

R-1273

最 終 報 告 書

Benzenemethanol, 4-methyl- :
ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験

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試験施設

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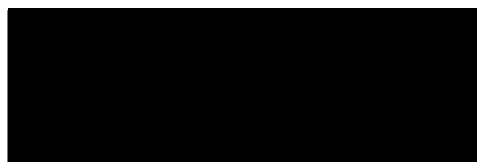
1. GLP 陳述書

試験番号 : R-1273

試験表題 : Benzenemethanol, 4-methyl- : ラットを用いた経口投与による
反復投与毒性・生殖発生毒性併合試験

本試験は以下の GLP 基準を遵守して実施した。

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
(平成 23 年 3 月 31 日 : 薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、
環保企発第 110331010 号)



2022 年 3 月 23 日

試験責任者

株式会社ボゾリサーチセンター 御殿場研究所

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3. 試験実施概要

3.1 試験番号

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3.2 試験表題

Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験

3.3 試験目的

本試験は、動物に被験物質を一定期間反復投与したときに現れる被験物質の一般毒性及び生殖発生毒性に関する初期情報を得ることを目的とした。

3.4 規制に関する情報

3.4.1 GLP

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
(平成 23 年 3 月 31 日 : 薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号)

3.4.2 毒性試験ガイドライン

- 「新規化学物質等に係る試験の方法について : 哺乳類を用いる反復投与毒性・生殖発生毒性併合試験」
(平成 23 年 3 月 31 日付け薬食発 0331 第 7 号厚生労働省医薬食品局長、平成 23・03・29 製局第 5 号経済産業省製造産業局長、環保企発第 110331009 号環境省総合環境政策局長連名通知) (最終改正 : 令和 2 年 11 月 5 日)

3.4.3 動物の福祉

- 「動物の愛護及び管理に関する法律」
(昭和 48 年 10 月 1 日法律第 105 号)
- 「実験動物の飼養及び保管並びに苦痛の軽減に関する基準」
(平成 18 年 4 月 28 日環境省告示第 88 号)
- 「動物実験の適正な実施に向けたガイドライン」
(日本学術会議 平成 18 年 6 月 1 日)
- 「厚生労働省の所管する実施機関における動物実験等の実施に関する基本指針について」
(平成 18 年 6 月 1 日科発第 0601001 号)

本試験は動物実験委員会 (IACUC) の承認を受けて実施した (承認番号 G210259)。

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3.5 試験委託者

厚生労働省

医薬・生活衛生局 医薬品審査管理課 化学物質安全対策室

〒100-8916 東京都千代田区霞が関 1-2-2

3.6 試験受託者

株式会社ボゾリサーチセンター

〒151-0065 東京都渋谷区大山町 36-7

3.7 試験施設及び試験場所

3.7.1 試験施設

株式会社ボゾリサーチセンター 御殿場研究所

〒412-0039 静岡県御殿場市かまど 1284

3.7.2 試験場所（ホルモン測定）

株式会社ボゾリサーチセンター つくば研究所

〒300-2611 茨城県つくば市大久保 8 番

3.8 被験物質

製造者

:

名称

: Benzenemethanol, 4-methyl- (略称 4MBE)

CAS 番号

: 589-18-4

官報公示整理番号

: (3)-1049 (化審法)

入手日

: 2021 年 8 月 27 日

3.9 試験責任者

株式会社ボゾリサーチセンター 御殿場研究所 研究部門

3.10 試験担当者

被験物質管理責任者 :

試験主担当者 :

臨床検査責任者 :

病理検査責任者 :

化学分析（被験液分析）

:

しかし、他の動物では上皮小体への被験物質の影響は評価可能であったことから、本件による試験へ及ぼす影響はないと判断した。

3.14 資料保存

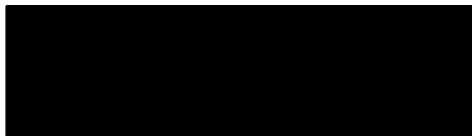
試験計画書（試験計画書変更書を含む）原本、記録文書、生データ、報告書類（最終報告書の原本を含む）及び標本（被験物質保存試料を含む）は株式会社ボゾリサーチセンター 御殿場研究所の資料保存施設に保存する。ただし、臨床検査後の残余生体試料（尿、血漿、血清）及び腔垢標本については試験終了後に廃棄する。また、固定した死産児及び死亡児については、出生率、生後 4 及び 13 日生存率に被験物質投与の影響が認められなかったため、廃棄した。資料の保存期間は試験終了後 5 年間とする。

ホルモン測定に関するホルモン測定計画書原本、生データ等の試験関係資料及びホルモン測定報告書原本は、試験場所（株式会社ボゾリサーチセンター つくば研究所）又は試験場所指定の GLP 保存施設に保存する。なお、その期間はホルモン測定報告書作成後 5 年間とする。

試験施設と試験場所における保存期間終了後の資料の取扱いについては厚生労働省 医薬・生活衛生局 医薬品審査管理課 化学物質安全対策室と株式会社ボゾリサーチセンター間で協議し、その処置を決定する。

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3.15 試験責任者の署名



2022 年 3 月 23 日

株式会社ボゾリサーチセンター 御殿場研究所

4. 要約

Benzenemethanol, 4-methyl-を 0.5 w/v%メチルセルロース溶液に懸濁させ、100、300 及び 1000 mg/kg の投与量で Sprague-Dawley 系 SPF ラット（交配群として雌雄各 12 匹/群、雌には交配を行わない非交配群として媒体対照群及び 1000 mg/kg 群に各 10 匹を追加）の雄には交配前 14 日間に加え交配期間を通して剖検前日まで（42 日間）、交配群雌には交配前 14 日間に加え交配期間及び妊娠期間を通して授乳 13 日まで（50~64 日間）、非交配群雌には 42 日間、強制経口投与し、反復投与毒性及び生殖発生毒性を検討した。更に、媒体対照群及び 1000 mg/kg 群の一部の動物（雄 5 匹と非交配群雌 5 匹）については、42 日間投与した後 14 日間の回復期間を設け、毒性変化の可逆性を検討した。なお、媒体対照群には媒体である 0.5 w/v%メチルセルロース溶液を投与した。

検査項目は一般状態、詳細な一般状態観察、機能検査、握力、自発運動量、体重、摂餌量、膣垢検査、交配、分娩観察、尿検査（摂水量含む）、血中ホルモン濃度測定（T4、T3、TSH）、血液学検査（凝固系検査を含む）、血液化学検査、剖検、器官重量及び病理組織学検査とした。

4.1 反復投与毒性

いずれの投与群においても死亡動物はみられなかった。

100 mg/kg 群では、いずれの検査項目にも被験物質投与の影響は認められなかった。

300 mg/kg 群では、投与期間終了時において、雌雄で前胃の過角化と扁平上皮の過形成、雌でクレアチニンの高値が認められたが、回復期間終了時には消失した。その他の検査項目に被験物質投与の影響は認められなかった。

1000 mg/kg 群では、雌雄で主に腹臥、雌で歩行異常、立ち上がり回数、自発運動量及び総運動量の低値、雄で体重増加の抑制、雌で交配前投与期間に体重増加、摂餌量の高値、雌雄で投与期間終了週に摂水量及び尿量又は尿中カリウムの高値、投与期間終了時に雄で赤血球数、ヘモグロビン濃度及びヘマトクリット値の低値、赤血球容積分布幅及び網赤血球数の高値、クレアチニン、アスパラギン酸アミノトランスフェラーゼ及び肝臓の相対重量の高値、雌で血小板数に低値及び肝臓重量の相対重量の高値、雌雄でアルカリホスファターゼの高値、血清中ホルモン（T4）濃度の低値が認められた。病理学検査では、投与期間終了時において、雌雄で大腿骨骨幹端における骨梁の増加、前胃の過角化と扁平上皮の過形成、腎臓及び膀胱に尿路上皮細胞の空胞化がみられた。更に、雄で精巣上体に尾部の白色巣、精子肉芽腫、尾部の管腔内の細胞残渣、間質の炎症性細胞浸潤を伴う水腫、雌で前胃粘膜固有層の水腫、大型卵胞の減少/消失、間質細胞の過形成、旧黄体の減少を伴う黄体の肥大、膣上皮の粘液化の増加、乳腺のび慢性小葉腺房過形成がみられた。回復期間終了時においては、雄で副腎の絶対及び相対重量に高値、精巣、精巣上体及び肛門挙筋・球海綿体筋の絶対重量に低値が認められた。雌雄で大腿骨の骨幹端における骨梁の増加がみられたが、所見の程度は軽減し、回復性が示唆された。その他の変化は消失した。

4.2 生殖発生毒性

100 及び 300 mg/kg 群では雌雄動物の生殖機能に関するパラメータに被験物質投与の影響は認められないことから、雌雄動物の交尾能、授精能及び受胎能、母動物の妊娠維持、分娩及び哺育行動などへの影響はないと判断した。また、出生児のいずれの検査項目にも被験物質投与による影響は認められないことから、児の子宮内発生、生後の発育及び分化並びに生存性などへの影響はないと判断した。

1000 mg/kg 群では、交配前投与期間において、連続休止期像による性周期異常率の高値、発情期像発現回数の低値がみられ、全例、交尾はしたものの雌全例は不妊であった。

これらの結果から、本試験条件下では、本被験物質の反復投与毒性に対する無影響量及び無毒性量は、雌雄ともにいずれも 100 mg/kg と判断した。一方、生殖発生毒性に対する無影響量及び無毒性量は、いずれも親動物及び児動物ともに 300 mg/kg と判断した。

5. 緒言

厚生労働省 医薬・生活衛生局 医薬品審査管理課 化学物質安全対策室の委託により、Benzenemethanol, 4-methyl-のラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験を実施したので、その成績を報告する。

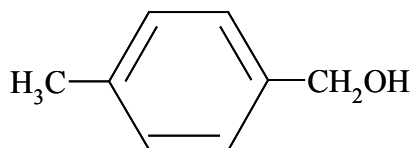
6. 試験材料及び方法

6.1 被験物質及び媒体

6.1.1 被験物質

被験物質は[REDACTED]から、非 GLP で実施された分析結果に基づく以下の情報とともに購入した。また、投与開始前に赤外吸収スペクトルの測定により特性を確認した (Attachment 1)。

製造者	: [REDACTED]
名称	: Benzenemethanol, 4-methyl- (略称 4MBE)
別名	: 4-メチルベンジルアルコール
CAS 番号	: 589-18-4
官報公示整理番号	: (3)-1049 (化審法)
構造式又は示性式	:



分子式	: C ₈ H ₁₀ O
分子量	: 122.17
外観	: 白色結晶性粉末
融点	: 60.0°C
沸点/沸騰範囲	: 116°C/2.7kPa
ロット番号	: [REDACTED]
入手量	: 1500 g
純度	: 99.8% (GC)
保存条件	: 密栓、冷暗所
保存方法	: 気密容器に入れ、冷蔵庫内に保存 (許容範囲: 1°C~10°C、実測値は許容範囲内であった)。
取扱い上の注意	: 作業場の換気を十分に行い、マスク、保護眼鏡、保護手袋等の適切な保護具を着用し、直接の接触を防ぐ。取り扱い後は、手、顔等を良く洗い、うがいをする。
保存場所	: 被験物質保存室及び被験物質調製室

- 安定性確認 : 投与期間終了後に株式会社ボゾリサーチセンター 御殿場研究所で残余被験物質の赤外吸収スペクトルを確認した結果、投与期間開始前に確認したスペクトルとほぼ同様であり安定性に問題はなかった (Attachment 2)。
- 保存試料 : 被験物質約 1 g を保存試料として保存した。
- 残余品の処理 : 使用後の残余は全て廃棄した。

6.1.2 媒体

名称 : 0.5 w/v%メチルセルロース溶液 (略称 0.5%MC 溶液) 注

注 : 媒体は、本試験に先立って実施した「Benzenemethanol, 4-methyl- : 特性及び安定性試験並びに HPLC 法を用いた被験液中濃度測定法バリデーション及び安定性・均一性試験 (媒体 : 0.5 w/v%メチルセルロース溶液)」 (株式会社ボゾリサーチセンター、試験番号 A-3318) ¹⁾において、0.5 w/v%メチルセルロース溶液中での被験物質の安定性に良好な結果が得られていることから、0.5 w/v%メチルセルロース溶液を選択した。

6.2 媒体及び被験液の調製

6.2.1 媒体の調製

必要量のメチルセルロース (メチルセルロース 100、化学用、富士フイルム和光純薬株式会社、ロット番号 LKF0118) を秤取し、攪拌しながら温めた適量の注射用水 (日本薬局方、株式会社大塚製薬工場、ロット番号 OJ95、IC75) に徐々に加えて分散させた。これを冷やしてメチルセルロースを溶解させ、更に注射用水を加えて 0.5%溶液とした。媒体は被験液調製当日に、最大 7 日分を一括して調製し、調製後 7 日以内に被験液調製又は投与に使用した。媒体対照群の投与に用いる媒体は、被験物質を取り扱う前に 1 日必要量を褐色ガラス瓶に分注し、被験液と同じ条件で保存した (許容範囲 : 2°C~8°C、実測値は許容範囲内であった)。

6.2.2 被験液の調製

6.2.2.1 調製方法

高用量群液 (100 mg/mL 液) の調製に必要な被験物質を秤取し、磁性乳鉢に入れ、磁性乳棒で磨砕した後、適量の媒体を加えて懸濁した。懸濁液をメスシリンダーに移し、媒体を加えて 100 mg/mL 液とした。中及び低用量群液 (30 及び 10 mg/mL 液) は 100 mg/mL 液を段階希釈して調製した。被験液は投与用に 1 日必要分ずつ褐色ガラス瓶に分注した。

6.2.2.2 調製頻度

最大 7 日分を一括して調製し、調製後 7 日以内に使用した。

6.2.2.3 保存条件

被験液は冷蔵保存した (許容範囲 : 2°C~8°C、実測値は許容範囲内であった)。

6.2.2.4 安定性

株式会社ボゾリサーチセンターにおいて、Benzenemethanol, 4-methyl-（ロット番号 [REDACTED] の 2 及び 100 mg/mL 液（媒体：0.5% MC 溶液）は褐色ガラス瓶で冷蔵（1°C~10°C）8 日間保存後、更に室温 24 時間保存後の安定性・均一性が確認されている（試験番号 A-3318¹⁾、Attachment 3）。

6.2.3 被験液の分析

初回投与及び雄の最終投与に使用した各濃度の被験液（上、中、下層から各約 10 mL 採取）について、株式会社ボゾリサーチセンター 御殿場研究所にて高速液体クロマトグラフ（HPLC）法により濃度測定を実施した。初回投与に使用した被験液については、投与開始前に分析を行った。その結果、各濃度液における被験物質濃度の表示値に対する割合は 101.0%~104.3%、変動係数（CV）は 1.0%~4.9%であり、いずれも評価基準（濃度許容範囲：表示値に対する割合；100% ± 10%、CV；10%以下）を満たしたことから、被験液の調製に問題はなかったと判断した（Attachment 4）。

なお、本測定法は株式会社ボゾリサーチセンター 御殿場研究所にて実施したバリデーション試験で確立された方法である（試験番号 A-3318）¹⁾。

分析法の概略を以下に示した。

1) 測定対象物質

Benzenemethanol, 4-methyl-

2) 標準物質

被験物質から一部分取したものを標準物質として使用した。

製造者：[REDACTED]
 名称：Benzenemethanol, 4-methyl-
 別名：4-メチルベンジルアルコール
 ロット番号：[REDACTED]
 保存条件：冷暗所、密栓
 保存期間中、保存条件からの逸脱はなかった。
 保存場所：御殿場研究所 被験物質保存室及び分析棟 分析室

3) 測定実測試料の調製

各測定試料をスターラーで攪拌しながら、n=1 で採取し、以下の表に従い測定実測試料を用時に調製した。

被験液 (mg/mL)	1 次希釈		2 次希釈		3 次希釈		希釈率
	測定試料 採取量 (mL)	定容量 (mL)	1 次希釈液 採取量 (mL)	定容量 (mL)	2 次希釈液 採取量 (mL)	定容量 (mL)	
10	1	50	2.5	50	—	—	1000
30	1	100	1	30	—	—	3000
100	1	100	5	50	2	20	10000

溶媒：メタノール

4) HPLC システム

機器名及び型式		メーカー
HPLC	2695 セパレーションモジュール	Waters Corporation
検出器	2487 デュアルλ UV/VIS 検出器	
データ処理装置	Empower	

5) HPLC 測定条件

検出	: UV (測定波長 230 nm)
カラム	: Cosmocil 5C ₁₈ -MS-II (4.6 mm ID × 150 mm、 粒子径 5 μm、ナカライテスク株式会社)
カラム恒温槽設定温度	: 40°C
移動相	: 精製水／メタノール混液 (55 : 45)
ニードル洗浄液	: メタノール
流量	: 1.0 mL/min
試料注入量	: 10 μL
オートサンプラー設定温度	: 10°C
測定時間	: 10 分間

6) 測定結果の保証

(1) 再注入及び再測定

再注入及び再測定を必要とする事象はなかった。

(2) 試験計画書からの逸脱及び測定結果の信頼性に影響を与える事象

システム適合性は、判定基準を満たした。

試験計画書からの逸脱及び測定結果の信頼性に影響を与える事象はなかった。

6.3 試験系及び系統の選択理由

毒性試験ガイドラインによりげっ歯類を用いた試験が必要とされている。ラットは医薬品などの安全性試験に広く用いられており、この試験に使用される系統のラットは特性がよく知られ、背景資料が豊富であることから選択した。

6.4 試験動物及び群分け

動物種	: ラット (SPF)
系統	: Sprague-Dawley [CrI:CD(SD)]
供給源	: 日本チャールス・リバー株式会社、厚木飼育センター
入荷時週齢	: 7 週齢
購入匹数	: 雄 56 匹、雌 82 匹
検疫・馴化期間	: 21 日間
投与開始時週齢	: 10 週齢

- 供試動物数 : 雄 48 匹、雌 68 匹
- 検疫・馴化期間中の観察 : 全動物について、体重測定（5 回：馴化 1、3 日、以降は週 1 回以上及び群分け日）、生死並びに体外表、栄養状態、姿勢、行動及び排泄物などの一般状態の観察（1 回/日）を実施した。詳細な一般状態の観察（詳細は 6.12.2 項参照）を検疫終了後、群分けまでの期間に実施した（1 回）。更に、雄は検疫期間終了後、群分け前までに陰嚢内の精巣の触診（1 回）及び陰茎亀頭の観察（1 回）を実施し、雌は検疫期間終了後、群分け前まで膣垢を採取して性周期を調べた（詳細は 6.12.5 項参照）。
- 供試動物の選択 : 検疫・馴化期間中の一般状態、詳細な一般状態の観察、入荷日から群分け日までの体重推移、精巣の触診結果及び性周期（馴化 6~19 日の 14 日間）に異常がなく、性成熟に達した陰茎亀頭であることを条件とし、健康と考えられる動物を選択した。
- 群分け : 上記に示した手順で選択した動物のうち、体重増加（検疫初回の体重~群分け時の体重）が順調な動物を群分け当日（投与開始前日）の体重に基づいて、各群の平均体重ができるだけ均等となるように群分けを行った。動物の割付けはコンピュータを用いたブロック・ランダム化により行った（ブロック配置により必要な群を構成し、試験群及び群内の個体番号を無作為に割当てた）。
- 投与開始時体重範囲 : 雄は 363 g~442 g（平均値：403 g）、雌は 217 g~261 g（平均値：240 g）であり、雌雄それぞれ平均体重の $\pm 20\%$ 以内であった。
- 余剰動物の処置 : 供試動物の選択条件を満たして余剰となった雌 12 匹は交配予備動物（無処置動物）として継続飼育し、交配群動物の交配が終了した後、2021 年 11 月 22 日に試験から除外した。その他の残余動物の雄 8 匹、雌 2 匹は、群分け後の 2021 年 10 月 26 日に試験から除外した。なお、試験から除外された動物は、動物管理部門に移管した。

6.5 飼育条件

- 飼育室番号 : 903 号室及び 904 号室。検疫・馴化期間は性ごと（雄：903 号室、雌：904 号室）に収容し、群分け後は各群を 2 分割して収容した（表 1 参照）。

表 1. 飼育室の動物振り分け表（群分け後）

飼育室番号	903		904	
性	雄	雌	雄	雌
動物番号	1001~1007	1101~1107	1008~1012	1108~1112
	2001~2007	2101~2107	2008~2012	2108~2112
	3001~3007	3101~3107	3008~3012	3108~3112
	4001~4007	4101~4107	4008~4012	4108~4112
		5101~5105		5106~5110
		6101~6105		6106~6110

温度	: 23°C ± 3°C
相対湿度	: 50% ± 20%
換気回数	: 1 時間 10~15 回
照明	: 1 日 12 時間（07:00~19:00）
ケージ	: 床敷（コンフィネスト、株式会社ファルマ、ロット番号 15T027071 及び 15T029022）を入れたプラスチックケージ（W440 × D275 × H180 mm：株式会社羽生精密）
収容匹数	: 入荷から群分けまで；同性 2 匹/ケージ 群分け以降；雌雄とも 1 匹/ケージ 交尾成立雌；授乳 13 日まで 1 腹/ケージ
飼料	: 固型飼料 CRF-1（γ 線滅菌、オリエンタル酵母工業株式会社、ロット番号 210304、210602 及び 210803）をステンレス製給餌器に入れて自由に摂取させた。
飲料水	: 御殿場市営水道水を自動給水装置により自由に摂取させた。
環境エンリッチメント	: 動物実験委員会の指針に従って、適切な環境エンリッチメントを与えた。

6.6 飼料、床敷及び飲料水中の混入物質

下記の混入物質に関する分析報告書の結果が基準内であることを確認した。

- ・ 飼料の分析報告書（Eurofins Food and Product Testing、供試全ロット）
- ・ 床敷の分析報告書（一般財団法人日本食品分析センター、供試全ロット）
- ・ 水道法に準拠した水質の分析報告書（芝浦セムテック株式会社、年 4 回）

6.7 動物の識別

小動物用耳標	: 番号が刻印された小動物用耳標を入荷時に装着し、実験期間を通じてこの番号を個体識別の基本とした。
動物番号	: 群分け後は、試験群、性及び群内の個体が区別できるよう、4 桁の数字を割り当てた（表 2 及び表 3 の群構成参照）。出生児については生後 13 日の体重測定時に、母

動物番号に続けて性別を示すアルファベット（雄は M、雌は F）、同腹内番号を示す 2 桁の出生児番号を体重測定順に割付け、油性インクで尾に付した記号で識別した。

ケージラベル : 群分け後、各飼育ケージには投与量（群）ごとに色分けしたケージラベルを添付し、試験番号、投与経路、投与量、性別、動物番号、耳標番号、剖検予定日（雄及び非交配群の雌）、交尾成立日（交配群の雌雄）及び分娩日（交配群の雌）を明記した。ケージラベルの裏には試験番号、性別及び耳標番号のみを表示し、詳細な一般状態の観察、機能検査あるいは握力測定時には、ケージラベルを裏返して観察者への投与量の情報を制限した。

6.8 投与経路、投与期間、投与回数及び回復期間とそれらの選択理由

毒性試験ガイドラインに従い、投与経路は、経口投与を選択した。投与回数は反復投与試験で一般的に行われている 1 日 1 回（7 日/週）とした。交配群の雄及び非交配群の雌の中の回復動物については、被験物質投与に起因した変化の可逆性、持続性並びに遅発性毒性等を観察するのに適切と考えられる 14 日間の回復期間を設定し、その間休薬させた。

各群の投与期間は以下の通りとした。

交配群（雄）	: 交配前 14 日間及び交配開始日から 28 日間
交配群（雌）	: 交配前 14 日間及び交配開始日から授乳 13 日まで
非交配群（雌のみ）	: 交配群の投与開始日から 42 日間

6.9 投与方法

投与方法は、げっ歯類の経口投与において一般的な強制経口投与とした。

投与容量は 10 mL/kg とし、フレキシブル胃ゾンデを用いて被験液を胃内に強制経口投与した（概ね午前中）。ただし、投与時に分娩途中であった場合、分娩の終了を待って投与を行った。媒体対照群には媒体（0.5% MC 溶液）を同様に投与した。動物ごとの投与液量（表示単位：0.1 mL）は直近の体重を基準に算出した。

6.10 投与量及び群構成

投与量は、交配群は 100、300 及び 1000 mg/kg の 3 用量とし、媒体対照群を加えた 4 群構成とした。また、非交配群は 1000 mg/kg の 1 用量とし、媒体対照群を加えた 2 群構成とした。1 群当たりの動物数は、交配群では各群で雌雄各 12 匹とし、このうち雄の媒体対照群及び高用量群の各 5 匹を回復動物とした。非交配群では各群で雌 10 匹とし、このうち各群の 5 匹を回復動物とした。群構成を表 2 及び表 3 に示す。

表 2. 群構成 (雄)

試験群	投与量 (mg/kg)	被験液 濃度 (mg/mL)	投与 容量 (mL/kg)	交配群			
				投与終了時剖検群		回復終了時剖検群	
				動物数	動物番号	動物数	動物番号
媒体対照	0	0	10	7	1001-1007	5	1008-1012
低用量	100	10	10	12	2001-2012		
中用量	300	30	10	12	3001-3012		
高用量	1000	100	10	7	4001-4007	5	4008-4012

表 3. 群構成 (雌)

試験群	投与量 (mg/kg)	被験液 濃度 (mg/mL)	投与 容量 (mL/kg)	交配群		非交配群			
				投与終了時剖検群		投与終了時剖検群		回復終了時剖検群	
				動物数	動物番号	動物数	動物番号	動物数	動物番号
媒体対照	0	0	10	12	1101-1112	5	5101-5105	5	5106-5110
低用量	100	10	10	12	2101-2112				
中用量	300	30	10	12	3101-3112				
高用量	1000	100	10	12	4101-4112	5	6101-6105	5	6106-6110

6.11 投与量の設定根拠

株式会社ボゾリサーチセンター実施した「Benzenemethanol, 4-methyl-：ラットを用いた 14 日間反復経口投与毒性試験（投与量設定試験）（試験番号：N-R112、投与量：250、500 及び 1000 mg/kg、5 匹/群/性）」²⁾では、1000 mg/kg の雌雄で投与後一過性に腹臥がみられ、雌雄で単球数の増加、アラニンアミノトランスフェラーゼ（ALT）の増加、肝臓重量の増加、雄で体重増加抑制、白血球数及び大型非染色球数の増加、アスパラギン酸アミノトランスフェラーゼ（AST）の増加、副腎重量の増加、雌でヘモグロビン濃度及びヘマトクリット値の低下、網赤血球数の増加、アルカリホスファターゼ（ALP）の増加、胸腺重量の低下が認められたが、雌雄ともに死亡はみられず、雌の体重、雌雄の摂餌量及び剖検には被験物質投与による明らかな毒性変化は認められなかった。これらのことから、本試験の高用量群を、毒性試験ガイドライン〔新規化学物質等に係る試験の方法について（平成 23 年 3 月 31 日）〕に示されている最高投与限度用量である 1000 mg/kg に設定し、中用量群以下を公比約 3 で除して 300 及び 100 mg/kg に設定した。

6.12 検査及び方法

毒性評価群について検査を実施した。試験日の起算に関しては以下の通りとした。

投与開始日	: 投与 1 日 (Day of dosing 1、Day 1)
投与 1 日から 7 日	: 投与 1 週 (Week of dosing 1、Week 1)
回復開始日 (投与 42 日の翌日)	
	: 回復 1 日 (Day 1 of recovery)
回復 1 日から 7 日	: 回復 1 週 (Week 1 of recovery)
交尾成立日	: 妊娠 0 日 (Gestation Day 0)

分娩終了日（出産日）：授乳 0 日（Lactation Day 0）
 出生日：生後 0 日（Postnatal Day 0）

6.12.1 一般状態の観察

全動物について、投与期間中（交配群雌の妊娠及び授乳期間を含む）は毎日 3 回（投与前、投与直後及び投与 1~4 時間後、ただし、詳細な一般状態の観察実施日は投与前と投与直後の 2 回/日）、回復期間中は毎日 1 回（午前；07:00~12:30）、剖検日は 1 回（剖検のための動物搬出前）、それぞれ生死並びに身体の外観、排泄物（尿、糞）、栄養状態、姿勢及び行動などの一般状態における異常の有無をケージサイドから観察した。また、動物を手にとっての観察を投与 1 週は投与開始日とその翌日の最低 2 回行い、投与 2 週以降は詳細な一般状態の観察（6.12.2 項参照）と兼ねて行った。

6.12.2 詳細な一般状態の観察、機能検査、握力及び自発運動量の測定

詳細な一般状態の観察は、全動物について行った（投与期間中は検査当日の投与後 1~4 時間の間に開始）。雄及び非交配群雌は投与期間中及び回復期間中毎週 1 回、交配群雌は交配前投与期間中毎週 1 回、交配期間中の未交尾動物は交配開始後 6 及び 13 日、妊娠期間中及び授乳期間中は指定された日（交尾動物は妊娠 1、7、14 及び 20 日、分娩動物は授乳 6 及び 13 日）にそれぞれ行った。

機能検査、握力測定及び自発運動量測定は、各群の 5 匹（雄の群内番号 8~12 番、交配群雌は各群の分娩順で動物番号が若い順に 5 匹^{注)}、非交配群雌の群内番号 6~10 番）について行った。投与期間中は交配群雌では授乳 13 日（投与 50~52 日）に、その他は投与期間終了週（投与 36 日）に、回復期間中は媒体対照群及び高用量群の雌雄について回復期間終了週（回復 8 日）に行った。

詳細な一般状態の観察及び機能検査については実測値あるいはスコア化した評点法を用いた。また、投与及び回復期間中の観察、検査及び測定は、観察者に対して投与量などの情報を制限（ブラインド化）し、動物をランダムに配置した状態で行った。ただし、自発運動量の測定はブラインド化しないで行った。

注)：交配群雌の検査対象動物を表 4 に示した。

表 4. 機能検査、握力測定及び自発運動量測定を実施した交配群雌動物

試験群	動物番号
媒体対照群	1102、1103、1104、1105、1106
低用量群	2101、2103、2104、2105、2112
中用量群	3102、3103、3105、3107、3108
高用量群	全例が妊娠 25 日に至っても未分娩であったため、検査動物はいない。

6.12.2.1 詳細な一般状態の観察

1) ケージ内観察

姿勢、痙攣、異常行動

2) 手に持つての観察と症状の評価

ケージからの取り出し易さ、被毛・皮膚の状態、眼・鼻の分泌物、眼球突出、眼瞼閉鎖状態、可視粘膜、自律神経機能（流涙、流涎、立毛、瞳孔径、異常呼吸）、ハンドリングに対する反応、ハンドリング時の発声

3) オープンフィールド内観察

覚醒状態、痙攣、異常行動、常同行動、歩行、姿勢、身繕い、立ち上がり回数、排泄物（排糞数、排尿）

6.12.2.2 機能検査

詳細な一般状態観察に続いて、聴覚反応、接近反応、接触反応、痛覚反応、瞳孔反射、空中正向反射を検査した。

6.12.2.3 握力測定

機能検査に引き続き、CPU ゲージ MODEL-RX-5（アイコーエンジニアリング株式会社）を用いて前肢及び後肢の握力を測定した。

6.12.2.4 自発運動量測定

握力測定に引き続き、実験動物用自発運動センサーNS-AS01（株式会社ニューロサイエンス）を用いて自発運動量を測定した。測定時間は 1 時間とし、10 分間隔及び 0~60 分の測定値を集計した。

6.12.3 体重測定

雄及び非交配群雌は投与 1、8、15、22、29、36 及び 42 日に、回復動物は更に回復 1、8 及び 14 日に、交配群雌は投与 1、8、15 及び 22 日、妊娠 0、7、14 及び 20 日、授乳 0、4、7 及び 13 日並びに全動物について剖検日に体重を測定した。また、投与期間中の体重増加量（雄及び非交配群雌：投与 1 日から投与 42 日、交配群雌：投与 1 日から投与 15 日、妊娠 0 日から妊娠 20 日及び授乳 0 日から授乳 13 日）及び回復期間中の体重増加量（回復 1 日から回復 14 日）を算出した。分娩が午後となった母動物の授乳 0 日の体重は午後に、剖検日は前日から約 16~19 時間絶食させた後、相対器官重量算出用に搬出前に、その他は午前中（投与期間中は投与前）に測定した。交尾不成立雌動物（動物番号 2109）、妊娠 25 日未分娩動物（動物番号 4101~4112）の剖検日の体重並びに交配期間中の雌の体重は評価の対象としないため、帳票には反映させなかった。

6.12.4 摂餌量測定

雄及び非交配群雌は投与 2、8、15、30、36 及び 42 日に、回復動物は更に回復 2、8 及び 14 日に、交配群雌は投与 2、8 及び 15 日、妊娠 1、7、14 及び 20 日並びに授乳 2、4、7 及び 13 日にそれぞれ残餌量を測定し、前日の給餌量との差から 1 匹当たりの 1 日摂餌量を算出した。また、各期間の総摂餌量（雄及び非交配群雌：投与 1 日から投与 15 日及び回復 1 日から回復 14 日、交配群雌：投与 1 日から投与 15 日、妊娠 0 日から妊娠 20 日及び授乳 0 日から授乳 13 日）を算出した。給餌量/残餌量の測定は測定日の午前中（投与期間中は投与前）に行った。

6.12.5 膣垢検査

交配群雌の全動物について、投与開始日から交尾成立まで毎日（午前）膣垢を採取して、発情前期（P）、発情期（E）、発情後期（M）及び発情休止期（D）に分類し、交配期間中は膣垢内の精子の有無も調べた。交配前投与期間中の観察結果から発情回数及び発情期から次の発情期までの日数（性周期）、観察雌動物数に対する性周期異常を示した動物数の割合を求めた。交配期間中の結果は交尾確認を目的とすることから、帳票には反映させなかった。

非交配群雌については、交配群において膣垢検査に異常が認められたため、膣垢検査は実施しなかった。

6.12.6 交配

交配前投与期間終了後、交配群の同投与群内の個体番号が同じ雌雄を 1:1 で終夜同居させ、翌朝、膣内に膣栓形成あるいは膣垢中に精子を確認したものを交尾成立とみなした。交配開始日を 0 日と起算して交尾までに要した日数を求めた。同一雌雄による同居期間は最長 14 日間であった。交尾が成立しない雌は期間終了日を妊娠 0 日と仮定して、一般状態の観察、体重・摂餌量測定並びに投与を継続し、25 日後に 6.16 項に記す検査を行った。交尾不成立雌動物については、仮定した妊娠日に基づくデータは評価から除外した。

6.13 分娩及び哺育観察

6.13.1 母動物の観察

交尾成立雌動物は、妊娠 21 日から妊娠 25 日の午前まで 1 日 2 回（午前・午後）、分娩の有無並びにその終了を確認するとともに分娩状態（胎盤の処理及び出産児の状態）を観察した。交尾成立から分娩終了までを妊娠期間とし、妊娠期間を 0.5 日単位で求めた。なお、分娩終了の確認は 17:00 までとした。分娩が終了した母動物は授乳 13 日まで出生児を哺育させ、児集め、営巣及び授乳を指標として哺育状態を観察し、授乳 14 日に 6.16 項に記す検査を行った。妊娠 25 日の午前までに分娩しなかった 12 例の雌動物（動物番号 4101~4112）は、イソフルラン吸入麻酔下で採血後、腹大動脈からの放血により安楽死させ、6.16 項に記す剖検を行った。その結果、着床は認めら

れなかったため不妊と判断し、これらの動物の妊娠期間中のデータは評価から除外した。

6.13.2 出生児の観察

生後 0 日に出生児数及び死産児（含む死亡児）数を数え、これらを合わせて出産児数とした。出産児は口腔内を含む外表異常の有無を肉眼的に観察し、性別を判定した。出生児は体重を個体別に測定し、更にスライドゲージを用いて、肛門縁から生殖突起の付け根までの距離（AGD; anogenital distance、肛門生殖突起間距離）を測定（0.1 mm 単位）した後、母動物に哺育させた。死産児（含む死亡児）はブアン液で固定して保存した。

出生日から生後 13 日まで毎日 1 回、母動物の一般状態観察時に死亡児及び異常行動の有無を確認した。死亡児は異常の有無を肉眼により観察した後、ブアン液で固定して保存した。生存児は生後 0、4、7 及び 13 日に体重を個体別に測定し、各腹単位で雌雄別に平均値を算出した。また、体重増加量（生後 0 日から生後 4 日、生後 4 日から生後 7 日及び生後 4 日から生後 13 日）を算出した。生後 4 日の性別の確認及び体重測定後、1 腹当たりの哺育児数を 8 匹（可能な限り雌雄 4 匹ずつ）となるように調整した。除外された出生児のうち各群分娩順の 5 腹について、腹ごとに生後 4 日除外児を無作為に選び、イソフルラン吸入麻酔下に開腹し、腹大動脈から血液（目標：合計約 0.6 mL）を無処理のサンプルチューブに注射筒を用いて採取した。血液は遠心分離（3,000 rpm、約 1,600×g、10 分間）して血清を得た。血清は、腹ごとにプールした後（約 0.2 mL）、ポリプロピレン容器に移しホルモン測定試験場所への送付に備え -80°C の冷凍庫（許容範囲：-70°C 以下）に保存し、試験場所に輸送した。採血した児は、残りの除外された出生児とともにイソフルラン吸入麻酔下で腹大動脈からの放血により安楽死させた後、廃棄した。

生後 13 日に全生存児の性別を確認し、雄児について乳頭/乳輪数を調べ、記録した。分娩の早い順に 5 腹を選択し、各腹から無作為に雌雄各 1 匹を選び、イソフルラン吸入麻酔下に開腹し注射筒を用いて腹大動脈から採血した（目標：合計約 2.0 mL）。採取した血液は無処理のサンプルチューブに移して遠心分離（3,000 rpm、約 1,600×g、10 分間）し、血清を得た。血清は腹ごとにプールした後、ポリプロピレン容器に分注（約 0.3 mL×3 本）し、それぞれをカラーペンで赤、青、緑に色分けして、ホルモン測定試験場所への送付時まで -80°C の冷凍庫（許容範囲：-70°C 以下）に保存した。採血した児は、残りの生存児とともにイソフルラン吸入麻酔下で腹大動脈からの放血により安楽死させ、外部生殖器の発達程度に注意を払い、体外表、胸腔内及び腹腔内の主要器官・組織を肉眼的に観察した。各腹の出生児雌雄各 1 匹（出生児番号：M01 及び F01）については甲状腺を摘出してリン酸緩衝 10%ホルマリン液で固定し、重量を測定後、同固定液に保存した。甲状腺重量（絶対重量）は左右一緒に測定し、剖検日の体重に対する相対重量を算出した。

6.14 臨床検査

6.14.1 尿検査

以下の動物を検査対象とした。

投与 6 週（投与 37~38 日）：雄及び非交配群雌の各群 5 匹（雄の群内番号 8~12 番、非交配群雌の群内番号 6~10 番）

回復 2 週（回復 9~10 日）：回復動物の全動物

採尿器をセットしたケージに動物を個別に収容し（投与 6 週検査では投与後に収容した）、絶食・自由摂水下で 4 時間尿を、次いで自由摂食・自由摂水下でその後の 20 時間尿を採取し、表 5 に記載した項目及び方法により検査した。なお、給水には給水瓶を用いた。また、尿検査時には、前日からの 1 日当たりの摂水量（単位：mL/24h）を、給水瓶を用いて重量法で測定した（1 g = 1 mL とみなした）。

表 5. 尿検査の項目、測定法及び使用機器など

1) 4 時間尿についての検査	
検査項目	測定方法
pH	マルティスティックス試験紙 ^{a)}
タンパク質	マルティスティックス試験紙 ^{a)}
ケトン体	マルティスティックス試験紙 ^{a)}
グルコース	マルティスティックス試験紙 ^{a)}
潜血	マルティスティックス試験紙 ^{a)}
ビリルビン	マルティスティックス試験紙 ^{a)}
ウロビリノーゲン	マルティスティックス試験紙 ^{a)}
色調	肉眼観察
沈渣	鏡検法
尿量（4 時間量） ^{注 1}	容量測定（単位：mL）
2) 20 時間尿についての検査	
検査項目	測定方法
尿量（20 時間量） ^{注 1}	容量測定（単位：mL）
浸透圧	氷点降下法 ^{b)} （単位：mOsm/kg）
ナトリウム ^{注 2}	イオン選択電極法 ^{c)} （単位：mmol/24h）
カリウム ^{注 2}	イオン選択電極法 ^{c)} （単位：mmol/24h）
塩素 ^{注 2}	イオン選択電極法 ^{c)} （単位：mmol/24h）
使用測定機器	
a)：尿自動分析装置 クリニテック 500（Siemens Healthcare Diagnostics Inc.）	
b)：自動浸透圧測定装置 オズモステーション OM-6060（株式会社アークレイファクトリー）	
c)：臨床化学自動分析装置 TBA-120FR 形（キヤノンメディカルシステムズ株式会社）	
注 1：4 時間の尿量と 20 時間の尿量を合計して 24 時間の尿量（mL/24h）を算出した。	
注 2：20 時間尿について濃度を測定し、測定濃度と 24 時間の尿量から 1 日当たりの排泄量を算出した。	

6.14.2 臨床検査のための採血

投与終了及び回復終了の計画剖検時に、採血針を用いて以下の表 6 に従って各検査用として別々に採血した。全動物について剖検前日（最終投与日あるいは回復 14 日）から一夜（約 16~21 時間）絶食させた。採血は雄及び交配群雌並びに非交配群雌の各群 5 匹（動物番号が若い順、ただし、交配群雌は分娩順の 5 匹）の計画剖検動物から

行い、交尾不成立雌動物及び妊娠 25 日未分娩動物については、血液学、凝固系及び血液化学検査並びにホルモン測定用に採血した。

表 6. 臨床検査のための採血

	血液学検査	凝固系検査	血液化学検査	ホルモン測定
絶食	前日から一夜（約 16~21 時間）絶食			
麻酔	イソフルラン吸入			
採血部位	腹大動脈			
抗凝固剤	EDTA-2K	3.8%クエン酸 ナトリウム	ヘパリン ナトリウム	なし
採血量	約 1 mL	0.9 mL	約 3 mL	約 4 mL
採血容器	BD Vacutainer (Becton, Dickinson and Company)	クエン酸ナトリ ウム溶液加容器 (血液/クエン酸 溶液、9/1、v/v)	ベノジェクト II ヘ パリンナトリウム、 5 mL 採血用（テル モ株式会社）	ベノジェクト II オ ートセップ 6 mL 採血用（テルモ株 式会社）
試料	全血	血漿	血漿	血清
遠心条件	遠心分離は行わな い	3000 rpm、 約 1600 ×g、 10 分間	3000 rpm、 約 1600 ×g、10 分間 で得られた上清を 同条件で更に 1 回	3000 rpm、 約 1600 ×g、 10 分間

6.14.2.1 血液学検査

得られた血液について表 7 に記載した項目を検査した。また、鏡検による確認に備え、全生存例について、May-Grünwald-Giemsa 染色法による血液塗抹標本を作製したが、鏡検は実施しなかった。交尾不成立雌動物及び妊娠 25 日未分娩動物についても検査したが、その成績は帳票には反映しなかった。

表 7. 血液学検査の項目、測定法及び使用機器など

検査項目	測定方法	単位
赤血球数(RBC)	フローサイトメトリー法 ^{a)}	10 ⁴ (E4)/μL
ヘモグロビン濃度(HGB)	シアンメトヘモグロビン変法 ^{a)}	g/dL
ヘマトクリット値(HCT)	RBC 及び MCV から算出 ^{a)}	%
平均赤血球容積(MCV)	フローサイトメトリー法 ^{a)}	fL
平均赤血球ヘモグロビン量(MCH)	RBC 及び HGB から算出 ^{a)}	pg
平均赤血球ヘモグロビン濃度(MCHC)	HGB 及び HCT から算出 ^{a)}	g/dL
赤血球容積分布幅(RDW)	赤血球容積ヒストグラムの標準偏差と MCV から算出 ^{a)}	%
網赤血球数(RETIC)	フローサイトメトリー法 ^{a)}	10 ⁹ (E9)/L
血小板数(PLT)	フローサイトメトリー法 ^{a)}	10 ⁴ (E4)/μL
白血球数(WBC)	フローサイトメトリー法 ^{a)}	10 ² (E2)/μL
白血球分類 ^注	フローサイトメトリー法 ^{a)}	10 ² (E2)/μL
使用測定機器		
a)：総合血液学検査装置 アドヴィア 2120i (Siemens Healthcare Diagnostics Inc.)		
注：リンパ球(LYMP)、好中球(NEUT)、好酸球(EOS)、好塩基球(BASO)、単球(MONO)及び大型非染色球(LUC)		

血液学検査の再測定

動物番号	測定項目	理由	採用
5108、6103	全項目	血小板凝集の可能性	初回測定値

6.14.2.2 凝固系検査

得られた血漿について表 8 に記載した項目を検査した。交尾不成立雌動物及び妊娠 25 日未分娩動物についても検査したが、その成績は帳票には反映しなかった。

表 8. 凝固系検査の項目、測定法及び使用機器など

検査項目	測定方法	単位
プロトロンビン時間 (PT)	Coagulometric test ^{a)}	s
活性化部分トロンボプラスチン時間 (APTT)	Coagulometric test ^{a)}	s
フィブリノゲン量 (FIB)	Coagulometric test ^{a)}	mg/dL
使用測定機器		
a) : 血液凝固自動分析装置 ACL Elite Pro (Instrumentation Laboratory Corporation)		

6.14.2.3 血液化学検査

得られた血漿について表 9 に記載の項目を検査した。交尾不成立雌動物及び妊娠 25 日未分娩動物についても検査したが、その成績は帳票には反映しなかった。

表 9. 血液化学検査の項目、測定法及び使用機器など

検査項目	測定方法	単位
アスパラギン酸アミノトランスフェラーゼ(AST)	UV-rate 法 ^{a)}	IU/L
アラニンアミノトランスフェラーゼ(ALT)	UV-rate 法 ^{a)}	IU/L
アルカリホスファターゼ(ALP)	Bessey-Lowry 法 ^{a)}	IU/L
γ-グルタミルトランスぺプチダーゼ(γ-GTP)	L-γ-グルタミル-3-カルボキシ-4-ニトロアニリド法 ^{a)}	IU/L
総胆汁酸(TBA)	3α-ヒドロキシステロイドデヒドロゲナーゼ(3α-HSD)法 ^{a)}	μmol/L
総コレステロール(T-CHO)	CEH-COD-POD 法 ^{a)}	mg/dL
トリグリセライド(TG)	LPL-GK-GPO-POD 法 ^{a)}	mg/dL
リン脂質(PL)	PLD-ChOD-POD 法 ^{a)}	mg/dL
総ビリルビン(T-BIL)	ビリルビンオキシダーゼ法 ^{a)}	mg/dL
グルコース(GLU)	グルコースデヒドロゲナーゼ法 ^{a)}	mg/dL
尿素窒素(BUN)	Urease-LEDH 法 ^{a)}	mg/dL
クレアチニン(CRNN)	Creatininase-creatinase-sarcosine oxidase-POD 法 ^{a)}	mg/dL
ナトリウム(Na)	イオン選択電極法 ^{a)}	mmol/L
カリウム(K)	イオン選択電極法 ^{a)}	mmol/L
塩素(Cl)	イオン選択電極法 ^{a)}	mmol/L
カルシウム(Ca)	OCPC 法 ^{a)}	mg/dL
無機リン(P)	PNP-XOD-POD 法 ^{a)}	mg/dL
総タンパク質(TP)	Biuret 法 ^{a)}	g/dL
アルブミン(ALB)	BCG 法 ^{a)}	g/dL
使用測定機器		
a) : 臨床化学自動分析装置 TBA-120FR 形 (キヤノンメディカルシステムズ株式会社)		

6.15 ホルモン測定

6.15.1 血清試料の採取、測定対象、保存及び送付

1) 試料の分取と保存

6.14.2 項で得られた血清試料はサンプルチューブに分注（約 0.5 mL×3 本）し、それぞれをカラーペンで赤、青、緑に色分けして、送付時まで-80°C の冷凍庫（許容値：-70°C 以下）に保存した。容器には、試験番号、検査時期、検査項目、試料番号、採取年月日及びサンプル名を明記したラベルを貼付した。

2) 測定対象

6.14.2 項で得られた雄及び交配群雌並びに非交配群雌の血清及び 6.13.2 項で得られた生後 4 及び 13 日児動物の血清について T4 (thyroxine) を測定した。なお、測定は雄及び生後 13 日の児動物の測定を優先して実施し、雄の測定結果に被験物質投与の影響と推定される異常がみられたことから、非交配群雌、授乳 14 日の母動物及び生後 4 日の児動物並びに回復動物についても測定を行った。3 本に分注した血清はそのうち 1 本（赤、青、緑の順に優先した）を測定し、残余の血清はホルモン測定用の予備として保存した。雄及び非交配群雌における投与終了時の T4 に有意な低値が認められたことから、ホルモン測定用の予備として保存した血清を用いて、雄及び非交配群雌における投与終了時の試料について T3 (triiodothyronine) 及び TSH (thyroid stimulating hormone) を測定した。なお、交尾不成立雌動物及び妊娠 25 日未分娩動物の試料については、測定を行わず廃棄した。

3) 試料の送付

測定に供する血清は、凍結した状態でドライアイスと同梱させ、試験場所（試験主任者宛）に送付した。

送付試料数 : 95 サンプル

（交配群雄 30 サンプル×3 本、交配群雌 15 サンプル×3 本、非交配群雌 20 サンプル×3 本、生後 13 日の児動物 15 サンプル×3 本、生後 4 日の児動物 15 サンプル）

送付日 : 2021 年 12 月 7 日（2021 年 12 月 8 日着）

；交配群雄（投与終了時）のサンプル

2021 年 12 月 27 日（2021 年 12 月 28 日着）

；上記以外のサンプル

6.15.2 甲状腺ホルモン測定

1) ホルモン測定番号

OT-210006

2) 分析方法

RIA method（詳細は Attachment 5 参照）

- 3) 測定項目
甲状腺ホルモン (T4、T3、TSH)
- 4) 作業・操作
測定に関する操作手順は試験場所の SOP に従った。
- 5) ホルモン測定報告書
試験場所においてホルモン測定報告書が作成された。試験責任者はホルモン測定報告書の PDF ファイルを入手し、当試験 (R-1273) の最終報告書に添付した。
また、その内容を当試験の最終報告書に反映させた。
- 6) 残余血清の処理
ホルモン測定終了後の残余血清は、ホルモン測定報告書作成後に試験責任者の指示に基づいて試験場所で廃棄した。

6.16 病理学検査

6.16.1 剖検

最終投与翌日及び回復期間終了日に、血液学検査、凝固系検査、血液化学検査及びホルモン測定のために採血した動物は採血後、その他の動物はイソフルラン吸入麻酔下で、腹大動脈からの放血により安楽死させ、外表及び全ての器官/組織を詳細に観察した。交尾不成立雌動物及び妊娠 25 日未分娩動物については、採血して放血安楽死させた後、剖検を行った。なお、母動物については剖検時に着床痕数を数えた。

6.16.2 器官重量測定

全動物について表 10 に示した器官の重量 (絶対重量) を測定するとともに、剖検日の体重に対する相対重量を算出した。両側性の器官は左右一緒に測定した。なお、交尾不成立雌動物及び妊娠 25 日未分娩動物については、帳票には反映しなかった。

6.16.3 病理組織学検査

検査対象器官/組織を表 10 に示した。全動物について全検査対象器官/組織をリン酸緩衝 10%ホルマリン液で固定した。ただし、眼球及び視神経はリン酸緩衝 3%グルタルアルデヒド・2.5%ホルマリン液で固定、精巣及び精巣上体はブアン液で固定した後、リン酸緩衝 10%ホルマリン液で保存した。以降の検査は次の通りとした。

- 1) パラフィン包埋及びヘマトキシリン・エオジン (H・E) 染色標本作製
以下に記載した動物の全検査対象器官/組織について標本作製した。
 - － 投与終了時及び回復終了時の計画剖検時に採血を実施した雄及び交配群雌並びに非交配群雌の各群 5 匹 (動物番号が若い順、ただし、交配群雌は分娩順の 5 匹)
 - － 妊娠 25 日未分娩動物、その交配相手雄
 - － 交尾不成立雌雄動物甲状腺に関しては、被験物質投与による変化が疑われなかったため (親動物に

組織学変化及び甲状腺重量の変動はみられなかったため)、採血を実施しなかった雄及び交配群雌並びに雌雄の生後 13 日児動物(全母体の各腹雌雄各 1 例)については、標本作製を行わなかった。

2) 鏡検

以下の通り実施した。

非腫瘍病変のグレーディングは以下の通りとした。

著変無し (Not remarkable)

軽微 (Minimal)

軽度 (Mild)

中等度 (Moderate)

高度 (Severe)

<投与終了時剖検群>

媒体対照群及び高用量群

: 全検査対象器官/組織

中及び低用量群

: 雄の高用量群で精巣上体、大腿骨、胃、腎臓、膀胱、雌の交配群及び非交配群の高用量群で卵巣、膣、乳腺、大腿骨、胃、腎臓、膀胱に被験物質に起因すると思われる変化が認められたため、中及び低用量群についても鏡検した。

<回復終了時剖検群>

全群

: 全検査対象器官/組織

<妊娠 25 日未分娩動物及びその交配相手雄、交尾不成立雌雄動物>

全群

: 全検査対象器官/組織

表 10. 病理学検査対象器官/組織

組 織	病理組織	重量測定
	HE	
脳 (大脳、小脳、橋)	√	√ (脳として)
延髄	√	
脊髄 (胸部)	√	
坐骨神経	√*	
視神経	√*	
眼球	√*	
ハート腺	(保存のみ・両側)	
下垂体	√	
甲状腺	√	√ (甲状腺として)
上皮小体	√*	
副腎	√	√
胸腺	√	√
脾臓	√	√
顎下リンパ節	√*	

組 織	病理組織	重量測定
	HE	
腸間膜リンパ節	√	
パイエル板（回腸）	√	
心臓	√	√
胸大動脈	（保存のみ）	
気管	√	
肺（気管支を含む）	√	
舌	（保存のみ）	
食道	（保存のみ）	
胃	√	
十二指腸	√	
空腸	√	
回腸	√	
盲腸	√	
結腸	√	
直腸	√	
顎下腺	√*	
舌下腺	（保存のみ・両側）	
肝臓	√	√
脾臓	√	
腎臓	√	√
膀胱	√	
精巣/卵巣	√/√	√/√
精巣上体/子宮	√/√	√/√
前立腺/膣	√/√	√/
精嚢（凝固腺含む）	√	√
乳腺（鼠径部）	√*	
胸骨	（保存のみ）	
大腿骨	√*	
胸骨骨髓	（保存のみ）	
大腿骨骨髓	√*	
大腿四頭筋	√*	
皮膚（鼠径部）	√*	
肉眼的異常部位	√	
肛門挙筋・球海綿体筋（LABC）	（重量測定のみ）	√
カウパー腺（COW）	（重量測定のみ）	√
陰茎龟头（GP）	（重量測定のみ）	√
喉頭	（保存のみ）	
個体識別部（耳標を装着した耳介）	（保存のみ）	

各項目該当ある場合は√で示した。

*：両側を摘出し、片側を鏡検した（他の両側性器官は両側を鏡検）。

7. データ採取に使用したコンピュータシステム

- MiTOX-BOZO システム（Version 9.3.1.1、三井 E&S システム技研株式会社）
- PATHOS5 システム（Pathology Operating Systems Ltd.）

8. パラメータの算出

性周期異常率、交尾率、受胎率、出産率、異常児を有する母動物発現率、生後 0 及び 4 日の性比を群ごとに、妊娠期間、分娩率、出生率、外表異常率、生後 4 及び 13 日生存率を母動物（腹）ごとに、以下の式により算出した。なお、出生児の体重及び AGD については母動物ごと雌雄別に平均値を求めた。この際、AGD は生後 0 日の体重の三乗根で除して標準化（小数点以下第 1 位まで表示）した。雄生存児の乳頭/乳輪数は母動物（腹）ごとに平均値を求めた。空中正向反射は 3 回の動物ごとのトータルスコアを求めた。

性周期異常率(%) = (性周期異常を示した動物数/観察雌動物数) × 100

交尾率(%) = (交尾動物数/同居動物数) × 100

(雌又は雄の)受胎率(%) = [妊娠した雌(又は雌を妊娠させた雄)の数/
交尾した雌(又は交尾した雄)の数] × 100

出産率(%) = (生児出産雌数/妊娠雌数) × 100

異常児を有する母動物発現率(%) = (異常児を有する母動物数/母動物数) × 100

外表異常率(%) = (外表異常児数/出産児数) × 100

生後 0 日の性比(%) = (雄出生児数/出生児数) × 100

生後 4 日の性比(%) = (生後 4 日の雄生存児数/生後 4 日の生存児数) × 100

妊娠期間(日) = 妊娠 0 日から分娩した日までの日数

分娩率(%) = (出産児数/着床痕数) × 100

出生率(%) = (出生児数/出産児数) × 100

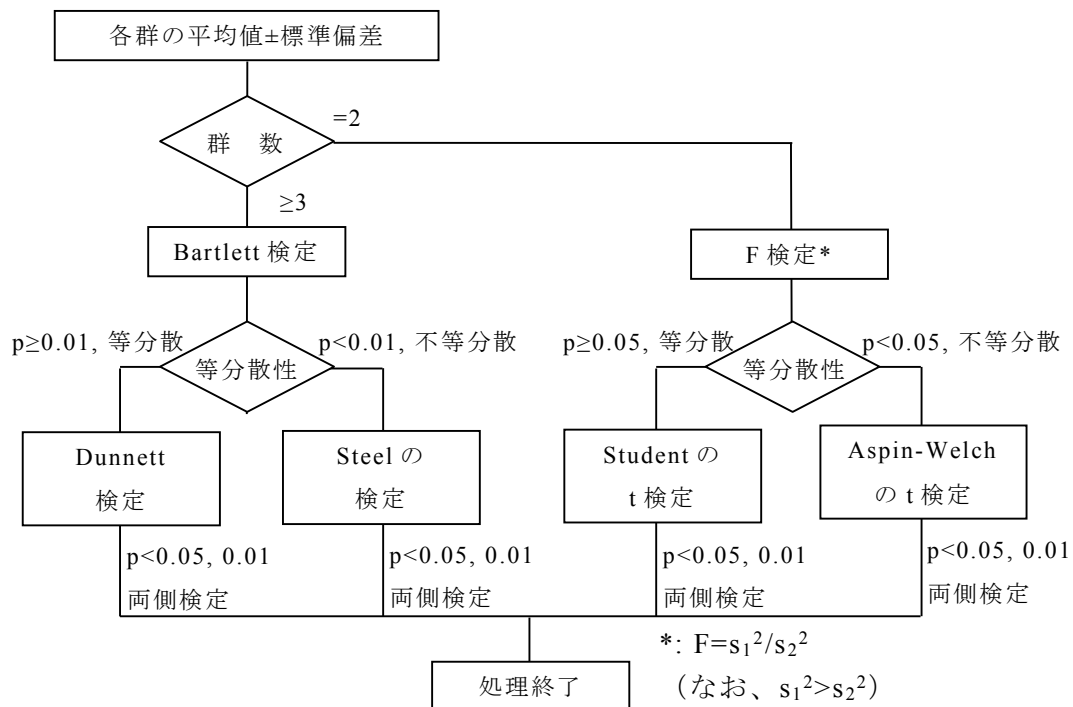
生後 4 日生存率(%) = (生後 4 日の生存児数/出生児数) × 100

生後 13 日生存率(%) = (生後 13 日の生存児数/生後 4 日調整後の児数) × 100

9. 統計解析

媒体対照群と各被験物質投与群との間で検定を行った。解析には、SAS Release 9.1.3 (SAS Institute Inc.)を使用した。なお、交尾不成立雌は交尾率にのみ含め、交配開始後のデータは試験成績から除外した。

- 1) 体重、体重増加量、摂餌量、総摂餌量、オープンフィールド内観察における排糞数と立ち上がり回数、握力及び自発運動量、尿検査の定量的項目及び摂水量、血液学検査、凝固系検査、血液化学検査及び器官重量（含、剖検時体重）、発情期発現回数、性周期（発情周期）、交尾までに要した日数、妊娠期間、着床数、出産児数、出生児数、死産児数、AGD、乳頭/乳輪数は、下記の模式図に従って検定した。



- 2) 分娩率、出生率、生存率については、群ごとに平均値及び標準偏差を求め、Wilcoxon の順位和検定を行った（有意水準 0.05 及び 0.01、両側）。なお、いずれの群にも外表異常児はみられなかったため、外表異常率について検定は行わなかった。
- 3) 性周期異常率、交尾率、雌雄の受胎率、出産率及び児の性比については、各群の性周期異常を示した動物数、交尾動物数、雌を妊娠させた雄動物数、妊娠雌動物数、出生児出産雌動物数、雌雄児数に基づき、Fisher の直接確率計算法により検定を行った（有意水準 0.05 及び 0.01、両側）。なお、いずれの群にも外表異常児はみられなかったため、異常児を有する母動物発現率について検定は行わなかった。

10. 試験結果

以降の参照した試験施設の背景データは同種 ReproTox 試験の成績である。

10.1 一般状態

結果を Table 1-1~1-9、Appendix 1-1~1-24 に示した。

1) 投与期間

雄では、1000 mg/kg 群で投与 2、4、5、7、26 及び 30 日の投与 1~4 時間後に腹臥が 1 又は 2 例（ほぼ一過性に 5/12 例に発現）みられた。100 及び 300 mg/kg 群では投与期間を通じ、いずれの動物にも異常はみられなかった。

交配群雌では、交配前投与期間において、1000 mg/kg 群で投与 2~5、7、9 及び 14 日の投与 1~4 時間後に腹臥が 1~6 例（一過性又は断続的に 9/12 例に発現）みられた。交配前、妊娠及び授乳期投与期間においては、100 及び 300 mg/kg 群では各投与期間を通じ、いずれの動物にも分娩/哺育状態を含め異常はみられなかった。1000 mg/kg 群の全例が不妊であったことから、妊娠動物としての評価対象外とした。なお、交尾後剖検までの一般状態では、交尾 8、16 及び 21 日の投与 1~4 時間後に腹臥が 3 例（一過性に 3/12 例に発現）みられた。

非交配群雌では、1000 mg/kg 群で投与 3~5、7、19、24 及び 31 日の投与 1~4 時間後に腹臥が 1~3 例（ほぼ一過性に 6/10 例に発現）みられた。

2) 回復期間

雌雄ともに、回復期間を通じ、いずれの動物にも異常は認められなかった。

10.2 詳細な一般状態の観察、機能検査、握力測定及び自発運動量の測定

10.2.1 詳細な一般状態の観察

10.2.1.1 ケージ内観察

結果を Table 2-1~2-24、Appendix 2-1~2-70 に示した。

1) 投与期間

雄では、投与期間を通じ、いずれの動物にも異常はみられなかった。

交配群雌では、1000 mg/kg 群で投与 1 週に腹臥が 1/12 例みられた。

非交配群雌では、いずれの動物も異常はなかった。

2) 回復期間

雌雄ともに、いずれの動物にも被験物質投与に関連すると考えられる異常はみられなかった。

10.2.1.2 手に持ったの観察

結果を Table 2-25~2-86、Appendix 2-71~2-140 に示した。

1) 投与期間

雄では、投与期間を通じ、いずれの動物にも異常はみられなかった。

交配群雌では、1000 mg/kg 群で投与 1 週にケージからの取り易さ及びハンドリングに対する反応性に無抵抗が各 1/12 例みられた。

非交配群雌では、いずれの動物も異常はなかった。

2) 回復期間

雌雄ともに、いずれの動物にも被験物質投与に関連すると考えられる異常はみられなかった。

10.2.1.3 オープンフィールド内観察

結果を Table 2-87~2-158、Appendix 2-141~2-280 に示した。

1) 投与期間

雄では、投与期間を通じ、いずれの動物にも異常はみられなかった。

交配群雌では、1000 mg/kg 群で投与 1 週に軽度な歩行異常と腹臥が各 1/12 例みられた。また、媒体対照群と比べ投与 1 及び 2 週に立ち上がり回数の有意な低値が認められた。

非交配群雌では、1000 mg/kg 群で媒体対照群と比べ投与 1~3 及び 6 週に立ち上がり回数の有意な低値が認められた。

2) 回復期間

雌雄ともに、いずれの動物にも被験物質投与に関連すると考えられる異常はみられなかった。

10.2.2 機能検査

結果を Table 2-159~2-163、Appendix 2-281~2-293 に示した。

1) 投与期間終了週検査

雄、交配群雌及び非交配群雌では、いずれの動物にも聴覚反応、接近反応、接触反応、痛覚反応、瞳孔反射及び空中正向反射に被験物質投与に関連すると考えられる異常はみられなかった。

2) 回復期間終了週検査

雌雄ともに、いずれの動物にも聴覚反応、接近反応、接触反応、痛覚反応、瞳孔反射及び空中正向反射に被験物質投与に関連すると考えられる異常はみられなかった。

10.2.3 握力

結果を Table 2-164~2-168、Appendix 2-294~2-306 に示した。

1) 投与期間終了週測定

雄、非交配群雌及び交配群雌では、媒体対照群と各被験物質投与群との間に差は認められなかった。

2) 回復期間終了週測定

雌雄ともに、媒体対照群と 1000 mg/kg 群との間に差は認められなかった。

10.2.4 自発運動量

結果を Fig. 1~5、Table 2-169~2-173、Appendix 2-307~2-319 に示した。

1) 投与期間終了週測定

雄及び交配群雌では、媒体対照群と各被験物質投与群との間に差は認められなかった。

非交配群雌では 1000 mg/kg 群で投与終了週において、媒体対照群と比べ測定開

始後 0~10、10~20、30~40 分の運動量及び総運動量に有意な低値が認められた。

2) 回復期間終了週測定

雌雄ともに、1000 mg/kg 群と媒体対照群との間に差は認められなかった。

10.3 体重

結果を Fig. 6~8、Table 3-1~3-7、Appendix 3-1~3-20 に示した。

1) 投与期間

雄では、1000 mg/kg 群で媒体対照群と比べ投与 22~42 日及び投与期間中の体重増加量に有意な低値が認められた。100 及び 300 mg/kg 群では媒体対照群の間に差は認められなかった。

交配群雌では、交配前投与期間において、1000 mg/kg 群で媒体対照群と比べ投与 15 日と投与期間中の体重増加量に有意な高値が認められた。100 及び 300 mg/kg 群では、媒体対照群の間に差は認められなかった。妊娠及び授乳期間においては、100 mg/kg 群で授乳期間中の体重増加量に有意な低値が認められたが、用量との関連はなく、偶発的変化と判断した。1000 mg/kg 群の全例が不妊であったことから、妊娠動物としての評価対象外とした。なお、交尾後の体重推移に異常はなかった。

非交配群雌では、媒体対照群と 1000 mg/kg 群との間に差は認められなかった。

2) 回復期間

雄では、媒体対照群と 1000 mg/kg 群との間に差は認められなかった。

雌では、1000 mg/kg 群で媒体対照群と比べ回復 8 及び 14 日、回復期間中の体重増加量に有意な低値が認められた。

10.4 摂餌量

結果を Fig. 9~11、Table 4-1~4-9、Appendix 4-1~4-26 に示した。

1) 投与期間

雄では、1000 mg/kg 群で媒体対照群と比べ投与 2 日に有意な低値が認められたが、一時的な変化であり、偶発的変動と判断した。

交配群雌では、交配前投与期間において、300 及び 1000 mg/kg 群で投与 15 日に有意な高値が認められた。妊娠及び授乳期間においては、100 及び 300 mg/kg 群では、媒体対照群との間に差は認められなかった。1000 mg/kg 群の全例が不妊であったことから、妊娠動物としての評価対象外とした。なお、交尾後の摂餌量推移に異常はなかった。

非交配群雌では、媒体対照群と 1000 mg/kg 群との間に差は認められなかった。

2) 回復期間

雌雄ともに媒体対照群と 1000 mg/kg 群との間に有意な差は認められなかった。

10.5 尿検査（摂水量測定を含む）

結果を Table 5-1~5-21、Appendix 5-1~5-30 に示した。

1) 投与期間終了週検査

定性項目については、いずれの動物にも異常はみられなかった。

定量項目については、雄の 1000 mg/kg 群で媒体対照群と比べ摂水量及び尿量に有意な高値、非交配群雌の 1000 mg/kg 群でも媒体対照群と比べ摂水量、尿量及び尿中 K に有意な高値が認められた。

2) 回復期間終了週検査

定性項目については、いずれの動物にも異常はみられなかった。

定量項目については、雌雄ともにいずれの検査項目においても媒体対照群と 1000 mg/kg 群との間に有意な差は認められなかった。

10.6 血液学検査

結果を Table 6-1~6-5、Appendix 6-1~6-13 に示した。

1) 投与期間終了時検査

雄では、1000 mg/kg 群で媒体対照群と比べ RBC、HGB 及び HCT に有意な低値、RDW 及び RETIC に有意な高値が認められた。その他、300 及び 1000 mg/kg 群で媒体対照群と比べ BASO に有意な低値、1000 mg/kg 群で媒体対照群と比べ EOS に有意な低値が認められた。いずれも WBC 分類に伴う相対的変動で、かつ低値であることから毒性学的意義はないと判断した。

交配群雌では、いずれの検査項目においても媒体対照群と 100 及び 300 mg/kg 群との間に差は認められなかった。

非交配群雌では、1000 mg/kg 群で媒体対照群と比べ PLT に有意な低値が認められた。同群で FIB に有意な高値が認められたが、試験施設の背景データ [Min.-Max. (Mean±2 S.D.) ; 178-337 mg/dL (225± 82 mg/dL) 、12 試験、2016-2021 年] の範囲内であることから、生理的変動範囲内の変化で偶発的有意差と判断した。

2) 回復期間終了時検査

雄では、1000 mg/kg 群で媒体対照群と比べ MONO に有意な低値が認められたが、関連するパラメータに異常はなく、試験施設の背景データ [Min.-Max. (Mean±2 S.D.) ; $1.3-3.8 \times 10^2 / \mu\text{L}$ ($1.9 \pm 1.4 \times 10^2 / \mu\text{L}$) 、12 試験、2016-2021 年] の範囲内であることから、生理的変動範囲内の変化で偶発的有意差と判断した。

雌では、1000 mg/kg 群で媒体対照群と比べ HGB、HCT 及び LUC に有意な低値、FIB に有意な高値が認められたが、いずれの値も試験施設の背景データ [Min.-Max. (Mean±2 S.D.) ; HGB : 14.5-16.2 g/dL (15.0 ± 1.0 g/dL) 、HCT : 40.6-44.2% ($42.1 \pm 2.0\%$) 、FIB : 182-247 mg/dL (204 ± 40 mg/dL) 、12 試験、2016-2021 年、Min.-Max. (Mean±2 S.D.) ; LUC : $0.2-0.9 \times 10^2 / \mu\text{L}$ ($0.4 \pm 0.4 \times 10^2 / \mu\text{L}$) 、12 試験、2016-2021 年] の範囲内であることから、生理的

変動範囲内の変化で偶発的有意差と判断した。

10.7 血液化学検査

結果を Table 7-1~7-5、Appendix 7-1~7-13 に示した。

1) 投与期間終了時検査

雄では、1000 mg/kg 群で媒体対照群と比べ AST、ALP 及び CRNN に有意な高値が認められた。

交配群雌では、300 mg/kg 群で媒体対照群と比べ CRNN に有意な高値が認められた。

非交配群雌では、1000 mg/kg 群で媒体対照群と比べ ALP に有意な高値が認められた。その他に、同群で Ca、TP 及び ALB に有意な低値が認められたが、いずれも試験施設の背景データ〔Min.-Max. (Mean $\pm$ 2 S.D.) ; Ca : 9.8–10.4 mg/dL (10.2 $\pm$ 0.4 mg/dL)、TP : 6.1–6.9 g/dL (6.5 $\pm$ 0.6 g/dL)、ALB : 3.4–4.0 g/dL (3.7 $\pm$ 0.4 g/dL)、12 試験、2016-2021 年〕の範囲内であることから、生理的変動範囲内の変化で偶発的有意差と判断した。

2) 回復期間終了時検査

雄では、1000 mg/kg 群で媒体対照群と比べ ALP、Ca 及び P に有意な高値、GLU に有意な低値が認められたが、いずれも試験施設の背景データ〔Min.-Max. (Mean $\pm$ 2 S.D.) ; ALP : 298–417 IU/L (336.8 $\pm$ 61.6 IU/L)、GLU : 120–162 mg/dL (142.8 $\pm$ 22.2 mg/dL)、Ca : 9.6–10.6 mg/dL (10.1 $\pm$ 0.6 mg/dL)、P : 5.2–6.4 mg/dL (5.7 $\pm$ 0.6 mg/dL)、12 試験、2016-2021 年〕の範囲内であることから、生理的変動範囲内の変化で偶発的有意差と判断した。

雌では、1000 mg/kg 群で媒体対照群と比べ T-CHO 及び P に有意な高値が認められたが、いずれも試験施設の背景データ〔Min.-Max. (Mean $\pm$ 2 S.D.) ; T-CHO : 59–81 mg/dL (72.8 $\pm$ 14.4 mg/dL)、P : 3.8–4.6 mg/dL (4.2 $\pm$ 0.6 mg/dL)、12 試験、2016-2021 年) のほぼ範囲内であることから、生理的変動範囲内の変化で偶発的有意差と判断した。

10.8 血清中ホルモン濃度測定

結果をホルモン濃度測定報告書 (Attachment 5) に示した。

1) 投与期間終了時

雄の 1000 mg/kg 群では、媒体対照群と比べ T4 濃度に有意な低値が認められた。交配群雌の 100 及び 300 mg/kg 群と媒体対照群の間に差は認められなかった。非交配群雌の 1000 mg/kg 群では、媒体対照群と比べ T4 濃度に有意な低値が認められた。

T3 及び TSH 濃度は、雄、交配群及び非交配群の雌の各被験物質群と媒体対照群との間に差は認められなかった。

- 2) 生後 4 及び 13 日齢児
100 及び 300 mg/kg 群では、T4 濃度には媒体対照群と比べ被験物質の影響は認められなかった。
- 3) 回復期間終了時
雌雄ともに、T4 濃度には媒体対照群と 1000 mg/kg 群との間に差は認められなかった。

10.9 器官重量

結果を Table 8-1~8-8、Appendix 8-1~8-22 に示した。

- 1) 投与期間終了時
雄では、1000 mg/kg 群で媒体対照群と比べ脳及び肝臓の相対重量に有意な高値が認められた。脳については関連する変化がみられないことから、剖検時の体重が低かったことによる変化と考えられた。
交配群雌では、100 及び 300 mg/kg 群と媒体対照群との間に有意差は認められなかった。
非交配群雌では、1000 mg/kg 群で媒体対照群と比べ肝臓の絶対及び相対重量に有意な高値が認められた。その他に、1000 mg/kg 群で媒体対照群と比べ脳の絶対重量に有意な低値が認められたが、相対重量に有意差はなく、媒体対照群との差は 5%と軽度であり、かつ組織学的にも異常がないことから、生理的変動範囲内の偶発的有意差と判断した。
- 2) 回復期間終了時
雄では、1000 mg/kg 群で媒体対照群と比べ副腎の絶対及び相対重量に有意な高値が認められた。また、同群で精巣、精巣上体及び肛門挙筋・球海綿体筋の絶対重量に有意な低値が認められた。
雌では、1000 mg/kg 群で媒体対照群と比べ脳の相対重量に有意な高値が認められたが、絶対重量に有意差はなく、組織学的にも異常がないことから、剖検時の体重が低かったことによる変化と考えられた。

10.10 剖検所見

結果を Table 9-1~9-6、Appendix 9-1~9-116 に示した。

- 1) 投与期間終了時及び回復期間終了時検査
交配群雄では、1000 mg/kg 群で精巣上体尾部の白色巣が 1/7 例にみられた。
交配群雌及び非交配群雌のいずれの動物にも被験物質投与の影響と考えられる肉眼所見はみられなかった。
- 2) 交尾不成立雌動物及び妊娠 25 日未分娩動物
交尾が成立しなかった 100 mg/kg 群の雌 1/12 例、妊娠 25 日までに未分娩であった 1000 mg/kg 群の 12/12 例においては、いずれの器官・組織にも肉眼的異常はみられなかった。

10.11 病理組織学検査

結果を Table 10-1~10-20、Appendix 9-1~9-116 に示した。

被験物質の影響と考えられる変化が精巣上体、卵巣、膣、乳腺、大腿骨、胃、腎臓、膀胱にみられた。その他に、種々の組織変化が認められたが、その発現状況及び病理組織学的な性状より偶発性変化と判断した。

1) 投与期間終了時及び回復期間終了時

雄	投与期間終了時				回復期間終了時	
投与量 (mg/kg)	0	100	300	1000	0	1000
検査例数	5	6	5	7	5	5
精巣上体						
尾部管腔内の細胞残渣 軽微	0	0	0	7	0	0
間質の水腫 軽微	0	0	0	2	0	0
軽度	0	0	0	3	0	0
精子肉芽腫 軽度	0	0	0	2	0	0
大腿骨						
骨幹端の骨梁増加 軽微	0	0	0	1	0	3
軽度	0	0	0	6	0	1
胃						
前胃の過角化 軽微	0	0	2	5	0	0
軽度	0	0	0	2	0	0
前胃の扁平上皮過形成 軽微	0	0	2	5	0	0
軽度	0	0	0	2	0	0
腎臓						
尿路上皮細胞の空胞化 軽微	0	0	0	5	0	0
軽度	0	0	0	1	0	0
膀胱						
尿路上皮細胞の空胞化 軽度	0	0	0	7	0	0

雌	交配群				非交配群			
	投与期間終了時				投与期間 終了時	回復期間 終了時		
投与量 (mg/kg)	0	100	300	1000	0	1000	0	1000
検査例数	5	6	5	12	5	5	5	5
卵巣								
大型卵胞の減少/消失 軽微	0	0	0	1	0	0	0	0
軽度	0	0	0	5	0	0	0	0
中等度	0	0	0	0	0	2	0	0
間質細胞の過形成 軽微	0	0	0	3	0	2	0	0
軽度	0	0	0	1	0	0	0	0
黄体の肥大 軽度	0	0	0	5	0	1	0	0
膣								
上皮の粘液化の増加 軽度	0	0	0	3	0	1	0	0
乳腺								
びまん性小葉腺房過形成 軽微	0	0	0	3	0	1	0	0
軽度	0	0	0	7	0	1	0	0
大腿骨								
骨幹端の骨梁増加 軽微	0	0	0	1	0	1	0	4
軽度	0	0	0	10	0	4	0	0
中等度	0	0	0	1	0	0	0	0

雌	交配群				非交配群			
	投与期間終了時				投与期間 終了時		回復期間 終了時	
投与量 (mg/kg)	0	100	300	1000	0	1000	0	1000
検査例数	5	6	5	12	5	5	5	5
胃								
前胃の過角化 軽微	0	0	1	12	0	5	0	0
前胃の扁平上皮過形成 軽微	0	0	1	12	0	5	0	0
前胃粘膜固有層の水腫 軽微	0	0	0	2	0	2	0	0
腎臓								
尿路上皮細胞の空胞化 軽微	0	0	0	4	0	2	0	0
膀胱								
尿路上皮細胞の空胞化 軽微	0	0	0	5	0	0	0	0
軽度	0	0	0	5	0	5	0	0

- 精巣上体 : 雄の 1000 mg/kg 群で尾部の管腔内の細胞残渣、間質の水腫及び精子肉芽腫がみられた。なお、間質の水腫はしばしば軽度の炎症性細胞浸潤を伴っていた。回復終了時剖検群では、これらの変化は消失した。なお、剖検時にみられた白色巣は病理組織学的に精子肉芽腫であった。
- 卵巢 : 交配群及び非交配群雌の 1000 mg/kg 群で大型卵胞の減少/消失、間質細胞の過形成、旧黄体の減少を伴う黄体の肥大がみられた。回復終了時剖検群では、これらの変化は消失した。
- 膣 : 交配群及び非交配群雌の 1000 mg/kg 群で上皮の粘液化の増加がみられた。回復終了時剖検群では、この変化は消失した。
- 乳腺 : 交配群及び非交配群雌の 1000 mg/kg 群でび慢性小葉腺房過形成がみられた。回復終了時剖検群では、この変化は消失した。
- 大腿骨 : 雄の 1000 mg/kg 群、交配群及び非交配群雌の 1000 mg/kg 群で骨幹端の骨梁の増加がみられた。回復期間終了時では雌雄の 1000 mg/kg 群で骨幹端の骨梁の増加がみられた。
- 胃 : 雄の 300 及び 1000 mg/kg 群、交配群雌の 300 及び 1000 mg/kg 群、並びに非交配群雌の 1000 mg/kg 群で前胃の過角化と扁平上皮過形成、交配群及び非交配群の雌の 1000 mg/kg 群で前胃の粘膜固有層の水腫がみられた。これらの変化は回復終了時剖検群では消失した。
- 腎臓 : 雄、交配群及び非交配群雌の 1000 mg/kg 群で尿路上皮細胞の空胞化がみられた。この変化は回復終了時剖検群

では消失した。

膀胱 : 雄、交配群及び非交配群雌の 1000 mg/kg 群で尿路上皮細胞の空胞化がみられた。この変化は回復終了時剖検群では消失した。

2) 交尾不成立雌雄動物、妊娠 25 日未分娩動物及びその交配相手雄

交尾不成立雌雄動物（雄 2009×雌 2109）では、特記すべき変化はみられず、交尾不成立の原因は明らかでないが、発現状況と用量との関連がないことから、毒性学的意義はないと判断した。

妊娠 25 日未分娩動物（雌 4101~4112）及びその交配相手（雄 4001~4012）における剖検では、着床は認められず、不妊であった。組織学的には卵巢で大型卵胞の減少/消失、間質細胞の過形成、旧黄体の減少を伴う黄体の肥大、精巢上体では、尾部の管腔内の細胞残渣、精子肉芽腫及び間質の水腫がみられ、雌不妊の原因と考えられた。

10.12 性周期

結果を Table 11、Appendix 10-1~10-8 に示した。

交配前投与期間において、1000 mg/kg 群で投与 3 日から 11 日以降に連続休止期像がみられ、媒体対照群と比べ発情期像発現回数に有意な低値、性周期異常率（9/12 例で 75.0%）に有意な高値が認められた。100 及び 300 mg/kg 群における性周期異常率、発情期像発現回数及び平均性周期（発情周期）には、媒体対照群との間に差は認められなかった。

10.13 交配成績

結果を Table 12-1 及び 12-2、Appendix 11-1~11-8 に示した。

交尾不成立は 100 mg/kg 群で 1 組（雄 2009×雌 2109）、交配開始後 14 日に交尾が 100 及び 300 mg/kg 群で各 1 組みられたが、他の組み合わせは交配開始後 4 日までに交尾した。妊娠 25 日に至っても未分娩であった雌動物は 1000 mg/kg 群の 12/12 例にみられた。これら動物の剖検では、着床は確認できず不妊であった。したがって、受胎率は 1000 mg/kg 群で 0%であった。

10.14 分娩成績並びに分娩及び哺育状態

結果を Table 13、14、Appendix 12-1~12-3、13-1~13-3 並びに Table 1-4、1-5、Appendix 1-13~1-18 に示した。

分娩成績は、100 及び 300 mg/kg 群で媒体対照群と比べ妊娠期間、出産率、着床痕数、分娩率、出生率、出産児数、出生児数、性比（生後 0 日）及び死産児数に差は認められなかった。また、いずれの群にも外表異常児はみられなかった。

妊娠動物の分娩状態では、妊娠 25 日に至っても未分娩であった 1000 mg/kg 群の 12/12 例を除き、全例が妊娠 21.5 から 22.5 日に分娩し、胎盤及び羊膜の処理は正常に

行われた。哺育状態ではいずれの母動物にも児集め、営巣及び授乳行動に異常はみられなかった。

10.15 出生児の Anogenital Distance (AGD)

結果を Table 15、Appendix 14-1~14-3 に示した。

生後 0 日の AGD では、媒体対照群と 100 及び 300 mg/kg 群の間に被験物質投与による差は認められなかった。なお、100 mg/kg 群の雄で標準化した AGD に有意な高値が認められたが、用量との関連はないことから偶発的変化と判断した。

10.16 出生児の生存性

結果を Table 16、Appendix 15-1~15-3 に示した。

生後 4 及び 13 日の生存児数及び生存率には、媒体対照群と 100 及び 300 mg/kg 群の間に差は認められなかった。

10.17 出生児の性比

結果を Table 17、Appendix 16-1~16-3 に示した。

生後 4 日の性比には、媒体対照群と 100 及び 300 mg/kg 群の間に差は認められなかった。

10.18 出生児の体重

結果を Table 18-1 及び 18-2、Appendix 17-1~17-6 に示した。

雌雄出生児ともに、出生時、生後 4 日の調整前及び調整後、生後 7 及び 13 日の体重並びに生後 0~4、4~7 及び 4~13 日の間の体重増加量には、媒体対照群と 100 及び 300 mg/kg 群の間に差は認められなかった。

10.19 死亡児の肉眼観察所見

結果を Table 19、Appendix 18-1~18-3 に示した。

いずれの死亡児にも肉眼的異常はみられなかった。

10.20 雄出生児の乳頭/乳輪数

結果を Table 20、Appendix 19-1~19-3 に示した。

雄出生児の乳頭/乳輪数は、いずれの動物にもみられず、媒体対照群と 100 及び 300 mg/kg 群の間に差は認められなかった。

10.21 出生児の生後 13 日剖検所見

結果を Table 21、Appendix 20-1~20-3 に示した。

いずれの動物にも肉眼的異常はみられなかった。

10.22 出生児の器官重量

結果を Table 22-1 及び 22-2、Appendix 21-1~21-6 に示した。

雌雄ともに、甲状腺重量には媒体対照群と 100 及び 300 mg/kg 群の間で差は認められなかった。

11. 考察及び結論

Benzenemethanol, 4-methyl-の 0 (対照群 : 0.5 w/v% メチルセルロース溶液)、100、300 及び 1000 mg/kg を Sprague-Dawley 系 SPF ラットの雄には交配前 14 日間に加え交配期間を通して剖検前日まで (42 日間)、交配群雌には交配前 14 日間に加え交配期間及び妊娠期間を通して授乳 13 日まで (50~64 日間)、非交配群雌には 42 日間、それぞれ強制経口投与し、反復投与毒性及び生殖発生毒性を検討した。更に、0 及び 1000 mg/kg 群の一部の動物については、雌雄ともに 42 日間投与した後 14 日間の回復期間を設け、毒性変化の可逆性を検討した。

11.1 反復投与毒性

いずれの投与群においても死亡動物はみられなかった。

一般状態では、雄、交配群 (交配前投与期間) 及び非交配群雌の 1000 mg/kg 群で腹臥が一過性又は断続的にみられた。これと関連して、交配群雌 (投与 1 週) でケージ内観察に腹臥、手に持った観察でケージからの取り易さ及びハンドリングに対する反応性で無抵抗、オープンフィールド内観察で軽度な歩行異常と腹臥、加えて、交配群雌 (投与 1 及び 2 週) 及び非交配群 (投与 1~3、6 週) のオープンフィールド内観察で立ち上がり回数の低値、更に、非交配群雌では 1000 mg/kg 群で測定開始後 0~10、10~20、30~40 分における自発運動量及び総運動量に低値が認められ、中枢神経系への抑制が示唆された。類似物質のベンジルアルコール³⁾及びトルエン⁴⁾にも中枢神経系への影響が報告されている。なお、腹臥は本被験物質の予備試験²⁾にもみられており、再現性が確認された。これらの変化は回復期間中消失した。

体重では、雄の 1000 mg/kg 群で体重増加の抑制がみられ、最終体重で 8% 低かった。一方、交配群雌の 1000 mg/kg 群で交配前投与期間において、体重増加がみられ 9% 高かった。これと関連して、同群の雌で投与 15 日に摂餌量の高値、投与 3~11 日以降には連続休止期像の性周期異常率 (9/12 例) が認められたことから、正常性周期の雌の摂餌量減少に対し、連続休止期像の雌の摂餌量不変化⁵⁾が体重増加の原因と考えられた。交配群雌の 300 mg/kg 群でも投与 15 日に摂餌量の高値が認められたが、正常性周期であることから、被験物質投与との関連のない生理的変動範囲内の変化と判断した。なお、回復期間において、雌の 1000 mg/kg 群で体重増加の抑制 (最終体重で約 7% 減少) がみられた。しかし、投与期間中に同変化はみられず、他の検査項目に体重増加の抑制を示唆する変化がみられないことから、被験物質投与の影響と考えるよりは、むしろ偶発的变化の可能性が高いと考えられた。

尿検査では、投与期間終了週において、雄及び非交配群雌の 1000 mg/kg 群で摂水量の高値、胃の組織学的検査では、雄の 300 及び 1000 mg/kg 群、交配群雌の 300 及び 1000 mg/kg 群並びに非交配群雌の 1000 mg/kg 群で前胃の過角化と扁平上皮の過形成、交配群及び非交配群の 1000 mg/kg 群の雌で前胃粘膜固有層の水腫がみられた。本被験物質は皮膚に腐食性/刺激性と眼に対する重篤な損傷性/刺激性が報告⁶⁾されている。類似物質のベンジルアルコールも皮膚及び眼に対して刺激性、前胃の過形成が報告^{3), 7)}されていることから、摂水量の高値及び胃の所見は被験物質の刺激性との関連が示唆された。また、雄、交配群及び非交配群雌の 1000 mg/kg 群で腎臓及び膀胱に尿路上皮細胞の空胞化がみられた。尿路上皮細胞の空胞化は被験物質/代謝物の尿中排泄による尿路上皮細胞に対する影響と推察された。また、雄の 1000 mg/kg 群で尿量に高値、非交配群雌の 1000 mg/kg 群でも尿量及び尿中 K に高値が認められ、被験物質投与の影響が示唆されたが、血中 K に異常がないことから、毒性学的意義は低いと考えられた。尿検査における変化は 2 週間の休薬により消失し、可逆的な変化であった。

血液学検査では、雄の 1000 mg/kg 群で RBC、HGB 及び HCT に低値、RDW 及び RETIC に高値が認められ、貧血が示唆された。類似物質のトルエンはベンゼンに起因する造血機能障害が報告⁴⁾されていることから、本被験物質も同様な機序の可能性が考えられた。非交配群雌では、1000 mg/kg 群で PLT に低値が認められたが、関連するパラメータに異常はなく、組織学検査に出血・血栓はみられず、巨核球にも異常はなく、肝臓及び脾臓等の網内系に PLT をトラップする所見がないものの、被験物質投与の影響を全く否定できなかった。

血液化学検査では、投与期間終了時において、雄及び非交配群雌の 1000 mg/kg 群で ALP の高値、雄の 1000 mg/kg 群、交配群及び非交配群雌の 1000 mg/kg 群で大腿骨骨幹端における骨梁の増加が認められ、骨への影響が示唆された。回復期間終了時においても、雌雄の 1000 mg/kg 群で大腿骨骨幹端における骨梁の増加がみられたが、所見の程度は軽減し、回復性が示唆された。その他に、雄の 1000 mg/kg 群で AST 及び肝臓の相対重量の高値が認められたが、その程度は軽微であり、絶対重量に差はなく、肝臓の組織学検査に異常はないことから極めて軽微な変化と考えられた。また、雄の 1000 mg/kg 群、交配群雌の 300 mg/kg 群で CRNN の高値が認められた。尿路上皮細胞の空胞化がみられたものの、糸球体や尿細管に組織学的異常がないことから、腎臓への影響は示唆されるものの、その程度は軽微であると考えられた。

血清中ホルモン (T4) 濃度測定では、雄及び非交配群雌の 1000 mg/kg 群で低値が認められたが、T3 及び TSH 値、甲状腺重量、下垂体及び甲状腺の組織学検査に異常はないこと、雄の 1000 mg/kg 群で肝臓の相対重量のみに高値、非交配群雌の 1000 mg/kg 群で肝臓重量の高値が認められたことから、肝臓における T4 の分解・排泄促進の可能性が考えられ、肝臓重量の高値は外来異物に対する生体の適応変化であると推定されることから、これら変化に毒性学的意義は低いと判断した。上記変化は回復期間終了時に消失した。

病理学検査では、投与期間終了時において、雄の 1000 mg/kg 群で精巣上体に尾部の白色巣が 1/7 例、組織学的に精子肉芽腫が 2/7 例、尾部の管腔内の細胞残渣、間質の炎症性細胞浸潤を伴う水腫がみられ、被験物質投与による精巣上体への影響と考えられた。回復期間終了時においては、上記変化はみられなかった。

卵巣では、交配群及び非交配群雌の 1000 mg/kg 群で大型卵胞の減少/消失、間質細胞の過形成がみられ、排卵障害が示唆された。これと関連して、交配前投与期間において、交配群雌の 1000 mg/kg 群で連続休止期像による発情期像発現回数に低値、性周期異常率 (9/12 例で 75.0%) の高値が認められた。また、組織学検査においては、旧黄体の減少を伴う黄体の肥大、膣上皮の粘液化の増加、乳腺のび慢性小葉腺房過形成がみられ、黄体におけるステロイド生成の活性化並びに黄体機能維持のためのプロラクチン分泌亢進 (偽妊娠)⁸⁾により生じたと推察された。回復期間終了時では、これら変化は消失した。

なお、回復期間終了時において、雄の 1000 mg/kg 群で精巣、精巣上体及び肛門挙筋・球海綿体筋の絶対重量に低値が認められ、背景データ [Min.-Max. (Mean $\pm$ 2 S.D.) ; 精巣 : 3.24-3.73 g (3.45 $\pm$ 0.30 g)、精巣上体 : 1221-1484 mg (1372 $\pm$ 122 mg) 12 試験、2016-2021 年、肛門挙筋・球海綿体筋 : 1.56-1.83 g (1.71 $\pm$ 0.18 g) 8 試験、2016-2021 年) を下回った。また、雄の 1000 mg/kg 群で副腎の絶対及び相対重量に高値が認められた。しかし、投与期間終了時にみられず、精巣、精巣上体及び肛門挙筋・球海綿体筋では相対重量に有意差はなく、副腎、精巣、精巣上体及び肛門挙筋・球海綿体筋の組織学的検査に異常はなかったことから、被験物質投与の影響と考えるよりは、むしろ偶発的变化と判断した。

11.2 生殖発生毒性

100 及び 300 mg/kg 群では、雌雄動物の生殖機能に関するパラメータに被験物質投与の影響は認められないことから、雌雄動物の交尾能、授精能及び受胎能、母動物の妊娠維持、分娩及び哺育行動などへの影響はないと判断した。また、出生児のいずれの検査項目にも被験物質投与による影響は認められないことから、児の子宮内発生、生後の発育及び分化並びに生存性などへの影響はないと判断した。

1000 mg/kg 群では、交配群雌の交配前投与期間において、連続休止期像による性周期異常率の高値、発情期像発現回数の低値がみられ、全例、交尾はしたものの雌全例は不妊であった。組織学検査では卵巣で大型卵胞の減少/消失と間質細胞の過形成、黄体の肥大、精巣上体で尾部の管腔内の細胞残渣、精子肉芽腫及び間質の水腫がみられ、雌不妊の原因と考えられた。

これらの結果から、本試験条件下で Benzenemethanol, 4-methyl-を反復経口投与することにより、被験物質に起因すると考えられる主な変化として、300 及び 1000 mg/kg 群の雌雄で前胃の過角化と扁平上皮の過形成、1000 mg/kg 群の雌雄で腹臥、摂水量及び尿量の高値、ALP の高値、T4 の低値、肝臓重量の高値、腎臓及び膀胱に尿路上皮

細胞の空胞化、大腿骨の骨幹端の骨梁の増加、更に、雄で体重増加の抑制、貧血、AST 及び CRNN の高値、精巣上体白色巣、精子肉芽腫、尾部における管腔内の細胞残渣と間質の炎症性細胞浸潤を伴う水腫、雌で軽度な歩行異常、立ち上がり回数の低値、自発運動量及び総運動量に低値、交配前投与期間に体重増加、摂餌量の高値、尿中 K の高値、PLT の低値、前胃粘膜固有層の水腫、大型卵胞の減少/消失、間質細胞の過形成、旧黄体の減少を伴う黄体の肥大、膈上皮の粘液化の増加、乳腺のび慢性小葉腺房過形成が認められた。300 mg/kg 群の雌で CRNN の高値が認められた。なお、回復期間終了時において、1000 mg/kg 群の雄で副腎の絶対及び相対重量に高値、精巣、精巣上体及び肛門挙筋・球海綿体筋の絶対重量に低値が認められた。したがって、本被験物質の反復投与毒性に対する無影響量及び無毒性量は、雌雄ともにいずれも 100 mg/kg と判断した。

一方、生殖発生毒性に対する主な変化として、1000 mg/kg 群で性周期異常（連続休止期像）が 9/12 例みられ、全例（12/12）交尾はしたものの不妊であった。しかし、100 及び 300 mg/kg 群の雄親動物、母動物及び児動物のいずれも被験物質の影響が認められなかった。したがって、生殖発生毒性無影響量及び無毒性量は、いずれも親動物及び児動物ともに 300 mg/kg と判断した。

12. 参考文献

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- 2) 鷹野正生：Benzenemethanol, 4-methyl-：ラットを用いた 14 日間反復経口投与毒性試験（投与量設定試験）（株式会社ボゾリサーチセンター、試験番号 N-R112、2021 年）
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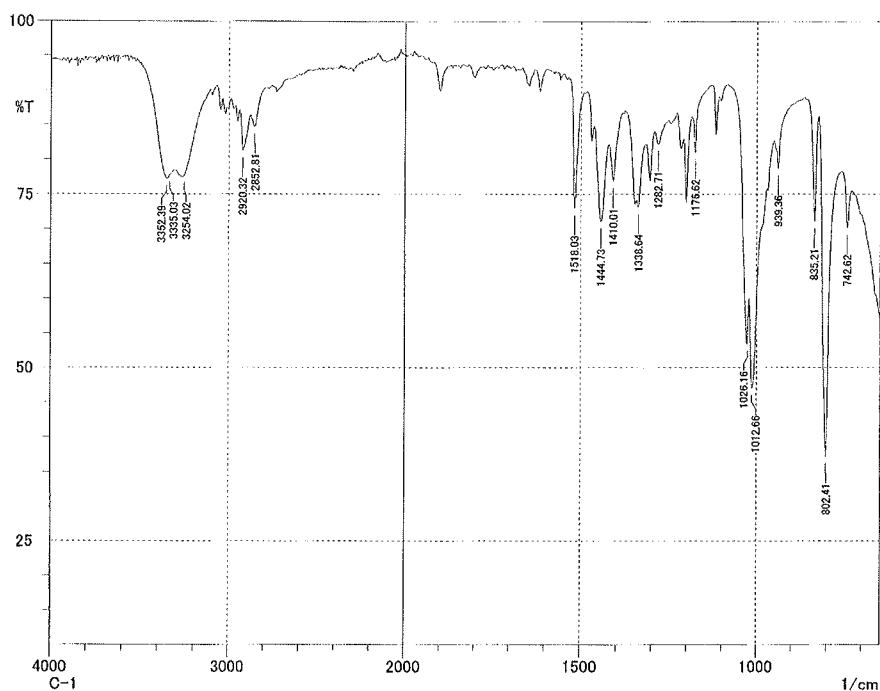
- 8) Dixon, D., Alison, R., Bach, U., Colman, K., Foley, G. L., Harleman, J. H., Haworth, R., Herbert, R., Heuser, A., Long, G., Mirsky, M., Regan, K., Van Esch, E., Westwood, F. R., Vidal, J., & Yoshida, M. (2014). Nonproliferative and proliferative lesions of the rat and mouse female reproductive system. *Journal of toxicologic pathology*, 27(3-4 Suppl), 1S–107S.
<https://doi.org/10.1293/tox.27.1S>https://www.nite.go.jp/chem/chrip/chrip_search/dt/pdf/CI_02_011/96-4.pdf

試験成績書
Benzenemethanol, 4-methyl-の特性

試験番号 : R-1273
被験物質 : Benzenemethanol, 4-methyl-
ロット番号 :
保存条件 : 冷暗所、密栓
試験施設 : 株式会社ボゾリサーチセンター 御殿場研究所
測定日 : 2021 年 10 月 11 日 (投与期間開始前)

測定項目 : 赤外吸収スペクトル (ATR 法)

結果 :



GLP : 「新規化学物質等に係る試験を実施する試験施設に関する基準」(平成 23 年 3 月 31 日:薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号)

2021 年 10 月 12 日

化学分析責任者
株式会社ボゾリサーチセンター 御殿場研究所

成績書番号 : R1273-安定性-1/2

試験成績書
Benzenemethanol, 4-methyl-の安定性

試験番号	: R-1273
被験物質	: Benzenemethanol, 4-methyl-
ロット番号	: [REDACTED]
保存条件	: 冷暗所、密栓
試験施設	: 株式会社ボゾリサーチセンター 御殿場研究所
測定日	: 2021 年 10 月 11 日 (投与期間開始前) 2021 年 12 月 28 日 (投与期間終了後)
測定項目	: 赤外吸収スペクトル (ATR 法)
判定基準	: 投与期間終了後のスペクトルを投与期間開始前のスペクトルと比較し、同等 (主な吸収について、同一の波数域に同様の強度の吸収を認める) であること。
結果	: 投与期間開始前のスペクトルと同等であった。 赤外吸収スペクトルは次ページに示す。
判定	: 適
GLP	: 「新規化学物質等に係る試験を実施する試験施設に関する基準」(平成 23 年 3 月 31 日: 薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号)

[REDACTED]
化学分析責任者

株式会社ボゾリサーチセンター 御殿場研究所

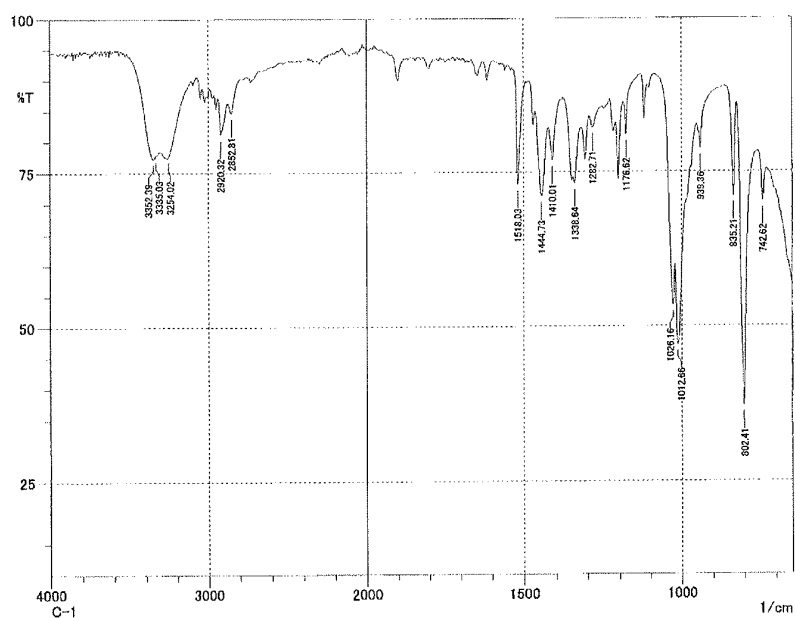
2022 年 1 月 5 日

成績書番号 : R1273-安定性-2/2

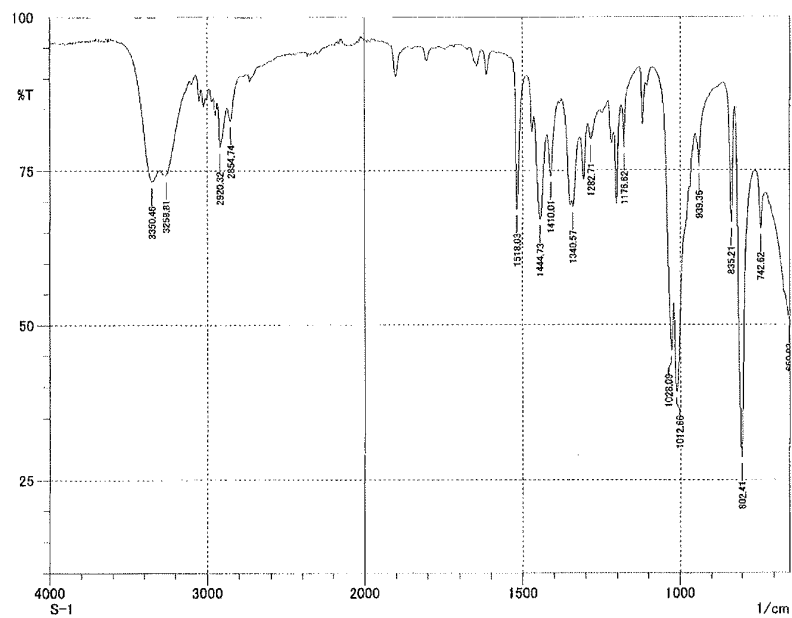
試験成績書
Benzenemethanol, 4-methyl-の安定性

試験番号 : R-1273

投与期間開始前

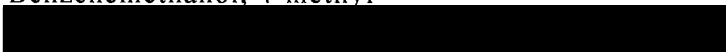


投与期間終了後



試験成績書

被験液中 Benzenemethanol, 4-methyl-の安定性及び均一性

試験番号 : A-3318
被験物質 : Benzenemethanol, 4-methyl-
ロット番号 : 
媒体 : 0.5 w/v%メチルセルロース溶液
形態 : 懸濁液

測定対象物質 : Benzenemethanol, 4-methyl-

保存条件 : 褐色ガラス瓶にて、遮光、冷蔵（許容値：1°C~10°C）
及び非遮光、室温（許容値：1°C~30°C）で保存。

保存期間 : 冷蔵で 8 日間保存後、室温で 24 時間保存。

判定基準

安定性 : 残存率〔初期値（調製日）の平均値（100%）に対する
保存後の測定濃度の平均値の割合〕が 100.0% ± 10.0%
以内。

均一性 : 調製日及び保存後の変動係数（CV）が 10.0%以下。

結果 : 次ページに記載

判定 : 適

GLP : 「新規化学物質等に係る試験を実施する試験施設に関
する基準」（平成 23 年 3 月 31 日：薬食発 0331 第 8 号、
平成 23・03・29 製局第 6 号、環保企発第 110331010 号）

 2021 年 12 月 15 日

試験責任者
株式会社ボゾリサーチセンター 御殿場研究所

試験成績書
被験液中 Benzenemethanol, 4-methyl-の安定性及び均一性

試験番号 : A-3318

結果：

調製濃度 (mg/mL)	採取層	測定濃度 (mg/mL)	
		初期値（調製日）	保存後
2.00	上層	2.11	2.14
	中層	2.12	2.16
	下層	2.13	2.13
	平均値	2.12	2.14
	標準偏差	0.01	0.02
	残存率（%）	(100)	100.9
	CV（%）	0.5	0.9
100	上層	104	104
	中層	102	104
	下層	102	102
	平均値	103	103
	標準偏差	1	1
	残存率（%）	(100)	100.0
	CV（%）	1.0	1.0

分析結果

試験番号 : R-1273
 測定項目 : 濃度・均一性
 ステージ : 初回投与

測定日 : 2021 年 10 月 20 日

測定試料
 被験物質 : Benzenemethanol, 4-methyl- (略称: 4MBE)
 (ロット番号 XXXXXXXXXX)
 媒体 : 0.5 w/v%メチルセルロース溶液
 形態 : 懸濁液
 調製日 : 2021 年 10 月 20 日

測定対象物質 : Benzenemethanol, 4-methyl-

評価基準
 濃度 : 表示値に対する割合; 100% ± 10% (平均値で評価)
 均一性 : CV (変動係数) 10%以下

結果:

表示値 (mg/mL)	採取層	測定濃度 (mg/mL)		表示値に 対する割合 (%)	CV (%)
		個々の値	平均値±標準偏差		
10	上層	10.4			
	中層	9.78	10.3 ± 0.5	103.0	4.9
	下層	10.7			
30	上層	31.9			
	中層	30.5	31.3 ± 0.7	104.3	2.2
	下層	31.6			
100	上層	101			
	中層	104	102 ± 2	102.0	2.0
	下層	101			

判定 : 適

分析結果

試験番号 : R-1273
測定項目 : 濃度・均一性
ステージ : 雄の最終投与

測定日 : 2021 年 12 月 1 日

測定試料
被験物質 : Benzenemethanol, 4-methyl- (略称 : 4MBE)
(ロット番号 XXXXXXXXXX)
媒体 : 0.5 w/v%メチルセルロース溶液
形態 : 懸濁液
調製日 : 2021 年 12 月 1 日

測定対象物質 : Benzenemethanol, 4-methyl-

評価基準
濃度 : 表示値に対する割合; 100% ± 10% (平均値で評価)
均一性 : CV (変動係数) 10%以下

結果 :

表示値 (mg/mL)	採取層	測定濃度 (mg/mL)		表示値に 対する割合 (%)	CV (%)
		個々の値	平均値±標準偏差		
10	上層	10.4			
	中層	10.4	10.4 ± 0.1	104.0	1.0
	下層	10.3			
30	上層	30.8			
	中層	31.6	31.1 ± 0.4	103.7	1.3
	下層	31.0			
100	上層	100			
	中層	99.4	101 ± 1	101.0	1.0
	下層	102			

判定 : 適

R-1273
Attachment 5 (1/27)
OT-210006

ホルモン測定報告書

「Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖
発生毒性併合試験（試験番号 R-1273）」におけるホルモン測定

OT-210006

株式会社ボゾリサーチセンター
〒151-0065 東京都渋谷区大山町 36-7

R-1273
Attachment 5 (2/27)
OT-210006

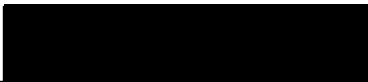
1. GLP 陳述書

ホルモン測定番号 : OT-210006

ホルモン測定表題 : 「Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」におけるホルモン測定

本作業は以下の GLP 基準を遵守して実施したものです。

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
（平成 23 年 3 月 31 日：薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号）

 2022 年 3 月 16 日

試験主任者
株式会社ボゾリサーチセンター つくば研究所

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R-1273

Attachment 5 (5/27)

OT-210006

3. ホルモン測定実施概要

3.1 ホルモン測定番号

OT-210006

3.2 ホルモン測定表題

「Benzenemethanol, 4-methyl-：ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」におけるホルモン測定

3.3 目的

「Benzenemethanol, 4-methyl-：ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」において採取された血清中のホルモン濃度を測定することを目的とした。

3.4 遵守した基準

3.4.1 GLP

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
（平成 23 年 3 月 31 日：薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号）

3.5 試験施設

株式会社ボゾリサーチセンター 御殿場研究所
〒412-0039 静岡県御殿場市かまど 1284

3.6 試験場所

株式会社ボゾリサーチセンター つくば研究所
〒300-2611 茨城県つくば市大久保 8 番

3.7 試験責任者

株式会社ボゾリサーチセンター 御殿場研究所 研究部門
[Redacted]

3.8 試験主任者

株式会社ボゾリサーチセンター つくば研究所 臨床検査部門
[Redacted]

測定担当者：

試料受領日	2021年12月8日、2021年12月28日
測定期間	2021年12月25日～2022年2月18日
ホルモン測定報告書作成日	2022年3月16日

ホルモン測定用試料及び TSH 測定に使用したラット管理血清を保存していた冷凍庫の温度データが、センサーの不具合により一時的に欠損した。欠損時間は最大約 10 分であり、欠損前後の温度はほぼ同じであったことから、温度の逸脱はないと考え、試料の安定性及び試験成績の信頼性に影響は無いと判断した。温度データ欠損の日時、欠損時間、温度推移は下表の通り。

欠損日時	欠損時間	欠損前後の温度推移
2021年12月22日6時24分~6時34分	約10分	-82℃~-81℃
2021年12月26日23時00分~23時10分	約10分	-83℃~-81℃
2021年12月30日11時12分~11時20分	約8分	-82℃~-81℃
2022年1月2日14時28分~14時32分	約4分	-82℃~-81℃

欠損日時	欠損時間	欠損前後の温度推移
2021年10月13日21時31分~21時37分	約6分	-81℃~-80℃
2021年10月16日7時45分~7時51分	約6分	-81℃~-80℃
2022年1月13日21時43分~21時47分	約4分	-81℃~-80℃
2022年1月15日19時57分~20時5分	約8分	-81℃~-80℃

- 1) ホルモン測定計画書の原本
- 2) ホルモン測定計画書変更書の原本
- 3) 試験計画書の写し

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- 4) 試験計画書変更書の写し
- 5) 生データ及びその他の記録文書
- 6) ホルモン測定報告書の原本
- 7) 通信記録

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3.13 試験主任者の署名

 2022 年 3 月 16 日

株式会社ボゾリサーチセンター つくば研究所

4. 要約

「Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」において採取された投与終了時動物（EOA）の交配群の雄及び非交配群の雌、生後 4 日児動物（PD4）、生後 13 日児動物（PD13）、授乳 14 日母動物（LD14）、回復終了時動物（EOR）の交配群の雄及び非交配群の雌の T4 濃度、EOA の T3 及び TSH 濃度を測定した。

その結果、EOA の T4 濃度において、高用量群で媒体対照群と比べて有意な低下が認められた。一方、PD4、PD13、LD14、EOR の T4 濃度、EOA の T3 及び TSH 濃度では、媒体対照群と全ての投与群との間に有意差は認められなかった。

5. 試験構成

5.1 概要

試験番号 R-1273 (Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験) の群構成を下表に示す。

群構成表 (雄)

試験群	投与量 (mg/kg)	交配群			
		投与終了時剖検群		回復終了時剖検群	
		動物数	動物番号	動物数	動物番号
媒体対照	0	7	1001-1007	5	1008-1012
低用量	100	12	2001-2012		
中用量	300	12	3001-3012		
高用量	1000	7	4001-4007	5	4008-4012

群構成表 (雌)

試験群	投与量 (mg/kg)	交配群		非交配群			
		投与終了時剖検群		投与終了時剖検群		回復終了時剖検群	
		動物数	動物番号	動物数	動物番号	動物数	動物番号
媒体対照	0	12	1101-1112	5	5101-5105	5	5106-5110
低用量	100	12	2101-2112				
中用量	300	12	3101-3112				
高用量	1000	12	4101-4112	5	6101-6105	5	6106-6110

5.2 試料

Text-Table 1

ホルモン 測定試料 (血清)	試験群	動物数	血清試料数			
			交配群		非交配群	
			投与終了 時剖検群	回復終了 時剖検群	投与終了 時剖検群	回復終了 時剖検群
測定対象	媒体対照	雄 10	5 ^{b)}	5 ^{a)}	—	—
		雌 15	5 ^{a)}	—	5 ^{a), b)}	5 ^{a)}
	低用量	雄 5	5 ^{b)}	—	—	—
		雌 5	5 ^{a)}	—	—	—
	中用量	雄 5	5 ^{b)}	—	—	—
		雌 5	5 ^{a)}	—	—	—
	高用量	雄 10	5 ^{b)}	5 ^{a)}	—	—
		雌 10	0 ^{c)}	—	5 ^{a), b)}	5 ^{a)}
	上記に加え、生後 4 日及び 13 日の児動物（交配群の各用量群の母動物から 5 腹ずつ、計 30 腹分）。 a)：交配群雌の授乳 14 日母動物、非交配群雌（投与終了時）及び生後 4 日児動物並びに回復動物について、試験責任者の判断により T4 濃度を追加測定した。 b)：交配群雄（投与終了時）及び非交配群雌（投与終了時）について、試験責任者の判断により T3 及び TSH 濃度を追加測定した。 c)：未分娩であったため、試料無し。					
	受領チューブ数	雌雄：約 0.5 mL×3 本、児（生後 4 日）：約 0.2 mL×1 本、児（生後 13 日）：約 0.3 mL×3 本、合計 255 本				
試験施設での保存条件		-80°C の冷凍庫（許容範囲：-70°C 以下）、実測値は許容範囲内であった。				
輸送条件		ドライアイス同梱下で輸送された。				
識別		ラベルに明記された情報（試験番号、採血時期、検査項目、試料番号、試料名、色分け及び採取年月日）をもとに、試験場所で血清試料名を割り付けた。				
試験場所での保存条件		-80°C の冷凍庫（許容範囲：-70°C 以下）、実測値は許容範囲内であった（3.11 参照）。				
血清試料安定性（-70°C 以下）		T4：保存安定性 16 週間、繰返し凍結融解回数 3 回まで。 T3：保存安定性 16 週間、繰返し凍結融解回数 3 回まで。 TSH：保存安定性 104 日間、繰返し凍結融解回数 3 回まで。 測定は上記の条件内で実施した。				
残余の取扱い		測定後の残余の血清は、ホルモン測定報告書作成後に試験責任者の指示に基づいて試験場所で廃棄する。				

6. 材料及び方法

受領した試料（Text-Table 1）を用いて下記 6.1 に従い、ホルモン濃度を測定した。測定方法及び測定キットに関する情報を下表（Text-Table 2、Text-Table 3）に示す。

Text-Table 2

ホルモン測定				
検査項目	測定方法	単位	表示桁数	測定範囲
T4	RIA 法	ng/mL	小数第 1 位	5.7 ~ 340.0 ng/mL
T3	RIA 法	ng/mL	小数第 2 位	0.27 ~ 7.70 ng/mL
TSH	RIA 法	ng/mL	小数第 1 位	1.0 ~ 64.0 ng/mL
使用測定機器 ガンマカウンター (AccuFLEX γ 7010、日立)				

Text-Table 3

T4	
キット	: RIA-gnost®-T4 (Cisbio Bioassays)
保存条件	: 2~8°C (実測値は許容範囲内であった。)
Lot No. (使用期限)	: 285U (12/28/2021)、287U (2/22/2022)
Calibrator (表示濃度)	: Cal-0、1 (22.6 ng/mL)、2 (49.0 ng/mL)、3 (100.0 ng/mL)、4 (196.0 ng/mL)、5 (340.0 ng/mL)
T3	
キット	: RIA-gnost®-T3 (Cisbio Bioassays)
保存条件	: 2~8°C (実測値は許容範囲内であった。)
Lot No. (使用期限)	: 288U (3/22/2022)
Calibrator (表示濃度)	: Cal-0、1 (0.53 ng/mL)、2 (1.02 ng/mL)、3 (2.12 ng/mL)、4 (4.20 ng/mL)、5 (7.70 ng/mL)
TSH	
キット	: rTSH [125 I] RIA KIT (Institute of isotopes Co., Ltd. (Izotop))
保存条件	: 2°C~8°C (実測値は許容範囲内であった。)
Lot No. (使用期限)	: 220594R (4/1/2022)
Calibrator 調製濃度	: Cal-1 (1.0 ng/mL)、2 (2.0 ng/mL)、3 (4.0 ng/mL)、4 (8.0 ng/mL)、5 (16.0 ng/mL)、6 (32.0 ng/mL)、7 (64.0 ng/mL)
TSH 測定用 BLK-QC (ラット管理血清)	
保存条件	: -70°C 以下 (実測値は許容範囲内であった (3.11 参照)。)
Lot No. (使用期限)	: RS211007 (10/7/2022)

6.1 アッセイ方法

6.1.1 T4 測定

6.1.1.1 Cal-1/2 及び Cal-1/4 の調製

Cal-1 と Cal-0 を 1 : 1 (60 μ L : 60 μ L) で混合し、Cal-1/2 (表示濃度 : 11.3 ng/mL) とした。さらに、Cal-1/2 と Cal-0 を 1 : 1 (60 μ L : 60 μ L または 30 μ L : 30 μ L) で混合し、Cal-1/4 (表示濃度 : 5.7 ng/mL) とした。調製当日を使用期限とした。

6.1.1.2 測定操作

- 1) 各試料 20 μ L を Ab チューブ (Antibody-coated tube) に加えた。
- 2) 125 I-T4 tracer (1 mL) をチューブに添加し、ふたをして攪拌した。
- 3) 125 I-T4 tracer をプラスチックチューブ (丸底テストチューブ、WATSON) に加えたものを Total Count (TC) とした。
- 4) 23°C 設定のインキュベータ内で 45~55 分間 (実時間 : 50 分間) 振とうした。
- 5) チューブ内の溶液をアスピレータで除去した (TC を除く)。
- 6) ガンマカウンターでチューブの 125 I (60 秒間) の放射線計数率 (cpm) を測定した。

6.1.2 T3 測定

6.1.2.1 Cal-1/2 の調製

Cal-1 と Cal-0 を 1 : 1 (60 μ L : 60 μ L) で混合し、Cal-1/2 (表示濃度 : 0.27 ng/mL) とした。調製当日を使用期限とした。

6.1.2.2 測定操作

- 1) 各試料 50 μ L を Ab チューブ (Antibody-coated tube) に加えた。
- 2) 125 I-T3 tracer (1 mL) をチューブに添加し、ふたをして攪拌した。
- 3) 125 I-T3 tracer をプラスチックチューブ (丸底テストチューブ、WATSON) に加えたものを Total Count (TC) とした。
- 4) 23°C 設定のインキュベータ内で 45~60 分間 (実時間 : 50 分間) 振とうした。
- 5) チューブ内の溶液をアスピレータで除去した (TC を除く)。
- 6) ガンマカウンターでチューブの 125 I (60 秒間) の放射線計数率 (cpm) を測定した。

6.1.3 TSH 測定

6.1.3.1 Rat-QC の調製

BLK-QC と Cal-7 (64.0 ng/mL) を 9 : 1 (270 μ L : 30 μ L) で混合し、Rat-QC とした。

調製当日を使用期限とした。

6.1.3.2 測定操作

- 1) Assay buffer (200 μ L) をチューブに加えたものを Non Specific Binding (NSB) とした。
- 2) Assay buffer (100 μ L) をチューブに加えたものを Blank (BLK) とした。
- 3) Calibrator (Cal-1~7)、BLK-QC、Rat-QC 及び血清試料 (100 μ L) を対応するチューブに添加した。
- 4) Antiserum solution (100 μ L) を上記のチューブに加えた (NSB 除く)。
- 5) Tracer solution (100 μ L) を全てのチューブに加えた。
- 6) Tracer solution (100 μ L) をプラスチックチューブ (丸底テストチューブ、WATSON) に加えたものを Total Count (TC) とした。
- 7) 全てのチューブを攪拌した (TC 除く)。
- 8) 全てのチューブを 23°C 設定インキュベータで 20 $\pm$ 4 時間 (実時間: 19 時間 20 分 ~ 19 時間 35 分) 静置した。
- 9) Separating second antibody reagent を緩やかに混和、均一にした後、400 μ L/チューブで加えた (TC 除く)。
- 10) 全てのチューブを攪拌した (TC 除く)。
- 11) 23°C 設定のインキュベータ内で 10 $\pm$ 1 分間 (実時間: 10 分間) 静置した。
- 12) 全てのチューブ (TC を除く) を遠心した (2000 $\times$ g、10 分間、4°C)。
- 13) チューブ内の上清を吸引除去した (TC を除く)。
- 14) 沈殿を含んだチューブの底部を切り取って測定用チューブに移した。
- 15) ガンマカウンターで測定用チューブの 125 I (60 秒間) の放射線計数率 (cpm) を測定した。

6.2 データ解析

Magellan Tracker ver. 7.0 ソフトウェア (Tecan) を用いて、放射線計数率 (cpm) から各試料のホルモン濃度を算出した。

X 軸を濃度 (ng/mL、対数表示)、Y 軸を放射線計数率 (cpm) の測定値とし、表示濃度のプロットから検量線を作成した。

解析法、表示桁数を下表に示す。

検査項目	解析法	表示桁数	
		放射線計数率 (cpm)	測定濃度
T4	4 パラメーター Marquardt (重み付け: 1/Y ²)	小数第 1 位	小数第 1 位
T3	4 パラメーター Marquardt (重み付け: 1/Y ²)	小数第 1 位	小数第 2 位
TSH	4 パラメーター Marquardt	小数第 1 位	小数第 1 位

6.3 測定成立条件の評価

本測定は、以下の測定成立条件を全て満たしていたことから測定成立とした。計算は Microsoft office Excel で実施 (表示桁数で計算) した。

6.3.1 T4 測定

1) TC 及び Cal-0

- TC 及び Cal-0 の平均放射線計数率が Cal-1/4 の平均放射線計数率を超えている。
- 平均放射線計数率は以下の計算式から算出した (小数第 1 位まで表示)。

$$\text{平均放射線計数率 (cpm)} = \frac{\text{個別放射線計数率 (cpm) の和}}{2}$$

2) 標準試料

- Duplicate での個別放射線計数率の差が 2 倍未満である。
- 測定濃度 (個別濃度の平均) の表示濃度に対する真度が Cal-1/4、Cal-5 で 100.0 ± 25.0% 以内、Cal-1/2~4 のうち 4 試料以上で 100.0 ± 20.0% 以内である。
- 真度 (%) は以下の計算式から算出した (小数第 1 位まで表示)。

$$\text{真度 (\%)} = \frac{\text{測定濃度}}{\text{表示濃度}} \times 100$$

3) QC

- Duplicate での個別放射線計数率の差が 2 倍未満で、かつ測定濃度 (個別濃度の平均) が表示濃度範囲内である。

6.3.2 T3 測定

1) TC 及び Cal-0

- TC 及び Cal-0 の平均放射線計数率が Cal-1/2 の平均放射線計数率を超えている。
- 平均放射線計数率は以下の計算式から算出した（小数第 2 位まで表示）。

$$\text{平均放射線計数率 (cpm)} = \frac{\text{個別放射線計数率 (cpm) の和}}{2}$$

2) 標準試料

- Duplicate での個別放射線計数率の差が 2 倍未満である。
- 測定濃度（個別濃度の平均）の表示濃度に対する真度が Cal-1/2、Cal-5 で $100.0 \pm 25.0\%$ 以内、Cal-1~4 のうち 3 試料以上で $100.0 \pm 20.0\%$ 以内である。
- 真度（%）は以下の計算式から算出した（小数第 1 位まで表示）。

$$\text{真度 (\%)} = \frac{\text{測定濃度}}{\text{表示濃度}} \times 100$$

3) QC

- Duplicate での個別放射線計数率の差が 2 倍未満で、かつ測定濃度（個別濃度の平均）が表示濃度範囲内である。

6.3.3 TSH 測定

1) TC、BLK 及び NSB

- TC 及び BLK の平均放射線計数率が Cal-1 の平均放射線計数率を超えている。
- NSB の平均放射線計数率が Cal-7 の平均放射線計数率を下回っている。
- 平均放射線計数率は以下の計算式から算出した（小数第 1 位まで表示）。

$$\text{平均放射線計数率 (cpm)} = \frac{\text{個別放射線計数率 (cpm) の和}}{2}$$

2) 標準試料

- Duplicate での個別放射線計数率の差が 2 倍未満である。
- 測定濃度（個別濃度の平均）の調製濃度に対する真度が Cal-1、Cal-7 で $100.0 \pm 25.0\%$ 以内、Cal-2~6 のうち 4 試料以上で $100.0 \pm 20.0\%$ 以内である。
- 真度（%）は以下の計算式から算出した（小数第 1 位まで表示）。

$$\text{真度 (\%)} = \frac{\text{測定濃度}}{\text{調製濃度}} \times 100$$

3) QC

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- Duplicate での個別放射線計数率の差が 2 倍未満である。
- 下式で算出した真度が 100.0±25.0%以内である（小数第 1 位まで表示）。

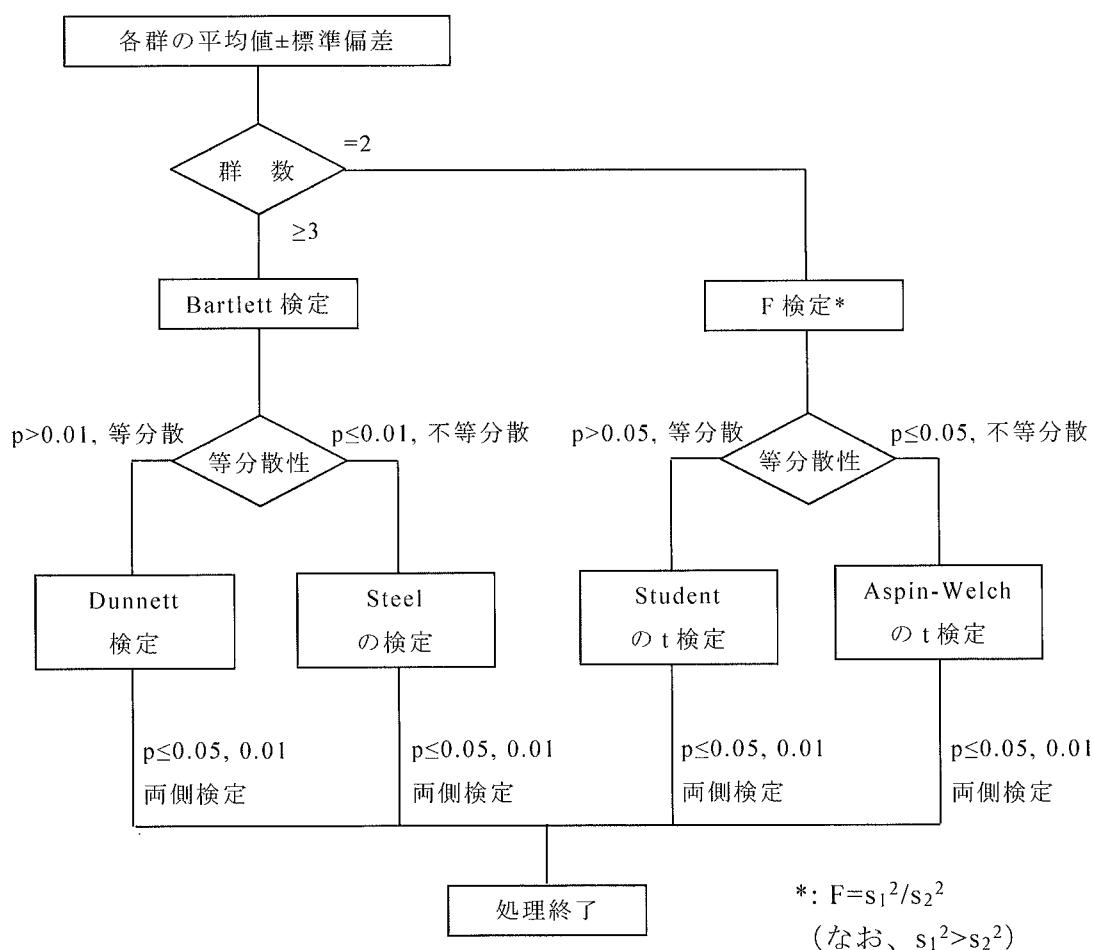
$$\text{真度 (\%)} = \frac{\text{Rat-QC 測定濃度}}{(\text{BLK-QC 測定濃度} \times 0.9 + 6.4)} \times 100$$

6.4 再測定

再測定は実施しなかった。

7. 統計解析

検査項目について下記の模式図に示す方法に従って検定した。各群の平均値 (Mean) 及び標準偏差 (SD) の算出には、それぞれ Microsoft Office Excel における AVERAGE 関数及び STDEV 関数を用いた。解析には SAS Release 9.1.3 を使用した。



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8. 結果及び考察

下記の通り、投与終了時動物（EOA）の交配群の雄において高用量群で T4 濃度の有意な変化が認められたことから、生後 13 日児動物（PD13）に加えて、試験責任者の指示により、EOA の非交配群の雌、生後 4 日児動物（PD4）、授乳 14 日母動物（LD14）及び回復終了時動物（EOR）の交配群の雄及び非交配群の雌の T4 濃度を測定した。その結果、EOA の非交配群の雌においても高用量群で T4 濃度の有意な変化が認められたことから、さらに EOA の T3 及び TSH 濃度を測定した。

8.1 投与終了時動物（EOA）

T4 濃度測定の結果を Table 1、Table 2 に示す。

交配群の雄及び非交配群の雌において高用量群で媒体対照群と比べて有意な低下が認められた。

T3 及び TSH 濃度測定の結果を、それぞれ Table 3、Table 4 及び Table 5、Table 6 に示す。

T3、TSH 濃度において、雌雄ともに媒体対照群と全ての投与群との間に有意差は認められなかった。

8.2 生後 4 日及び 13 日児動物（PD4、PD13）

T4 濃度測定の結果を Table 7、Table 8 に示す。

媒体対照群と全ての投与群との間に有意差は認められなかった。

8.3 授乳 14 日母動物（LD14）

T4 濃度測定の結果を Table 9 に示す。

媒体対照群と全ての投与群との間に有意差は認められなかった。

8.4 回復終了時動物（EOR）

T4 濃度測定の結果を Table 10、Table 11 に示す。

交配群の雄及び非交配群の雌ともに、媒体対照群と投与群との間に有意差は認められなかった。

9. 結論

「Benzenemethanol, 4-methyl- : ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」において採取された投与終了時動物（EOA）の交配群の雄及び非交配群の雌、生後 4 日児動物（PD4）、生後 13 日児動物（PD13）、授乳 14 日母動物（LD14）、回復終了時動物（EOR）の交配群の雄及び非交配群の雌の T4 濃度、EOA の T3 及び TSH 濃度を測定した。

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その結果、EOA の T4 濃度において、高用量群で媒体対照群と比べて有意な低下が認められた。一方、PD4、PD13、LD14、EOR の T4 濃度、EOA の T3 及び TSH 濃度では、媒体対照群と全ての投与群との間に有意差は認められなかった。

Table 1 T4 concentrations in rat serum of EOA (Male)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
1001	36.1	2001	25.5	3001	34.5	4001	23.4
1002	36.4	2002	41.8	3002	36.3	4002	21.9
1003	30.0	2003	32.3	3003	35.2	4003	14.4
1004	36.0	2004	36.3	3004	37.4	4004	13.1
1005	34.5	2005	28.3	3005	35.8	4005	15.7
Mean	34.6	Mean	32.8	Mean	35.8	Mean	17.7 **
SD	2.7	SD	6.5	SD	1.1	SD	4.6
n	5	n	5	n	5	n	5

EOA: End of administration

: $p \leq 0.01$, Dunnett's testTable 2 T4 concentrations in rat serum of EOA (Non-mating female)**

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
5101	24.2	6101	10.0
5102	19.0	6102	18.2
5103	21.8	6103	13.6
5104	19.4	6104	18.5
5105	15.8	6105	13.3
Mean	20.0	Mean	14.7 *
SD	3.2	SD	3.6
n	5	n	5

EOA: End of administration

*: $p \leq 0.05$, Student's t-test

Table 3 T3 concentrations in rat serum of EOA (Male)

Animal No.	T3 (ng/mL)	Animal No.	T3 (ng/mL)	Animal No.	T3 (ng/mL)	Animal No.	T3 (ng/mL)
1001	0.51	2001	0.35	3001	0.58	4001	0.34
1002	0.36	2002	0.55	3002	0.52	4002	0.44
1003	0.41	2003	0.38	3003	0.29	4003	0.32
1004	0.48	2004	0.46	3004	0.41	4004	0.29
1005	0.49	2005	0.35	3005	0.57	4005	0.32
Mean	0.45	Mean	0.42	Mean	0.47	Mean	0.34
SD	0.06	SD	0.09	SD	0.12	SD	0.06
n	5	n	5	n	5	n	5

EOA: End of administration

No significant difference in any treated groups from vehicle control group.

Table 4 T3 concentrations in rat serum of EOA (Non-mating female)

Animal No.	T3 (ng/mL)	Animal No.	T3 (ng/mL)
5101	0.45	6101	0.35
5102	0.55	6102	0.40
5103	0.52	6103	0.54
5104	0.63	6104	0.55
5105	0.49	6105	0.53
Mean	0.53	Mean	0.47
SD	0.07	SD	0.09
n	5	n	5

EOA: End of administration

No significant difference in treated group from vehicle control group.

Table 5 TSH concentrations in rat serum of EOA (Male)

Animal No.	TSH (ng/mL)	Animal No.	TSH (ng/mL)	Animal No.	TSH (ng/mL)	Animal No.	TSH (ng/mL)
1001	17.9	2001	14.0	3001	4.2	4001	7.1
1002	4.5	2002	7.4	3002	8.7	4002	6.1
1003	6.8	2003	8.7	3003	2.4	4003	3.2
1004	12.1	2004	3.4	3004	3.6	4004	2.9
1005	6.5	2005	5.7	3005	5.2	4005	4.4
Mean	9.6	Mean	7.8	Mean	4.8	Mean	4.7
SD	5.4	SD	4.0	SD	2.4	SD	1.8
n	5	n	5	n	5	n	5

EOA: End of administration

No significant difference in any treated groups from vehicle control group.

Table 6 TSH concentrations in rat serum of EOA (Non-mating female)

Animal No.	TSH (ng/mL)	Animal No.	TSH (ng/mL)
5101	3.0	6101	1.8
5102	3.5	6102	3.2
5103	2.7	6103	3.2
5104	1.9	6104	4.2
5105	3.0	6105	3.1
Mean	2.8	Mean	3.1
SD	0.6	SD	0.9
n	5	n	5

EOA: End of administration

No significant difference in treated group from vehicle control group.

Table 7 T4 concentrations in rat serum of PD4 (Pups)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
1102	8.9	2101	12.4	3102	8.8
1103	8.2	2103	8.5	3103	10.3
1104	14.7	2104	7.2	3105	11.6
1105	9.8	2105	10.3	3107	11.1
1106	6.9	2112	9.4	3108	10.5
Mean	9.7	Mean	9.6	Mean	10.5
SD	3.0	SD	2.0	SD	1.1
n	5	n	5	n	5

PD4: Postnatal day 4

Animal No.: Dam No. of pups

No significant difference in any treated groups from vehicle control group.

Table 8 T4 concentrations in rat serum of PD13 (Pups)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
1102	37.7	2101	29.0	3102	37.9
1103	35.5	2103	32.3	3103	36.4
1104	36.4	2104	32.2	3105	35.5
1105	35.5	2105	36.6	3107	35.1
1106	34.6	2112	38.9	3108	42.6
Mean	35.9	Mean	33.8	Mean	37.5
SD	1.2	SD	3.9	SD	3.0
n	5	n	5	n	5

PD13: Postnatal day 13

Animal No.: Dam No. of pups

No significant difference in any treated groups from vehicle control group.

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Table 9 T4 concentrations in rat serum of LD14 (Female)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
1102	16.9	2101	16.5	3102	24.1
1103	19.5	2103	25.7	3103	17.7
1104	17.6	2104	19.1	3105	21.2
1105	21.0	2105	21.6	3107	22.2
1106	28.6	2112	19.5	3108	25.2
Mean	20.7	Mean	20.5	Mean	22.1
SD	4.7	SD	3.4	SD	2.9
n	5	n	5	n	5

LD14: Lactation day 14

No significant difference in any treated groups from vehicle control group.

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Table 10 T4 concentrations in rat serum of EOR (Male)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
1008	24.1	4008	28.0
1009	35.4	4009	23.3
1010	34.2	4010	24.8
1011	32.9	4011	29.6
1012	35.1	4012	30.1
Mean	32.3	Mean	27.2
SD	4.7	SD	3.0
n	5	n	5

EOR: End of recovery

No significant difference in treated group from vehicle control group.

Table 11 T4 concentrations in rat serum of EOR (Non-mating female)

Animal No.	T4 (ng/mL)	Animal No.	T4 (ng/mL)
5106	13.5	6106	20.2
5107	11.6	6107	20.8
5108	23.8	6108	16.5
5109	18.6	6109	26.4
5110	18.6	6110	30.2
Mean	17.2	Mean	22.8
SD	4.8	SD	5.4
n	5	n	5

EOR: End of recovery

No significant difference in treated group from vehicle control group.

信頼性保証書（1/2）

ホルモン測定番号： OT-210006

ホルモン測定表題： 「Benzenemethanol, 4-methyl-：ラットを用いた経口投与による反復投与毒性・生殖発生毒性併合試験（試験番号 R-1273）」
におけるホルモン測定

本測定は以下に示す基準に従って実施されたことを保証致します。

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
（平成 23 年 3 月 31 日：薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保
企発第 110331010 号）

なお、調査は下記の通り実施し、報告致しました。

調 査 項 目	調査担当者	調 査 日	試験主任者 及び試験場所 管理責任者 への報告日	試験責任者、 運営管理者及び 主信頼性保証 部門責任者 への報告日
ホルモン測定 計画書		2021 年 9 月 30 日 2021 年 10 月 5 日	2021 年 10 月 6 日	2021 年 10 月 6 日
ホルモン測定 計画書変更書（1）		2021 年 12 月 2 日 2021 年 12 月 3 日	2021 年 12 月 3 日	2021 年 12 月 6 日
試料受領（雄動 物）		2021 年 12 月 8 日	2021 年 12 月 8 日	2021 年 12 月 8 日
ホルモン測定		2021 年 12 月 25 日	2021 年 12 月 27 日	2021 年 12 月 27 日
試料受領（雌雄及 び児動物）		2021 年 12 月 28 日	2021 年 12 月 28 日	2021 年 12 月 28 日
ホルモン測定 計画書変更書（2）		2022 年 2 月 2 日	2022 年 2 月 2 日	2022 年 2 月 2 日
ホルモン測定 （TSH）		2022 年 2 月 17 日 2022 年 2 月 18 日	2022 年 2 月 18 日	2022 年 2 月 18 日

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信頼性保証書 (2/2)

調 査 項 目	調査担当者	調 査 日	試験主任者 及び試験場所 管理責任者 への報告日	試験責任者、 運営管理者及び 主信頼性保証 部門責任者 への報告日
ホルモン測定 報告書草案、 生データ		2022 年 3 月 9 日 2022 年 3 月 10 日	2022 年 3 月 10 日	2022 年 3 月 10 日
改善確認		2022 年 3 月 14 日	2022 年 3 月 15 日	2022 年 3 月 15 日
ホルモン測定 報告書		2022 年 3 月 15 日 2022 年 3 月 16 日	2022 年 3 月 16 日	2022 年 3 月 16 日

2022 年 3 月 16 日
株式会社ボゾリサーチセンター
つくば研究所
試験場所信頼性保証部門責任者

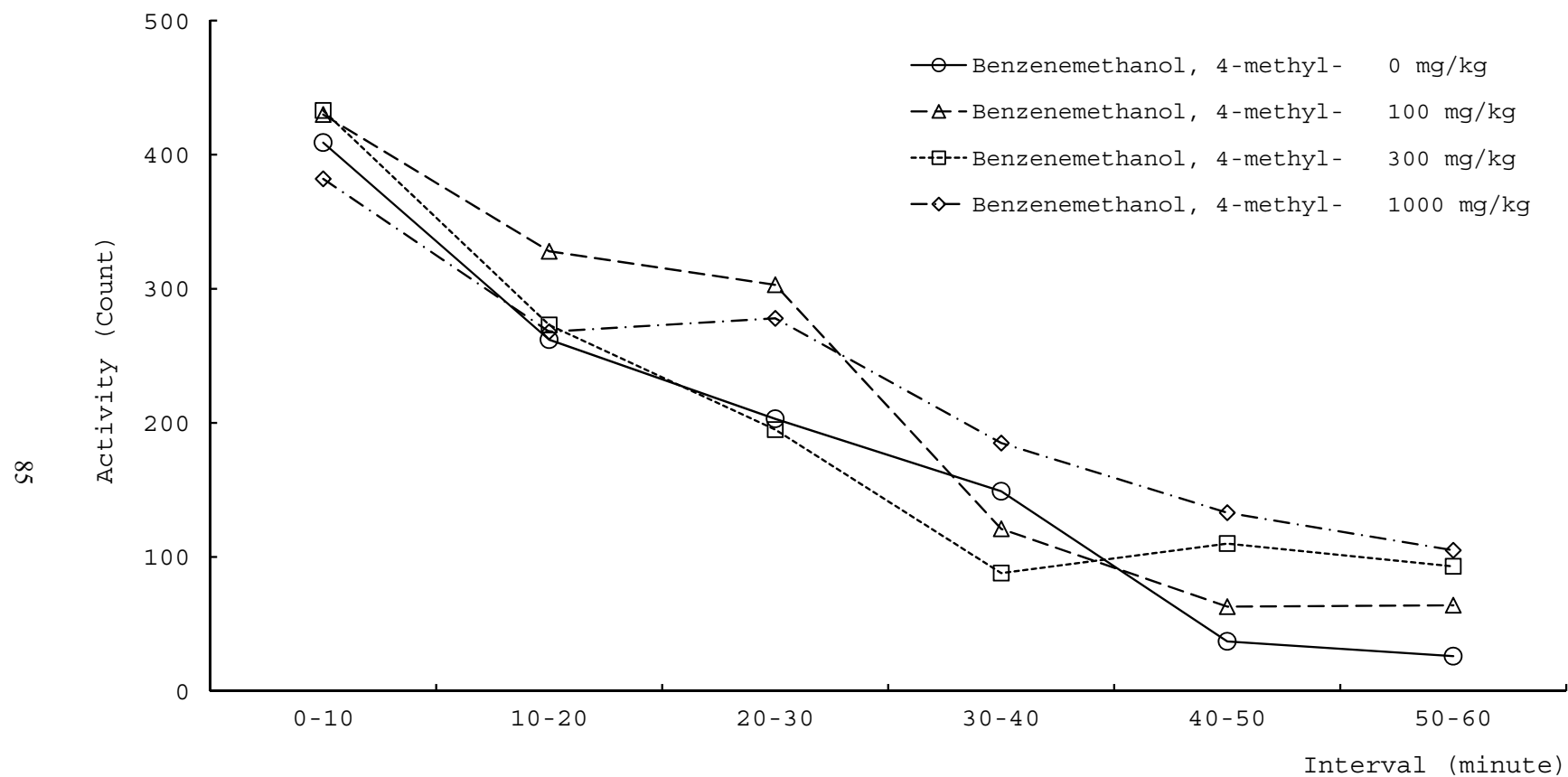


Fig.1 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Motor activity of male rats (Week 6 of administration)

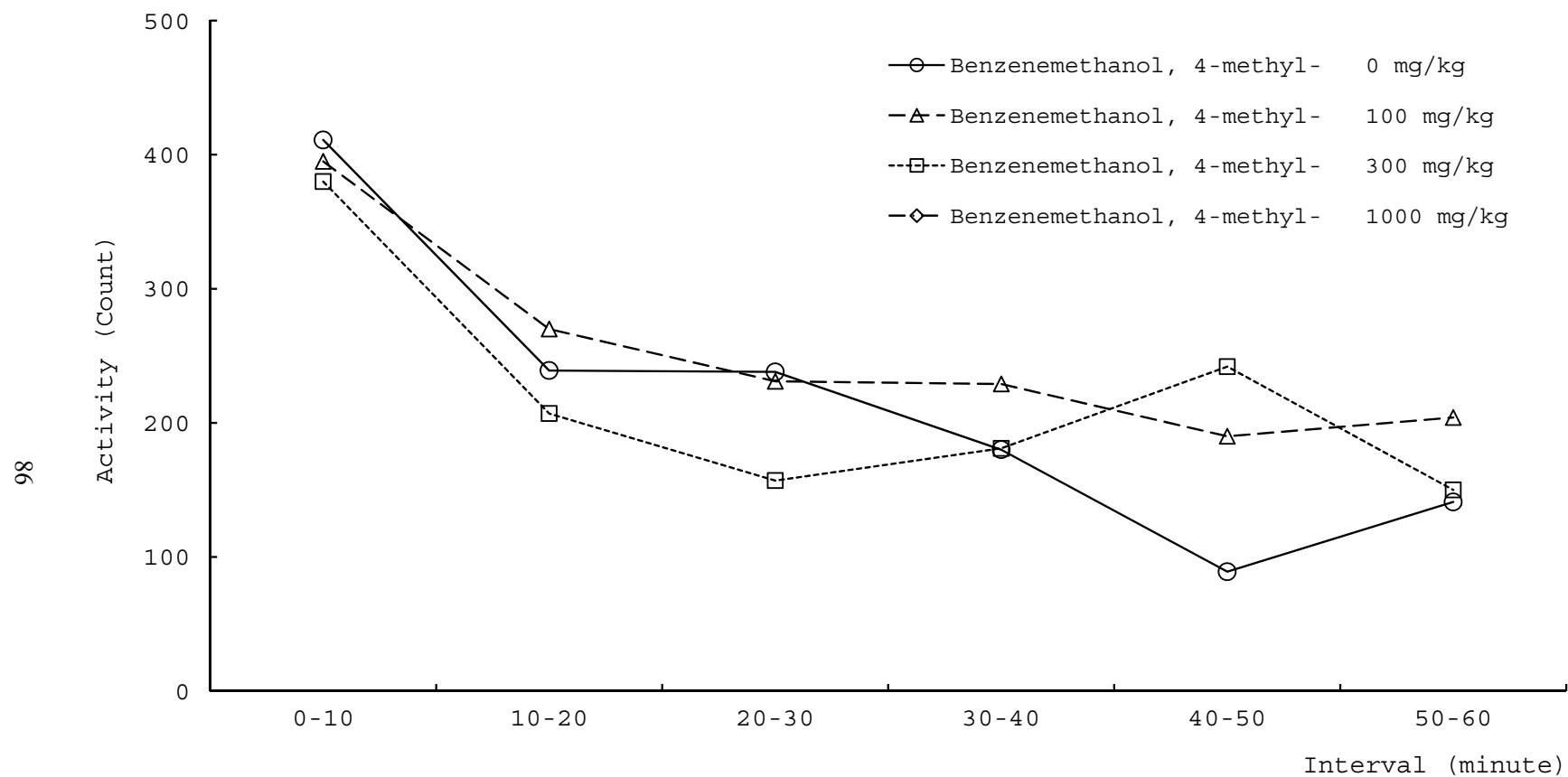


Fig.2 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Motor activity of female rats (Main group, Lactation Day13)

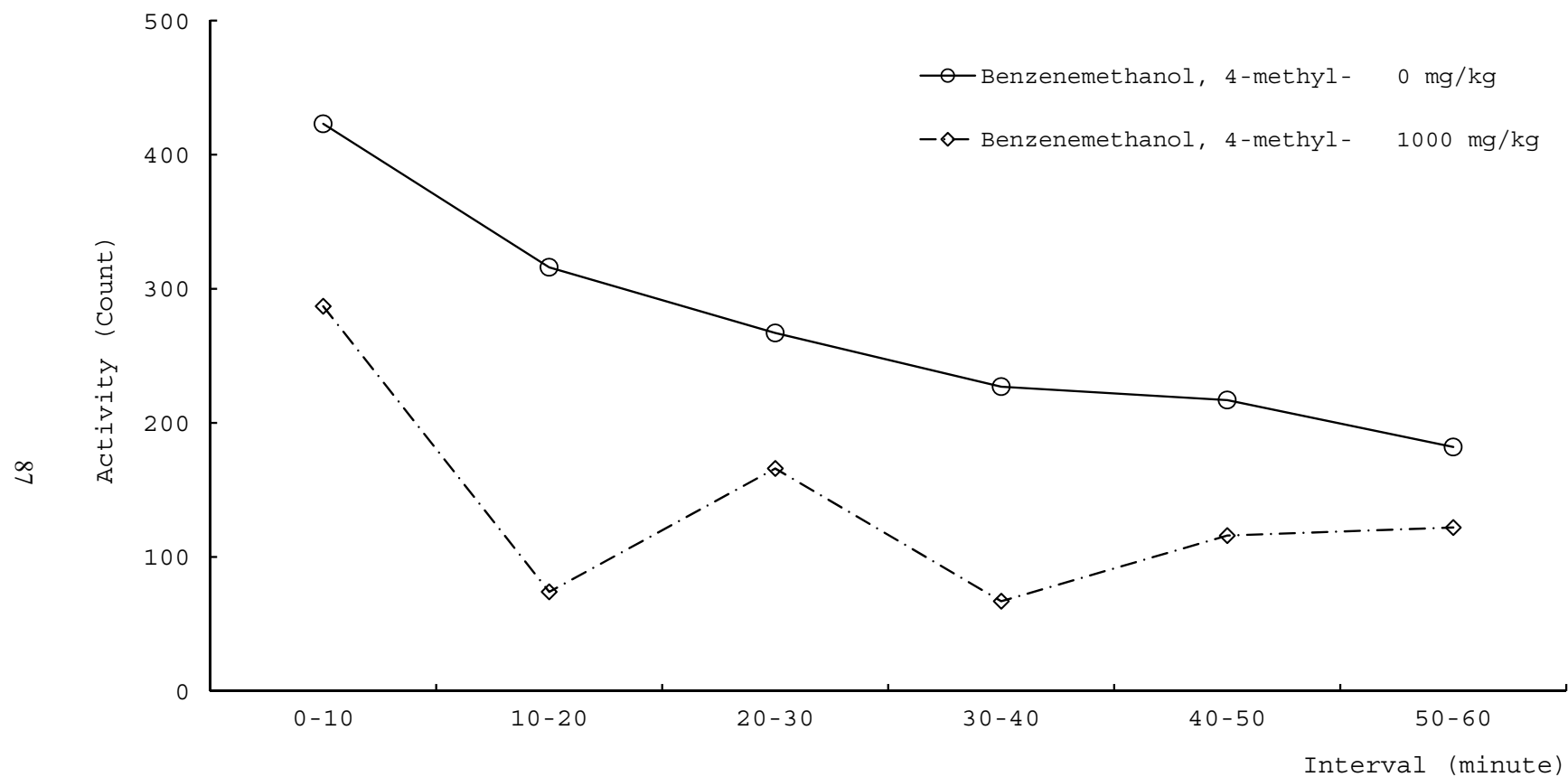


Fig.3 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Motor activity of female rats (Non-mating group, Week 6 of administration)

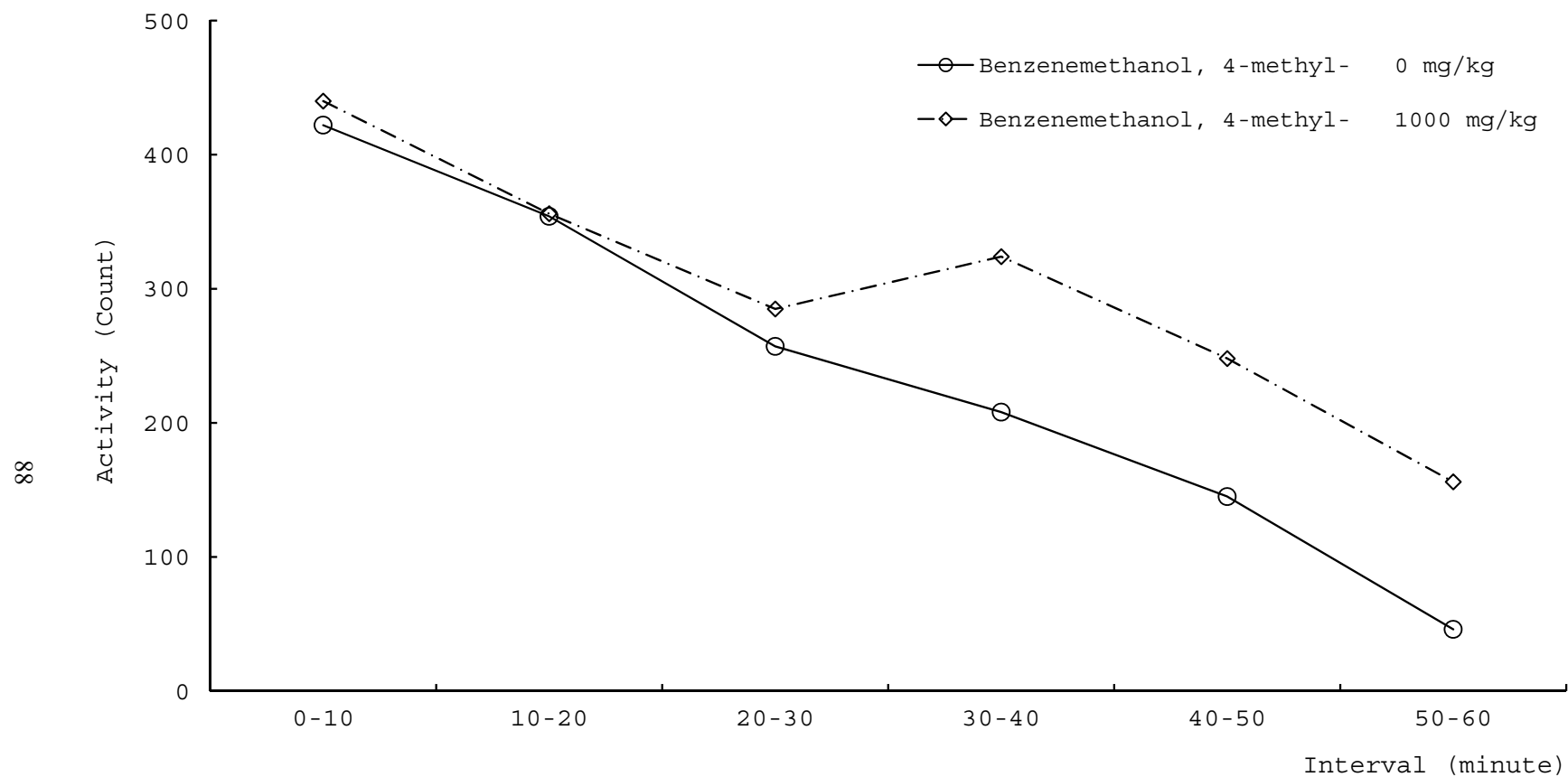


Fig.4 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Motor activity of male rats (Week 2 of recovery)

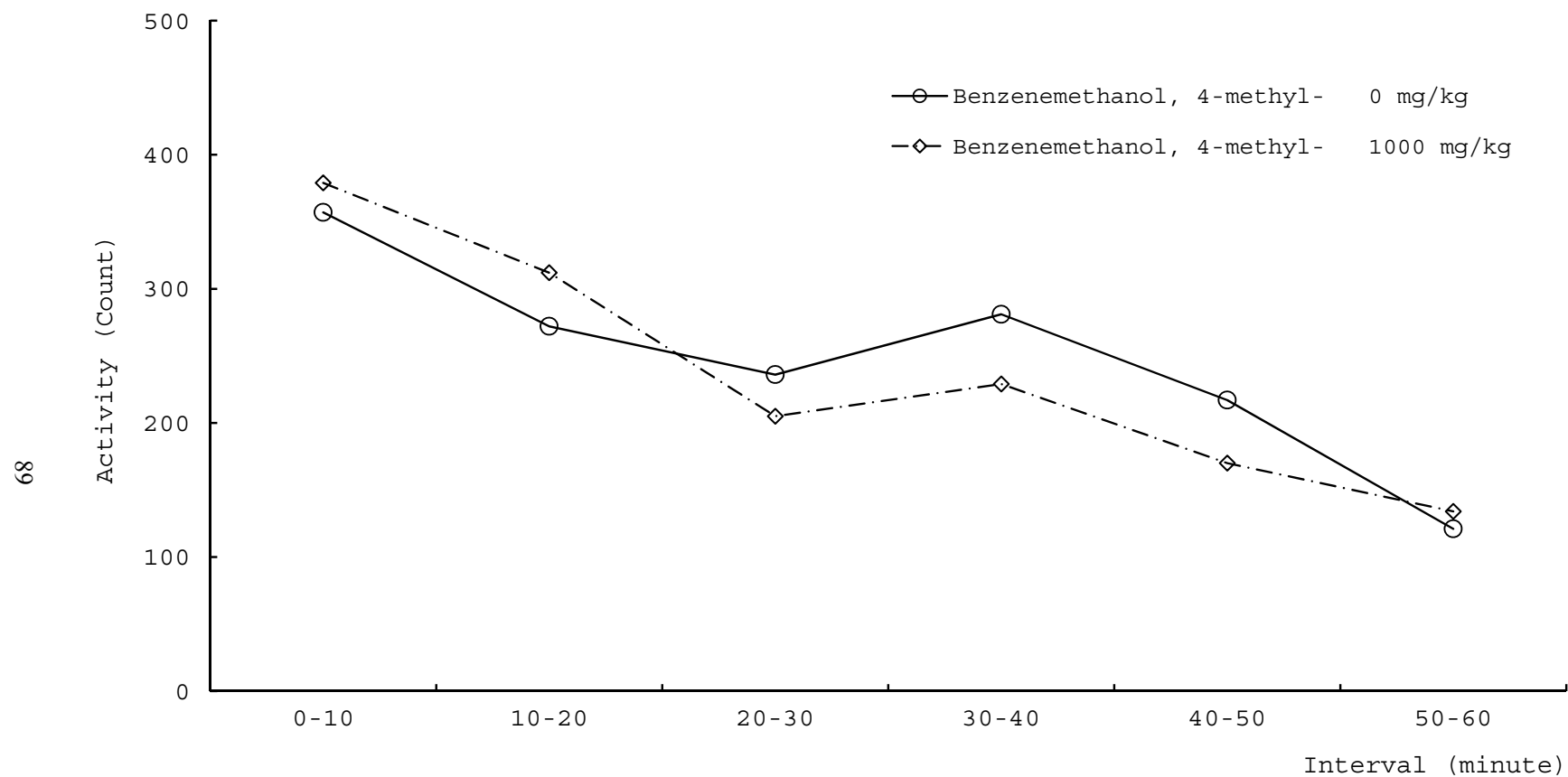


Fig.5 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Motor activity of female rats (Non-mating group, Week 2 of recovery)

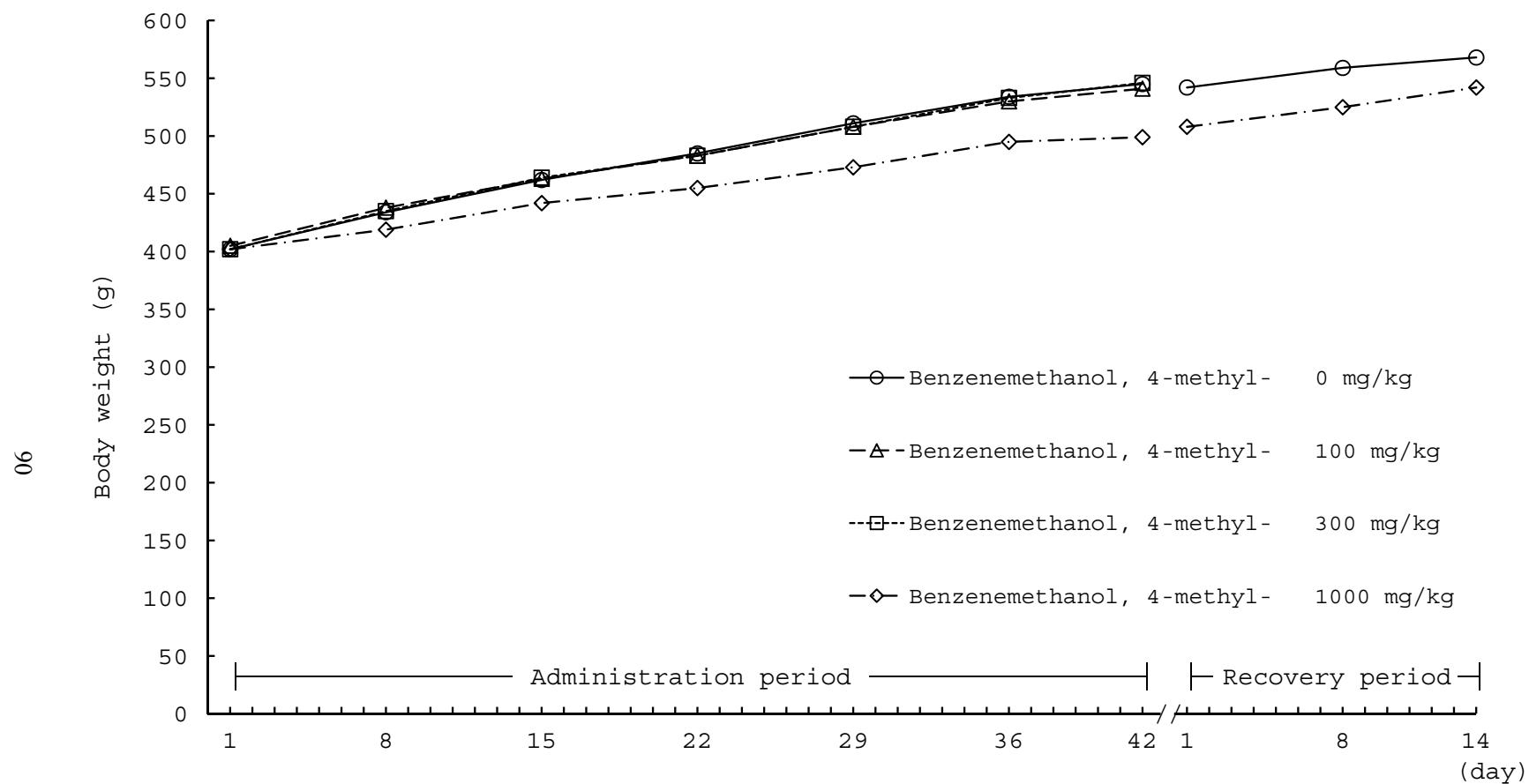


Fig.6 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Body weight of male rats

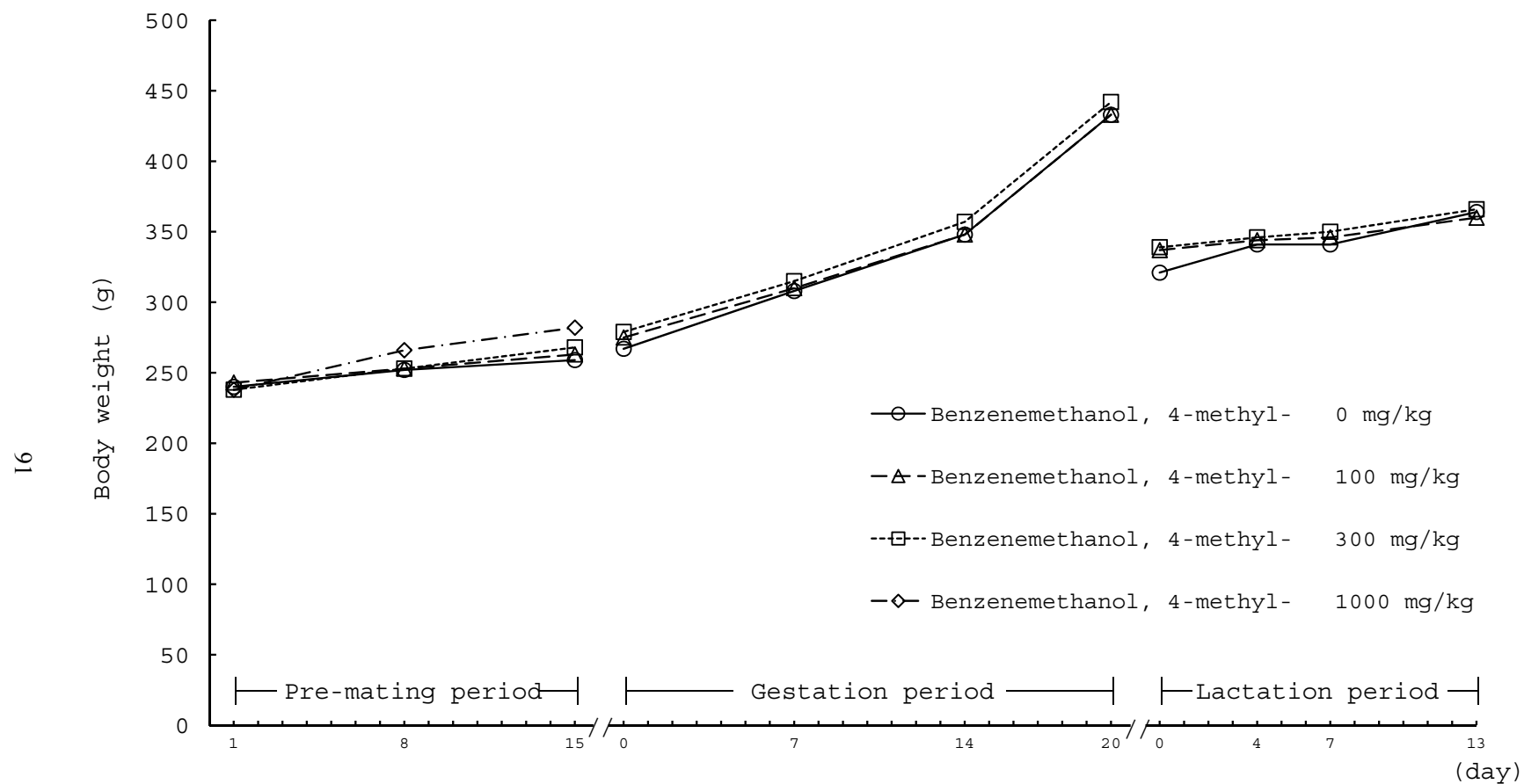


Fig.7 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Body weight of female rats (Mating group)

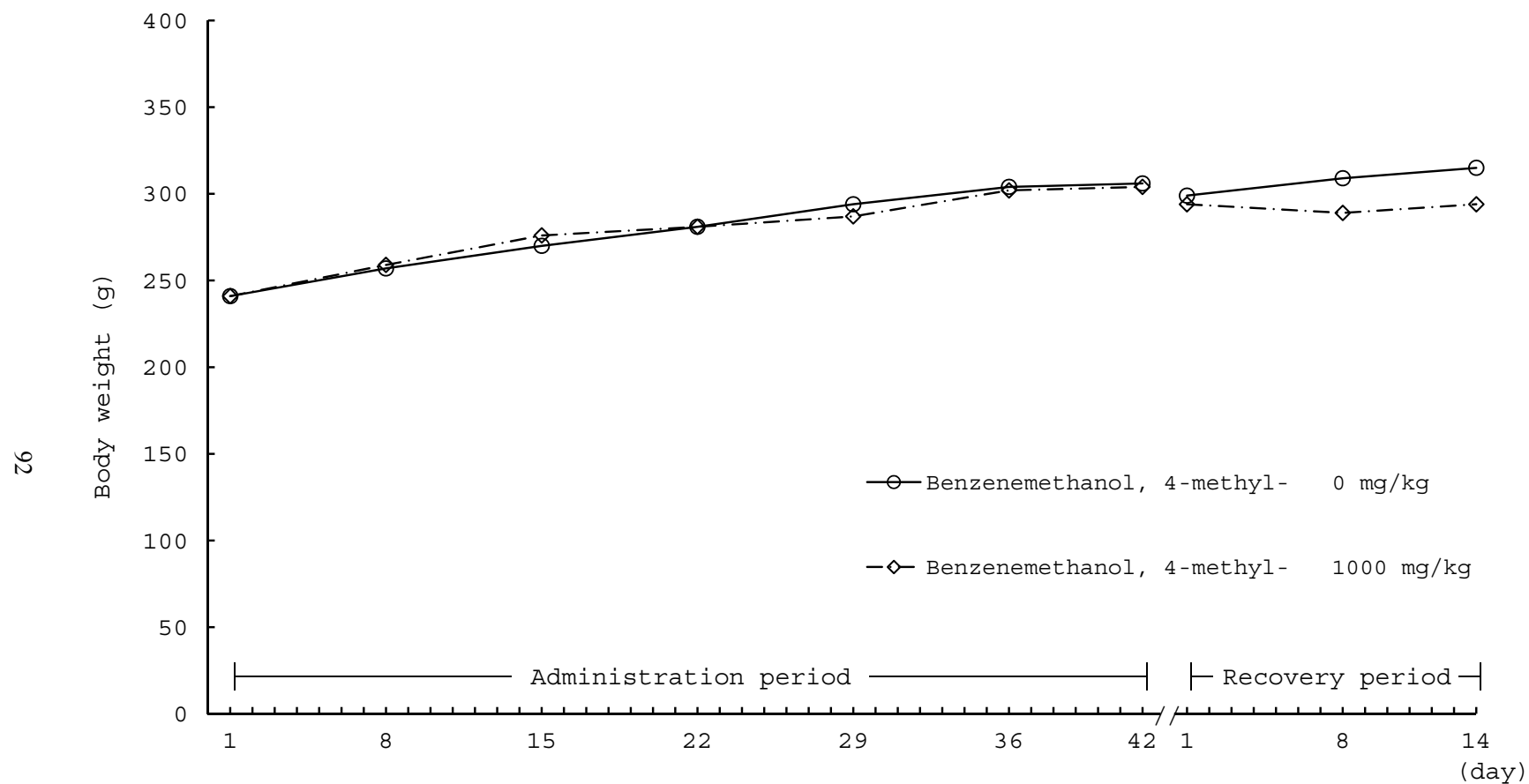


Fig.8 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Body weight of female rats (Non-mating group)

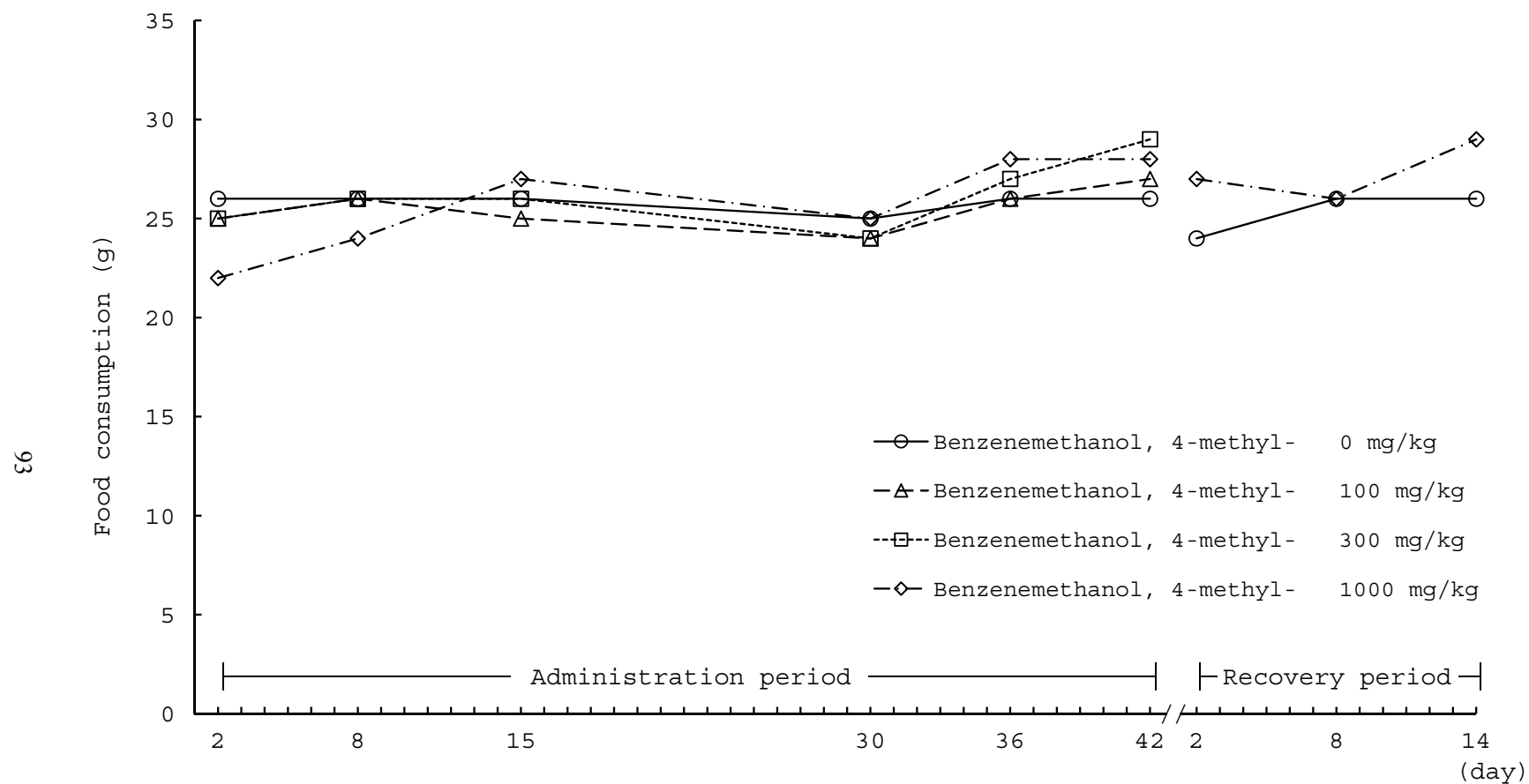


Fig.9 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Food consumption of male rats

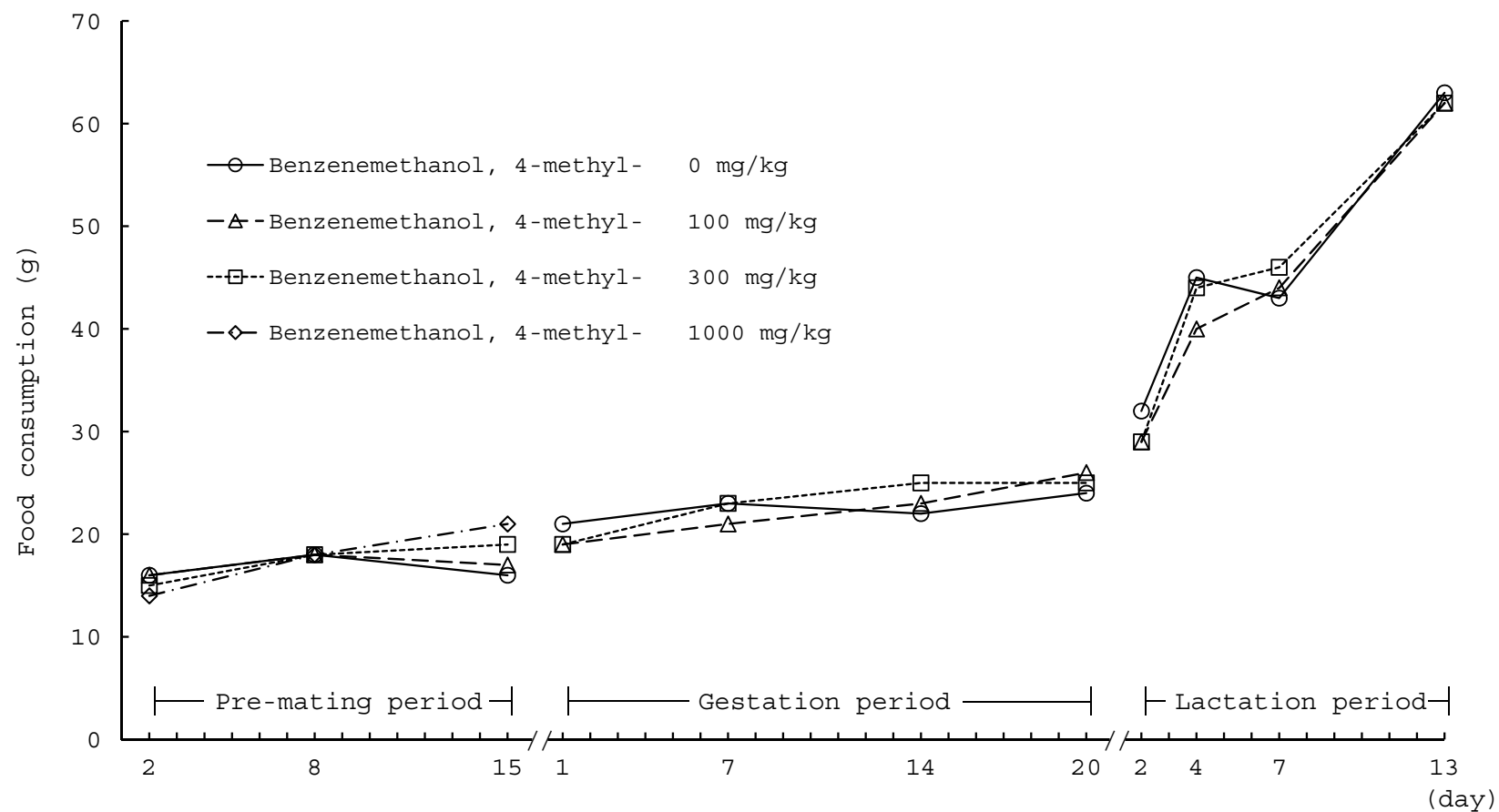


Fig.10 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Food consumption of female rats (Mating group)

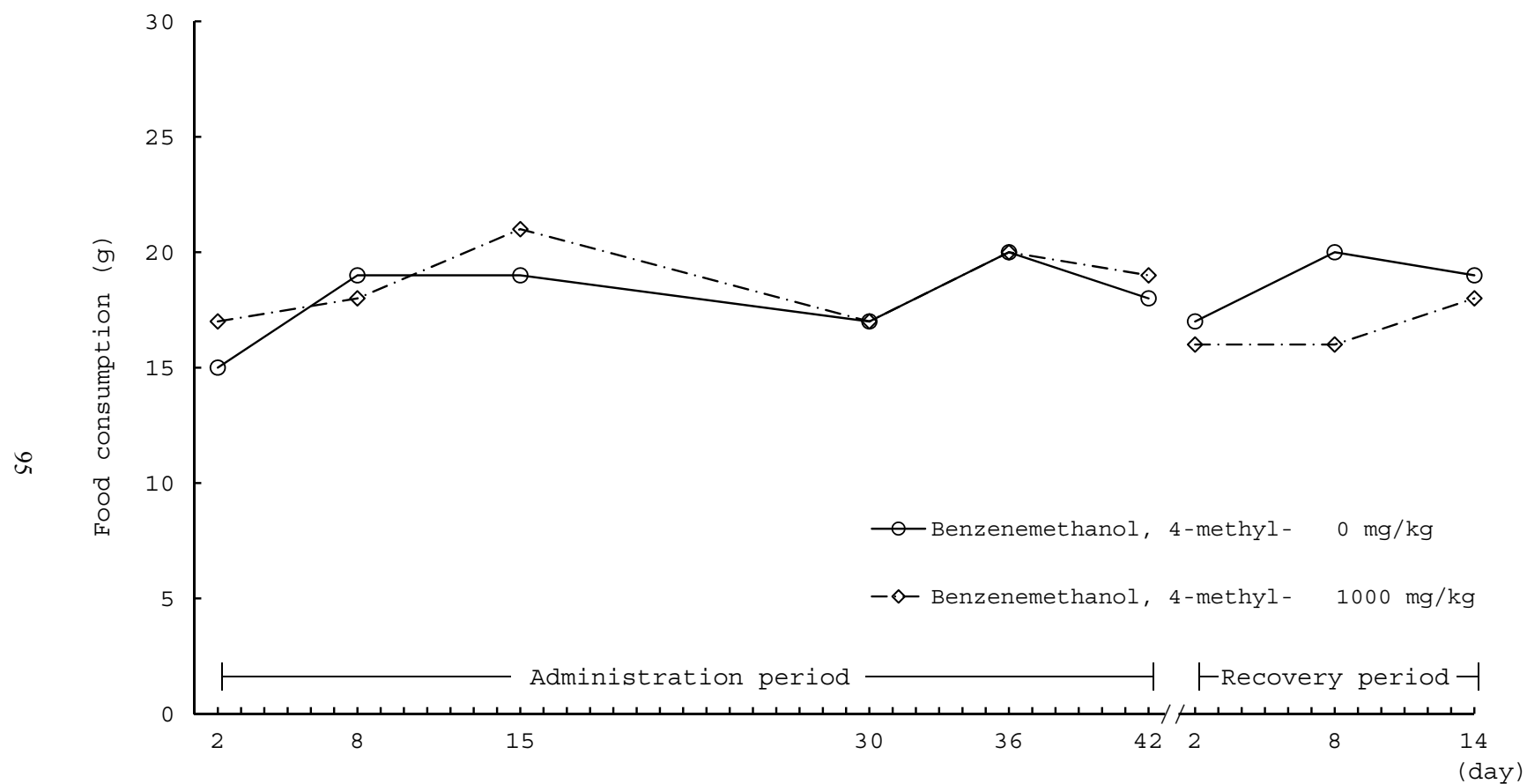


Fig.11 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Food consumption of female rats (Non-mating group)

Table 1 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Male

Period : F0 before mating Day 1-15, F0 mating Day 15-43

Species : Rat

Test article Dose	Signs	/Day																												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
4MBE 0 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 100 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 300 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	1	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Prone position	0	1	0	1	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

4MBE : Benzenemethanol, 4-methyl-

Table 1 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Male

Period : F0 before mating Day 1-15, F0 mating Day 15-43

Species : Rat

Test article Dose	Signs	/Day													
		30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
4MBE 0 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	7
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 100 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 300 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	7
	Number of animals with abnormal findings	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	Prone position	1	0	0	0	0	0	0	0	0	0	0	0	0	0

4MBE : Benzenemethanol, 4-methyl-

a): Day of necropsy

Table 1 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Female

Period : F0 before mating Day 1-15

Species : Rat

Test article Dose	Signs	/Day														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4MBE 0 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 100 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 300 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
	Number of animals with abnormal findings	0	1	3	6	2	0	3	0	1	0	0	0	0	1	0
	Prone position	0	1	3	6	2	0	3	0	1	0	0	0	0	1	0

4MBE : Benzenemethanol, 4-methyl-

Table 1 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Study No. : R-1273

		Period : F0 gestation Day 0-25																									Species : Rat
Clinical signs in dams Sex : Female																											
Test article		/Day																									
Dose	Signs	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4MBE	Number of dams	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	1	0	0	0
0 mg/kg	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	Number of dams	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	1	0	0	0
100 mg/kg	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	Number of dams	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	0	0	0	0
300 mg/kg	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE :Benzenemethanol, 4-methyl-																											

Table 1 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Study No. : R-1273

Period : F0 lactation Day 0-14

Species : Rat

Sex : Female																	Species : Rat
Test article		/Day															
Dose	Signs	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14 a)	
4MBE 0 mg/kg	Number of dams	10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4MBE 100 mg/kg	Number of dams	6	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
4MBE 300 mg/kg	Number of dams	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

4MBE : Benzenemethanol, 4-methyl-

a): Day of necropsy

Table 1 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Female

Period : Administration day 1-43(non-mating group)

Species : Rat

Sex : Female		Species : Rat																												
Test article		/Day																												
Dose	Signs	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
4MBE 0 mg/kg	Number of animals	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Number of animals with abnormal findings	0	0	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
	Prone position	0	0	2	3	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
4MBE :Benzenemethanol, 4-methyl-																														

Table 1 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Female

Period : Administration day 1-43(non-mating group)

Species : Rat

Test article Dose	Signs	/Day													
		30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
4MBE 0 mg/kg	Number of animals	10	10	10	10	10	10	10	10	10	10	10	10	10	5
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	10	10	10	10	10	10	10	10	10	10	10	10	10	5
	Number of animals with abnormal findings	0	1	0	0	0	0	0	0	0	0	0	0	0	0
	Prone position	0	1	0	0	0	0	0	0	0	0	0	0	0	0

4MBE : Benzenemethanol, 4-methyl-

a): Day of necropsy

Table 1 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs
Sex : Male

Period : Recovery Day 1-15

Species : Rat

Test article Dose	Signs	/Day														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
4MBE 0 mg/kg	Number of animals	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of animals	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Number of animals with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-

a): Day of necropsy

Table 1 - 9

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs
Sex : Female

Study No. : R-1273

Period : Recovery Day 1-15 (non-mating group)

Species : Rat

Test article Dose	Signs	/Day														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
4MBE 0 mg/kg	Number of dams	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE 1000 mg/kg	Number of dams	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	Number of dams with abnormal findings	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-

a): Day of necropsy

Table 2 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating

Study No. : R-1273

Generation : F0		Sex : Male		Week : 1				Species : Rat	
		Posture NC				Convulsion NC			
Test article									
Dose		N	F	H	0	1	2	3	
4MBE 0 mg/kg	n	12	0	0	12	0	0	0	
4MBE 100 mg/kg	n	12	0	0	12	0	0	0	
4MBE 300 mg/kg	n	12	0	0	12	0	0	0	
4MBE 1000 mg/kg	n	12	0	0	12	0	0	0	
Abnormal NC behavior									
Test article		0	1	2	3				
Dose									
4MBE 0 mg/kg	n	12	0	0	0				
4MBE 100 mg/kg	n	12	0	0	0				
4MBE 300 mg/kg	n	12	0	0	0				
4MBE 1000 mg/kg	n	12	0	0	0				
4MBE :Benzenemethanol, 4-methyl- Posture) N: Normal, F: Flattened, H: Hunched Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe Not calculated : NC									

Table 2 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Home cage observation	Period : F0 before mating
Generation : F0	Sex : Male
	Week : 2

Study No. : R-1273

Generation : F0		Sex : Male	Week : 2	Convulsion NC								Species : Rat	
		Posture NC											
Test article													
Dose		N	F	H	0	1	2	3					
4MBE 0 mg/kg	n	12	0	0	12	0	0	0					
4MBE 100 mg/kg	n	12	0	0	12	0	0	0					
4MBE 300 mg/kg	n	12	0	0	12	0	0	0					
4MBE 1000 mg/kg	n	12	0	0	12	0	0	0					
Abnormal NC behavior													
Test article		0	1	2	3								
Dose													
4MBE 0 mg/kg	n	12	0	0	0								
4MBE 100 mg/kg	n	12	0	0	0								
4MBE 300 mg/kg	n	12	0	0	0								
4MBE 1000 mg/kg	n	12	0	0	0								
4MBE :Benzenemethanol, 4-methyl- Posture) N: Normal, F: Flattened, H: Hunched Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe Not calculated : NC													

Table 2 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Home cage observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 3

Species : Rat

		Posture NC				Convulsion NC			
Test article		N	F	H		0	1	2	3
Dose									
4MBE	n	12	0	0		12	0	0	0
0 mg/kg									
4MBE	n	12	0	0		12	0	0	0
100 mg/kg									
4MBE	n	12	0	0		12	0	0	0
300 mg/kg									
4MBE	n	12	0	0		12	0	0	0
1000 mg/kg									
		Abnormal NC behavior							
Test article		0	1	2	3				
Dose									
4MBE	n	12	0	0	0				
0 mg/kg									
4MBE	n	12	0	0	0				
100 mg/kg									
4MBE	n	12	0	0	0				
300 mg/kg									
4MBE	n	12	0	0	0				
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Home cage observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 4

Species : Rat

		Posture NC			Convulsion NC			
Test article		N	F	H	0	1	2	3
Dose								
4MBE	n	12	0	0	12	0	0	0
0 mg/kg								
4MBE	n	12	0	0	12	0	0	0
100 mg/kg								
4MBE	n	12	0	0	12	0	0	0
300 mg/kg								
4MBE	n	12	0	0	12	0	0	0
1000 mg/kg								
Abnormal NC behavior								
Test article		0	1	2	3			
Dose								
4MBE	n	12	0	0	0			
0 mg/kg								
4MBE	n	12	0	0	0			
100 mg/kg								
4MBE	n	12	0	0	0			
300 mg/kg								
4MBE	n	12	0	0	0			
1000 mg/kg								

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Home cage observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 5

Species : Rat

		Posture NC				Convulsion NC			
Test article									
Dose		N	F	H		0	1	2	3
4MBE 0 mg/kg	n	12	0	0		12	0	0	0
4MBE 100 mg/kg	n	12	0	0		12	0	0	0
4MBE 300 mg/kg	n	12	0	0		12	0	0	0
4MBE 1000 mg/kg	n	12	0	0		12	0	0	0
		Abnormal NC behavior							
Test article									
Dose		0	1	2	3				
4MBE 0 mg/kg	n	12	0	0	0				
4MBE 100 mg/kg	n	12	0	0	0				
4MBE 300 mg/kg	n	12	0	0	0				
4MBE 1000 mg/kg	n	12	0	0	0				

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Home cage observation Period : F0 mating

Study No. : R-1273

Test article Dose	Generation : F0	Sex : Male	Week : 6	Period : P0 mating				Species : Rat
	Posture NC		Convulsion NC					
	N	F	H	0	1	2	3	
4MBE 0 mg/kg	n	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	0

Test article	Dose	n	Abnormal NC behavior			
			0	1	2	3
4MBE	0 mg/kg	n	12	0	0	0
4MBE	100 mg/kg	n	12	0	0	0
4MBE	300 mg/kg	n	12	0	0	0
4MBE	1000 mg/kg	n	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article		N			F			H			0				1				2				3			
Dose	n																									
4MBE	n	12			0			0			12				0				0			0				0
0 mg/kg																										
4MBE	n	12			0			0			12				0				0			0				0
100 mg/kg																										
4MBE	n	12			0			0			12				0				0			0				0
300 mg/kg																										
4MBE	n	11			1			0			12				0				0			0				0
1000 mg/kg																										

		Abnormal NC behavior											
Test article		0			1			2			3		
Dose	n												
4MBE	n	12			0			0			0		0
0 mg/kg													
4MBE	n	12			0			0			0		0
100 mg/kg													
4MBE	n	12			0			0			0		0
300 mg/kg													
4MBE	n	12			0			0			0		0
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating

Study No. : R-1273

Generation : F0		Sex : Female Week : 2				Convulsion NC				Species : Rat	
		Posture NC									
Test article											
Dose		N	F	H		0	1	2	3		
4MBE	n	12	0	0	0	12	0	0	0	0	
0 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
100 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
300 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
1000 mg/kg											
Abnormal NC behavior											
Test article											
Dose		0	1	2	3						
4MBE	n	12	0	0	0	0					
0 mg/kg											
4MBE	n	12	0	0	0	0					
100 mg/kg											
4MBE	n	12	0	0	0	0					
300 mg/kg											
4MBE	n	12	0	0	0	0					
1000 mg/kg											
4MBE :Benzenemethanol, 4-methyl- Posture) N: Normal, F: Flattened, H: Hunched Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe Not calculated : NC											

Table 2 - 9

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation Period : F0 gestation
Generation : F0 Sex : Female Day : 1
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article Dose		N			F	H	0	1	2	3
4MBE 0 mg/kg	n	12			0	0	12	0	0	0
4MBE 100 mg/kg	n	11			0	0	11	0	0	0
4MBE 300 mg/kg	n	12			0	0	12	0	0	0
Abnormal NC behavior										
Test article Dose		0	1	2	3					
4MBE 0 mg/kg	n	12	0	0	0					
4MBE 100 mg/kg	n	11	0	0	0					
4MBE 300 mg/kg	n	12	0	0	0					

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 10

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 7 Period : F0 gestation

Study No. : R-1273

Generation : F0		Sex : Female Day : 7				Convulsion NC				Species : Rat
		Posture NC								
Test article										
Dose		N	F	H		0	1	2	3	
4MBE	n	12	0	0		12	0	0	0	
0 mg/kg										
4MBE	n	11	0	0		11	0	0	0	
100 mg/kg										
4MBE	n	12	0	0		12	0	0	0	
300 mg/kg										
		Abnormal NC behavior								
Test article		0	1	2	3					
Dose										
4MBE	n	12	0	0	0					
0 mg/kg										
4MBE	n	11	0	0	0					
100 mg/kg										
4MBE	n	12	0	0	0					
300 mg/kg										
4MBE :Benzenemethanol, 4-methyl-										
Posture) N: Normal, F: Flattened, H: Hunched										
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe										
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe										
Not calculated : NC										

Table 2 - 11

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article Dose		N			F	H	0	1	2	3
4MBE 0 mg/kg	n	12			0	0	12	0	0	0
4MBE 100 mg/kg	n	11			0	0	11	0	0	0
4MBE 300 mg/kg	n	12			0	0	12	0	0	0
Abnormal NC behavior										
Test article Dose		0	1	2	3					
4MBE 0 mg/kg	n	12	0	0	0					
4MBE 100 mg/kg	n	11	0	0	0					
4MBE 300 mg/kg	n	12	0	0	0					

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 12

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Home cage observation

Period : F0 gestation

Generation : F0

Sex : Female

Day : 20

Species : Rat

		Posture NC				Convulsion NC			
Test article		N	F	H		0	1	2	3
Dose	n								
4MBE	n	12	0	0		12	0	0	0
0 mg/kg									
4MBE	n	11	0	0		11	0	0	0
100 mg/kg									
4MBE	n	12	0	0		12	0	0	0
300 mg/kg									
Abnormal NC behavior									
Test article		0	1	2	3				
Dose	n								
4MBE	n	12	0	0	0				
0 mg/kg									
4MBE	n	11	0	0	0				
100 mg/kg									
4MBE	n	12	0	0	0				
300 mg/kg									

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 13

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 6 Period : F0 lactation
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article		Posture NC				Convulsion NC			
Dose		N	F	H		0	1	2	3
4MBE	n	12	0	0		12	0	0	0
0 mg/kg									
4MBE	n	11	0	0		11	0	0	0
100 mg/kg									
4MBE	n	12	0	0		12	0	0	0
300 mg/kg									
Abnormal NC behavior									
Test article		Abnormal NC behavior							
Dose		0	1	2	3				
4MBE	n	12	0	0	0				
0 mg/kg									
4MBE	n	11	0	0	0				
100 mg/kg									
4MBE	n	12	0	0	0				
300 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 14

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation Period : F0 lactation
Generation : F0 Sex : Female Day : 13
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article Dose		N			F	H	0	1	2	3
4MBE 0 mg/kg	n	12			0	0	12	0	0	0
4MBE 100 mg/kg	n	11			0	0	11	0	0	0
4MBE 300 mg/kg	n	12			0	0	12	0	0	0
Abnormal NC behavior										
Test article Dose		0	1	2	3					
4MBE 0 mg/kg	n	12	0	0	0					
4MBE 100 mg/kg	n	11	0	0	0					
4MBE 300 mg/kg	n	12	0	0	0					

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 16

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats Home cage observation			Period : Administration (non-mating group)
Generation : F0	Sex : Female	Week : 2	
	Posture NC		Convulsion NC

Study No. : R-1273

Generation : F0		Sex : Female		Week : 2		Convulsion NC		Species : Rat	
		Posture NC							
Test article		N		F		H			
Dose		0		1		2		3	
4MBE	n	10	0	0	10	0	0	0	0
0 mg/kg									
4MBE	n	10	0	0	10	0	0	0	0
1000 mg/kg									
Abnormal NC behavior									
Test article		0		1		2		3	
Dose		0		1		2		3	
4MBE	n	10	0	0	0	0	0	0	0
0 mg/kg									
4MBE	n	10	0	0	0	0	0	0	0
1000 mg/kg									

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 17

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article		N			F			H			0				1				2				3			
Dose	n																									
4MBE	n	10			0			0			10				0				0			0				0
0 mg/kg																										
4MBE	n	10			0			0			10				0				0			0				0
1000 mg/kg																										
Test article		0			1			2			3				Abnormal NC behavior											
Dose	n																									
4MBE	n	10			0			0			0				0				0			0				0
0 mg/kg																										
4MBE	n	10			0			0			0				0				0			0				0
1000 mg/kg																										

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 18

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats		
Home cage observation		Period : Administration (non-mating group)
Generation : F0	Sex : Female	Week : 4
Posture NC		Convulsion NC

Study No. : R-1273

Non-male Administration (Non-mating group)												Species : Rat
Generation : F0		Sex : Female Week : 4				Convulsion NC						
		Posture NC										
Test article												
Dose		N	F	H		0	1	2	3			
4MBE	n	10	0	0		10	0	0	0			
0 mg/kg												
4MBE	n	10	0	0		10	0	0	0			
1000 mg/kg												
Abnormal NC behavior												
Test article												
Dose		0	1	2	3							
4MBE	n	10	0	0	0							
0 mg/kg												
4MBE	n	10	0	0	0							
1000 mg/kg												

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 19

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article		N										F										H										0										1										2										3																													
Dose		n										10										0										0										10										0										0										0																			
4MBE		n										10										0										0										10										0										0										0																			
0 mg/kg																																																																																											
4MBE		n										10										0										0										10										0										0										0																			
1000 mg/kg																																																																																											

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Test article		Abnormal NC behavior													
Dose		N		F		H		0		1		2		3	
4MBE	0 mg/kg	n	10	0	0	0	10	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	10	0	0	0	0	0	0	0	0

Test article		Abnormal NC behavior							
Dose		0		1		2		3	
4MBE	0 mg/kg	n	10	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 21

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 1 Period : Recovery

Study No. : R-1273

		Posture NC				Convulsion NC				Species : Rat	
Test article											
Dose		N	F	H		0	1	2	3		
4MBE	n	5	0	0		5	0	0	0		
0 mg/kg											
4MBE	n	5	0	0		5	0	0	0		
1000 mg/kg											
		Abnormal NC behavior									
Test article											
Dose		0	1	2		3					
4MBE	n	5	0	0		0					
0 mg/kg											
4MBE	n	5	0	0		0					
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 22

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 2 Period : Recovery

Study No. : R-1273

		Posture NC				Convulsion NC				Species : Rat	
Test article											
Dose		N F H				0 1 2 3					
4MBE		n	5	0	0	5	0	0	0		
0 mg/kg											
4MBE		n	5	0	0	5	0	0	0		
1000 mg/kg											
		Abnormal NC behavior									
Test article											
Dose		0 1 2 3									
4MBE		n	5	0	0	0					
0 mg/kg											
4MBE		n	5	0	0	0					
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 23

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article		N				F				H				0				1				2				3			
Dose		n				5				0				0				5				0				0			
4MBE		n				5				0				0				5				0				0			
0 mg/kg																													
4MBE		n				5				0				0				5				0				0			
1000 mg/kg																													
Test article		0				1				2				3															
Dose		n				5				0				0															
4MBE		n				5				0				0															
0 mg/kg																													
4MBE		n				5				0				0															
1000 mg/kg																													

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 24

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)
Posture NC Convulsion NC

Study No. : R-1273

Species : Rat

Test article	N												F												H												0												1												2												3											
Dose	n	5				0				0				5				0				0				0				0				5				0				0				0																																						
4MBE																																																																																				
0 mg/kg																																																																																				
4MBE	n	5				0				0				5				0				0				0				5				0				0				0																																										
1000 mg/kg																																																																																				

Abnormal NC behavior																																																					
Test article	0												1												2												3																
Dose	n	5				0				0				5				0				0				5				0				0				5				0											
4MBE																																																					
0 mg/kg																																																					
4MBE	n	5				0				0				5				0				0				5				0				0				5				0											
1000 mg/kg																																																					

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 25

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating

Study No. : R-1273

		Generation : F0		Sex : Male		Week : 1					Species : Rat				
				Ease of removal from cage NC					Fur condition NC						
Test article	Dose														
		-1	0	1	2	3	0	1	2	3					
4MBE 0 mg/kg	n	0	12	0	0	0	12	0	0	0					
4MBE 100 mg/kg	n	0	12	0	0	0	12	0	0	0					
4MBE 300 mg/kg	n	0	12	0	0	0	12	0	0	0					
4MBE 1000 mg/kg	n	0	12	0	0	0	12	0	0	0					
		Skin NC					Secretions- NC Eye, Nose		Exophthalmos NC						
Test article	Dose	0	1	2	3	0	1	0	1	0					
4MBE 0 mg/kg	n	12	0	0	0	12	0	12	0						
4MBE 100 mg/kg	n	12	0	0	0	12	0	12	0						
4MBE 300 mg/kg	n	12	0	0	0	12	0	12	0						
4MBE 1000 mg/kg	n	12	0	0	0	12	0	12	0						

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 26

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating

Study No. : R-1273

Test article Dose	n	Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0
Test article Dose	n	Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 27

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
1000 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	12	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												
4MBE	n	0	12	0	0	0						
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward
Not calculated : NC

Table 2 - 28

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating
Generation : F0 Sex : Male Week : 2

Study No. : R-1273

Generation : F0		Sex : Male		Week : 2						Fur condition NC						Species : Rat																									
		Ease of removal NC al from cage																																							
Test article		-1					0					1					2					3																			
Dose		0					1					2					3					0																			
4MBE	n	0					12					0					0					0					12					0					0				
0 mg/kg																																									
4MBE	n	0					12					0					0					0					12					0					0				
100 mg/kg																																									
4MBE	n	0					12					0					0					0					12					0					0				
300 mg/kg																																									
4MBE	n	0					12					0					0					0					12					0					0				
1000 mg/kg																																									
		Skin NC										Secretions- NC Eye, Nose						Exophthalmos NC																							
Test article		0					1					2					3					0					1					0					1				
Dose		0					1					2					3					0					1					0					1				
4MBE	n	12					0					0					0					12					0					12					0				
0 mg/kg																																									
4MBE	n	12					0					0					0					12					0					12					0				
100 mg/kg																																									
4MBE	n	12					0					0					0					12					0					12					0				
300 mg/kg																																									
4MBE	n	12					0					0					0					12					0					12					0				
1000 mg/kg																																									

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 29

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating

Study No. : R-1273

Test article Dose	n	Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0
Test article Dose	n	Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 30

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating

Study No. : R-1273

		Abnormal NC respiration				Vocalization NC				Species : Rat
Test article		0	1	2	3	0	1	2	3	
Dose										
4MBE	n	12	0	0	0	12	0	0	0	
0 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
100 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
300 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
1000 mg/kg										
		Reactivity to NC handling								
Test article		-1	0	1	2	3				
Dose										
4MBE	n	0	12	0	0	0				
0 mg/kg										
4MBE	n	0	12	0	0	0				
100 mg/kg										
4MBE	n	0	12	0	0	0				
300 mg/kg										
4MBE	n	0	12	0	0	0				
1000 mg/kg										

4MBE :Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 31

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating

Study No. : R-1273

		Generation : F0	Sex : Male	Week : 3					Ease of remov- NC					Fur condition NC					Species : Rat																						
		al from cage																																							
Test article	Dose	-1					0					1					2					3																			
4MBE	0 mg/kg	n	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0																				
4MBE	100 mg/kg	n	0	12	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	0	0																				
4MBE	300 mg/kg	n	0	12	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	0	0																				
4MBE	1000 mg/kg	n	0	12	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	0	0																				
		Skin NC					Secretions- NC					Exophthalmos NC																													
		Eye, Nose																																							
Test article	Dose	0					1					2					3					0					1					0					1				
4MBE	0 mg/kg	n	12	0	0	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0																				
4MBE	100 mg/kg	n	12	0	0	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0																				
4MBE	300 mg/kg	n	12	0	0	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0																				
4MBE	1000 mg/kg	n	12	0	0	0	12	0	0	12	0	0	12	0	0	12	0	0	12	0	0																				

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 32

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 3
Period : F0 mating

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article														
Dose		0	1	2	3		0	1	2	3		0	1	
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
1000 mg/kg														
		Piloerection NC			Pupil size NC				Salivation NC					
Test article														
Dose		0	1		-1	0	1	2	0	1	2	3		
4MBE	n	12	0		0	12	0	0	12	0	0	0	0	
0 mg/kg														
4MBE	n	12	0		0	12	0	0	12	0	0	0	0	
100 mg/kg														
4MBE	n	12	0		0	12	0	0	12	0	0	0	0	
300 mg/kg														
4MBE	n	12	0		0	12	0	0	12	0	0	0	0	
1000 mg/kg														

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 33

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 3 Period : F0 mating

Study No. : R-1273

		Abnormal NC respiration				Vocalization NC				Species : Rat
Test article		0	1	2	3	0	1	2	3	
Dose										
4MBE	n	12	0	0	0	12	0	0	0	
0 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
100 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
300 mg/kg										
4MBE	n	12	0	0	0	12	0	0	0	
1000 mg/kg										
		Reactivity to NC handling								
Test article		-1	0	1	2	3				
Dose										
4MBE	n	0	12	0	0	0				
0 mg/kg										
4MBE	n	0	12	0	0	0				
100 mg/kg										
4MBE	n	0	12	0	0	0				
300 mg/kg										
4MBE	n	0	12	0	0	0				
1000 mg/kg										

4MBE :Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 34

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating

Study No. : R-1273

		Sex : Male		Week : 4					Species : Rat				
		Generation : F0		Ease of remov- NC al from cage					Fur condition NC				
Test article	Dose	-1	0	1	2	3	0	1	2	3			
4MBE	0 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	100 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	300 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	1000 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
		Skin NC					Secretions- NC Eye, Nose		Exophthalmos NC				
Test article	Dose	0	1	2	3	0	1	0	0	1	0		
4MBE	0 mg/kg	n	12	0	0	0	12	0	12	1	0		
4MBE	100 mg/kg	n	12	0	0	0	12	0	12	0	0		
4MBE	300 mg/kg	n	12	0	0	0	12	0	12	0	0		
4MBE	1000 mg/kg	n	12	0	0	0	12	0	12	0	0		

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 35

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating

Study No. : R-1273

		Sex : Male				Week : 4				Species : Rat			
		Generation : F0				Palpebral NC closure				Mucosal NC membranes			
										Lacrimation NC			
Test article	Dose	0				1				2			
		3				0				1			
4MBE	n	0	12	0	0	0	0	0	12	0	0	0	0
0 mg/kg													
4MBE	n	12	0	0	0	12	0	0	0	12	0		
100 mg/kg													
4MBE	n	12	0	0	0	12	0	0	0	12	0		
300 mg/kg													
4MBE	n	12	0	0	0	12	0	0	0	12	0		
1000 mg/kg													
		Piloerection NC				Pupil size NC				Salivation NC			
Test article	Dose	0				1				2			
		3				-1				3			
4MBE	n	0	12	0	0	0	12	0	0	0	12	0	0
0 mg/kg													
4MBE	n	12	0	0	12	0	0	12	0	0	0	0	0
100 mg/kg													
4MBE	n	12	0	0	12	0	0	12	0	0	0	0	0
300 mg/kg													
4MBE	n	12	0	0	12	0	0	12	0	0	0	0	0
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 36

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 4 Period : F0 mating

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
1000 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	12	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												
4MBE	n	0	12	0	0	0						
1000 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 37

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 5

Species : Rat

		Ease of removal- NC					Fur condition NC				
		al from cage									
Test article		-1	0	1	2	3	0	1	2	3	
Dose	n										
4MBE	n	0	12	0	0	0	12	0	0	0	0
0 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0	0	0
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0	0	0
300 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0	0	0
1000 mg/kg											
		Skin NC			Secretions- NC			Exophthalmos NC			
					Eye, Nose						
Test article		0	1	2	3	0	1	0	1		
Dose	n										
4MBE	n	12	0	0	0	12	0	12	0	0	0
0 mg/kg											
4MBE	n	12	0	0	0	12	0	12	0	0	0
100 mg/kg											
4MBE	n	12	0	0	0	12	0	12	0	0	0
300 mg/kg											
4MBE	n	12	0	0	0	12	0	12	0	0	0
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 38

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating
Generation : F0 Sex : Male Week : 5

Study No. : R-1273

Test article Dose		Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0

Test article Dose		Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 39

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Male Week : 5 Period : F0 mating

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
1000 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	12	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												
4MBE	n	0	12	0	0	0						
1000 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 40

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating

Study No. : R-1273

		Sex : Male		Week : 6					Species : Rat				
		Generation : F0		Ease of remov- NC al from cage					Fur condition NC				
Test article	Dose	-1	0	1	2	3	0	1	2	3			
4MBE	0 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	100 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	300 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
4MBE	1000 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0
		Skin NC					Secretions- NC Eye, Nose		Exophthalmos NC				
Test article	Dose	0	1	2	3	0	1	0	0	1	0		
4MBE	0 mg/kg	n	12	0	0	0	12	0	12	1	0		
4MBE	100 mg/kg	n	12	0	0	0	12	0	12	0	0		
4MBE	300 mg/kg	n	12	0	0	0	12	0	12	0	0		
4MBE	1000 mg/kg	n	12	0	0	0	12	0	12	0	0		

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 41

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating
Generation : F0 Sex : Male Week : 6

Study No. : R-1273

Test article Dose	n	Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0
Test article Dose	n	Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 42

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 mating

Study No. : R-1273

Generation : F0		Sex : Male		Week : 6		Dose : 0 mg/kg		Abnormal NC respiration		Vocalization NC		Species : Rat	
Test article													
Dose													
4MBE		n		12		0		0		0		0	
0 mg/kg													
4MBE		n		12		0		0		0		0	
100 mg/kg													
4MBE		n		12		0		0		0		0	
300 mg/kg													
4MBE		n		12		0		0		0		0	
1000 mg/kg													
Reactivity to NC handling													
Test article													
Dose													
4MBE		n		0		12		0		0		0	
0 mg/kg													
4MBE		n		0		12		0		0		0	
100 mg/kg													
4MBE		n		0		12		0		0		0	
300 mg/kg													
4MBE		n		0		12		0		0		0	
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl-													
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe													
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive													
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward													
Not calculated : NC													

Table 2 - 43

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating
Generation : F0 Sex : Female Week : 1

Study No. : R-1273

		Generation : F0		Sex : Female		Week : 1								Species : Rat	
						Ease of remov- NC						Fur condition NC			
Test article															
Dose															
4MBE		n	-1	0	0	1	2	3	0	0	1	2	3	0	
0 mg/kg															
4MBE		n		0	12	0	0	0	0	12	0	0	0	0	
100 mg/kg															
4MBE		n		0	11	1	0	0	0	12	0	0	0	0	
300 mg/kg															
4MBE		n		1	11	0	0	0	0	12	0	0	0	0	
1000 mg/kg															

4MBE : Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 44

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating
Generation : F0 Sex : Female Week : 1

Study No. : R-1273

Test article Dose	n	Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0

Test article Dose	n	Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 45

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose	n											
4MBE 0 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 100 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 1000 mg/kg	n	12	0	0	0		12	0	0	0		
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose	n											
4MBE 0 mg/kg	n	0	12	0	0	0						
4MBE 100 mg/kg	n	0	12	0	0	0						
4MBE 300 mg/kg	n	0	12	0	0	0						
4MBE 1000 mg/kg	n	1	11	0	0	0						

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 46

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating
Generation : F0 Sex : Female Week : 2

Study No. : R-1273

		Ease of remov- NC					Fur condition NC					Species : Rat	
		al from cage											
Test article		-1	0	1	2	3	0	1	2	3			
Dose													
4MBE	n	0	12	0	0	0	12	0	0	0			
0 mg/kg													
4MBE	n	0	12	0	0	0	12	0	0	0			
100 mg/kg													
4MBE	n	0	12	0	0	0	12	0	0	0			
300 mg/kg													
4MBE	n	0	12	0	0	0	12	0	0	0			
1000 mg/kg													
		Skin NC				Secretions- NC		Exophthalmos NC					
						Eye, Nose							
Test article		0	1	2	3	0	1	0	1				
Dose													
4MBE	n	12	0	0	0	12	0	12	0				
0 mg/kg													
4MBE	n	12	0	0	0	12	0	12	0				
100 mg/kg													
4MBE	n	12	0	0	0	12	0	12	0				
300 mg/kg													
4MBE	n	12	0	0	0	12	0	12	0				
1000 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 47

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 before mating
Generation : F0 Sex : Female Week : 2

Study No. : R-1273

Test article Dose	n	Palpebral NC closure				Mucosal NC membranes				Lacrimation NC	
		0	1	2	3	0	1	2	3	0	1
4MBE 0 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 100 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 300 mg/kg	n	12	0	0	0	12	0	0	0	12	0
4MBE 1000 mg/kg	n	12	0	0	0	12	0	0	0	12	0

Test article Dose	n	Piloerection NC		Pupil size NC				Salivation NC			
		0	1	-1	0	1	2	0	1	2	3
4MBE 0 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 100 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 300 mg/kg	n	12	0	0	12	0	0	12	0	0	0
4MBE 1000 mg/kg	n	12	0	0	12	0	0	12	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 48

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose	n											
4MBE 0 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 100 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 1000 mg/kg	n	12	0	0	0		12	0	0	0		
Reactivity to NC handling												
Test article		-1	0	1	2	3						
Dose	n											
4MBE 0 mg/kg	n	0	12	0	0	0						
4MBE 100 mg/kg	n	0	12	0	0	0						
4MBE 300 mg/kg	n	0	12	0	0	0						
4MBE 1000 mg/kg	n	0	12	0	0	0						

4MBE :Benzenemethanol, 4-methyl-
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward
Not calculated : NC

Table 2 - 49

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 1

Study No. : R-1273

		Ease of remov- NC al from cage								Fur condition NC				Species : Rat
Test article	Dose	-1	0	1	2	3	0	1	2	3				
4MBE	0 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0	
4MBE	100 mg/kg	n	0	11	0	0	0	11	0	0	0	0	0	
4MBE	300 mg/kg	n	0	12	0	0	0	12	0	0	0	0	0	
		Skin NC					Secretions- NC Eye, Nose		Exophthalmos NC					
Test article	Dose	0	1	2	3	0	0	1	0	1	0			
4MBE	0 mg/kg	n	12	0	0	0	12	0	12	0	0			
4MBE	100 mg/kg	n	11	0	0	0	11	0	11	0	0			
4MBE	300 mg/kg	n	12	0	0	0	12	0	12	0	0			

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 50

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 1

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article		0	1	2	3		0	1	2	3		0	1	
Dose														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	11	0	0	0		11	0	0	0		11	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article		0	1	-1	0	1	2			0	1	2	3	
Dose														
4MBE	n	12	0	0	12	0	0			12	0	0	0	
0 mg/kg														
4MBE	n	11	0	0	11	0	0			11	0	0	0	
100 mg/kg														
4MBE	n	12	0	0	12	0	0			12	0	0	0	
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Not calculated : NC

Table 2 - 51

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Day : 1
Period : F0 gestation

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	11	0	0	0		11	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	11	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 52

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 7

Study No. : R-1273

Generation : F0		Sex : Female		Day : 7		Ease of removal- NC						Fur condition NC						Species : Rat			
Test article	Dose																				
4MBE	0 mg/kg	n	-1	0	12	1	0	2	0	3	0	0	12	1	0	2	0	3	0		
4MBE	100 mg/kg	n		0	11		0		0		0		11		0		0		0		
4MBE	300 mg/kg	n		0	12		0		0		0		12		0		0		0		
		Skin NC										Secretions- NC				Exophthalmos NC					
Test article	Dose											Eye, Nose									
4MBE	0 mg/kg	n	0	1	12	2	0	3	0	0	0	12	1	0	0	1	12	0			
4MBE	100 mg/kg	n		11		0		0		0		11		0		11		0			
4MBE	300 mg/kg	n		12		0		0		0		12		0		12		0			

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 53

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 7

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article Dose		0	1	2	3		0	1	2	3		0	1	
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	11	0	0	0		11	0	0	0		11	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article Dose		0	1	-1	0	1	2			0	1	2	3	
4MBE	n	12	0	0	12	0	0			12	0	0	0	
0 mg/kg														
4MBE	n	11	0	0	11	0	0			11	0	0	0	
100 mg/kg														
4MBE	n	12	0	0	12	0	0			12	0	0	0	
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 54

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 7

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	11	0	0	0		11	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	11	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 55

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14

Study No. : R-1273

Generation : F0		Sex : Female		Day : 14						Species : Rat			
		Ease of removal NC						Fur condition NC					
Test article													
Dose		-1	0	1	2	3	0	1	2	3			
4MBE	n	0	12	0	0	0	12	0	0	0			
0 mg/kg													
4MBE	n	0	11	0	0	0	11	0	0	0			
100 mg/kg													
4MBE	n	0	12	0	0	0	12	0	0	0			
300 mg/kg													
		Skin NC				Secretions- NC		Exophthalmos NC					
		Eye, Nose											
Test article		0	1	2	3	0	1	0	1				
4MBE	n	12	0	0	0	12	0	12	0				
0 mg/kg													
4MBE	n	11	0	0	0	11	0	11	0				
100 mg/kg													
4MBE	n	12	0	0	0	12	0	12	0				
300 mg/kg													

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 56

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article		0	1	2	3		0	1	2	3		0	1	
Dose														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	11	0	0	0		11	0	0	0		11	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article		0	1			-1	0	1	2	0	1	2	3	
Dose														
4MBE	n	12	0	0	12	0	0	0	0	12	0	0	0	0
0 mg/kg														
4MBE	n	11	0	0	11	0	0	0	11	0	0	0	0	
100 mg/kg														
4MBE	n	12	0	0	12	0	0	0	12	0	0	0	0	
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 57

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose	n											
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	11	0	0	0		11	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose	n											
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	11	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 58

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 gestation

Study No. : R-1273

		Generation : F0		Sex : Female		Day : 20		Ease of remov- NC al from cage		Fur condition NC		Species : Rat	
Test article	Dose	-1		0		1		2		3		0	
4MBE	0 mg/kg	n	0	12	0	0	0	0	0	12	0	0	0
4MBE	100 mg/kg	n	0	11	0	0	0	0	0	11	0	0	0
4MBE	300 mg/kg	n	0	12	0	0	0	0	0	12	0	0	0
		Skin NC		Secretions- NC Eye, Nose		Exophthalmos NC							
Test article	Dose	0		1		2		3		0		1	
4MBE	0 mg/kg	n	12	0	0	0	0	0	0	12	0	12	0
4MBE	100 mg/kg	n	11	0	0	0	0	0	0	11	0	11	0
4MBE	300 mg/kg	n	12	0	0	0	0	0	0	12	0	12	0

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 59

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Day : 20 Period : F0 gestation

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article		0	1	2	3		0	1	2	3		0	1	
Dose														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	11	0	0	0		11	0	0	0		11	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article		0	1	-1	0	1	2			0	1	2	3	
Dose														
4MBE	n	12	0	0	12	0	0			12	0	0	0	
0 mg/kg														
4MBE	n	11	0	0	11	0	0			11	0	0	0	
100 mg/kg														
4MBE	n	12	0	0	12	0	0			12	0	0	0	
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 60

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Day : 20 Period : F0 gestation

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose	n											
4MBE 0 mg/kg	n	12	0	0	0		12	0	0	0		
4MBE 100 mg/kg	n	11	0	0	0		11	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0		12	0	0	0		
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose	n											
4MBE 0 mg/kg	n	0	12	0	0	0						
4MBE 100 mg/kg	n	0	11	0	0	0						
4MBE 300 mg/kg	n	0	12	0	0	0						

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 61

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 lactation
Generation : F0 Sex : Female Day : 6

Study No. : R-1273

Generation : F0		Sex : Female		Day : 6		Species : Rat					
		Ease of removal from cage					Fur condition NC				
Test article	Dose	-1	0	1	2	3	0	1	2	3	
4MBE	n	0	12	0	0	0	12	0	0	0	
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0	0	
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0	0	
300 mg/kg											
		Skin NC					Secretions- NC		Exophthalmos NC		
		Eye, Nose									
Test article	Dose	0	1	2	3	0	1	0	1	0	
4MBE	n	12	0	0	0	12	0	12	0		
0 mg/kg											
4MBE	n	11	0	0	0	11	0	11	0		
100 mg/kg											
4MBE	n	12	0	0	0	12	0	12	0		
300 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 62

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Day : 6 Period : F0 lactation

Study No. : R-1273

Generation : F0		Sex : Female Day : 6					Species : Rat							
		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article														
Dose		0	1	2	3		0	1	2	3		0	1	
4MBE	n	12	0	0	0	0	12	0	0	0	0	12	0	0
0 mg/kg														
4MBE	n	11	0	0	0	0	11	0	0	0	0	11	0	0
100 mg/kg														
4MBE	n	12	0	0	0	0	12	0	0	0	0	12	0	0
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article														
Dose		0	1			-1	0	1	2		0	1	2	3
4MBE	n	12	0	0	0	12	0	0	0	12	0	0	0	0
0 mg/kg														
4MBE	n	11	0	0	0	11	0	0	0	11	0	0	0	0
100 mg/kg														
4MBE	n	12	0	0	0	12	0	0	0	12	0	0	0	0
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Not calculated : NC

Table 2 - 63

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Day : 6 Period : F0 lactation

Study No. : R-1273

		Abnormal NC respiration					Vocalization NC					Species : Rat
Test article		0	1	2	3		0	1	2	3		
Dose												
4MBE	n	12	0	0	0		12	0	0	0		
0 mg/kg												
4MBE	n	11	0	0	0		11	0	0	0		
100 mg/kg												
4MBE	n	12	0	0	0		12	0	0	0		
300 mg/kg												
		Reactivity to NC handling										
Test article		-1	0	1	2	3						
Dose												
4MBE	n	0	12	0	0	0						
0 mg/kg												
4MBE	n	0	11	0	0	0						
100 mg/kg												
4MBE	n	0	12	0	0	0						
300 mg/kg												

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 64

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Sex : Female		Day : 13		Period : F0 lactation		Species : Rat			
Generation : F0				Ease of remov- NC				Fur condition NC			
				al from cage							
Test article	Dose	-1 0 1 2 3					0 1 2 3				
4MBE	n	0	12	0	0	0	12	0	0	0	
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0	0	
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0	0	
300 mg/kg											
		Skin NC		Secretions- NC		Exophthalmos NC					
				Eye, Nose							
Test article	Dose	0 1 2 3					0 1		0 1		
4MBE	n	12	0	0	0	12	0	12	0		
0 mg/kg											
4MBE	n	11	0	0	0	11	0	11	0		
100 mg/kg											
4MBE	n	12	0	0	0	12	0	12	0		
300 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Not calculated : NC

Table 2 - 65

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : F0 lactation
Generation : F0 Sex : Female Day : 13

Study No. : R-1273

		Palpebral NC closure					Mucosal NC membranes					Lacrimation NC		
Test article		0	1	2	3		0	1	2	3		0	1	
Dose														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
0 mg/kg														
4MBE	n	11	0	0	0		11	0	0	0		11	0	
100 mg/kg														
4MBE	n	12	0	0	0		12	0	0	0		12	0	
300 mg/kg														
		Piloerection NC				Pupil size NC				Salivation NC				
Test article		0	1			-1	0	1	2	0	1	2	3	
Dose														
4MBE	n	12	0	0	12	0	0	0	0	12	0	0	0	0
0 mg/kg														
4MBE	n	11	0	0	11	0	0	0	11	0	0	0	0	
100 mg/kg														
4MBE	n	12	0	0	12	0	0	0	12	0	0	0	0	
300 mg/kg														

4MBE : Benzenemethanol, 4-methyl-
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Piloerection) 0: Absent, 1: Present
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked
Not calculated : NC

Table 2 - 66

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation

Period : F0 lactation

Generation : F0

Sex : Female Day : 13

Species : Rat

		Abnormal NC respiration					Vocalization NC				
Test article		0	1	2	3		0	1	2	3	
Dose											
4MBE	n	12	0	0	0		12	0	0	0	
0 mg/kg											
4MBE	n	11	0	0	0		11	0	0	0	
100 mg/kg											
4MBE	n	12	0	0	0		12	0	0	0	
300 mg/kg											
		Reactivity to NC handling									
Test article		-1	0	1	2	3					
Dose											
4MBE	n	0	12	0	0	0					
0 mg/kg											
4MBE	n	0	11	0	0	0					
100 mg/kg											
4MBE	n	0	12	0	0	0					
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 67

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

		In-the-hand observation										Period : Administration (non-mating group)										Species : Rat									
		Generation : F0					Sex : Female					Week : 1					Ease of remov- NC					Fur condition NC									
																	al from cage														
Test article	Dose	-1					0					1					2					3					0				
4MBE	0 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Skin NC										Secretions- NC										Exophthalmos NC									
												Eye, Nose																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
		Palpebral NC										Mucosal NC										Lacrimation NC									
							closure																								
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 68

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

In-the-hand observation

Period : Administration (non-mating group)

Generation : F0 Sex : Female Week : 1

Study No. : R-1273

Generation : F0		Sex : Female		Week : 1		Species : Rat											
		Piloerection NC				Pupil size NC				Salivation NC							
Test article																	
Dose		0		1		-1		0		1		2		3			
4MBE	n	10	0	0	0	10	0	0	0	10	0	0	0	0			
0 mg/kg																	
4MBE	n	10	0	0	0	10	0	0	0	10	0	0	0	0			
1000 mg/kg																	
		Abnormal NC respiration				Vocalization NC											
Test article																	
Dose		0		1		2		3		0		1		2		3	
4MBE	n	10	0	0	0	0	10	0	0	0	0	0	0	0			
0 mg/kg																	
4MBE	n	10	0	0	0	0	10	0	0	0	0						
1000 mg/kg																	
		Reactivity to NC handling															
Test article																	
Dose		-1		0		1		2		3							
4MBE	n	0	10	0	0	0	0	0									
0 mg/kg																	
4MBE	n	0	10	0	0	0	0										
1000 mg/kg																	
4MBE :Benzenemethanol, 4-methyl-																	
Piloerection) 0: Absent, 1: Present																	
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis																	
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked																	
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe																	
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive																	
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward																	
Not calculated : NC																	

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

		In-the-hand observation										Period : Administration (non-mating group)										Species : Rat									
		Generation : F0					Sex : Female					Week : 2					Ease of remov- NC					Fur condition NC									
																	al from cage														
Test article	Dose	-1					0					1					2					3					0				
4MBE	0 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Skin NC										Secretions- NC										Exophthalmos NC									
												Eye, Nose																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
		Palpebral NC										Mucosal NC										Lacrimation NC									
												closure																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

In-the-hand observation

Period : Administration (non-mating group)

Generation : F0 Sex : Female Week : 2

Study No. : R-1273

Generation : F0		Sex : Female		Week : 2		Species : Rat											
		Piloerection NC				Pupil size NC				Salivation NC							
Test article																	
Dose																	
4MBE	n	0	1		-1	0	0	1	2	0	0	1	2	3	0		
0 mg/kg		10	0	0	0	10	0	0	0	10	0	0	0	0	0		
4MBE	n	10	0	0	0	10	0	0	0	10	0	0	0	0	0		
1000 mg/kg																	
		Abnormal NC respiration				Vocalization NC											
Test article																	
Dose																	
4MBE	n	0	1	2	3	0	0	1	2	3	0						
0 mg/kg		10	0	0	0	10	0	0	0	0	0						
4MBE	n	10	0	0	0	10	0	0	0	0	0						
1000 mg/kg																	
		Reactivity to NC handling															
Test article																	
Dose																	
4MBE	n	-1	0	1	2	3	0										
0 mg/kg		0	10	0	0	0	0										
4MBE	n	0	10	0	0	0											
1000 mg/kg																	

4MBE :Benzenemethanol, 4-methyl-

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

		In-the-hand observation					Sex : Female					Week : 3					Period : Administration (non-mating group)					Species : Rat																													
		Generation : F0										Ease of remov- NC										Fur condition NC																													
												al from cage																																							
Test article	Dose	-1					0					1					2					3					0					1					2					3									
4MBE	0 mg/kg	n					0				10				0				0				0				10				1				0				0				0				0				
4MBE	1000 mg/kg	n					0				10				0				0				0				10				0				0				0				0								
		Skin NC										Secretions- NC										Exophthalmos NC																													
												Eye, Nose																																							
Test article	Dose	0					1					2					3					0					1					0					1														
4MBE	0 mg/kg	n					10				0				0				10				0				10				0				10				0												
4MBE	1000 mg/kg	n					10				0				0				10				0				10				0				0				0												
		Palpebral NC										Mucosal NC										Lacrimation NC																													
		closure										membranes																																							
Test article	Dose	0					1					2					3					0					1					2					3					0					1				
4MBE	0 mg/kg	n					10				0				0				10				0				0				0				0				10				0								
4MBE	1000 mg/kg	n					10				0				0				10				0				0				0				0				10				0								
4MBE :Benzenemethanol, 4-methyl-																																																			
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult																																																			
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked																																																			
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe																																																			
Secretions-Eye, Nose) 0: Absent, 1: Present																																																			
Exophthalmos) 0: Absent, 1: Present																																																			
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed																																																			
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked																																																			
Lacrimation) 0: Absent, 1: Present																																																			
Not calculated : NC																																																			

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats		
In-the-hand observation		
Generation : F0	Sex : Female	Week : 3
Period : Administration (non-mating group)		

Study No. : R-1273

Generation : F0		Sex : Female		Week : 3		Species : Rat	
		Piloerection NC		Pupil size NC		Salivation NC	
Test article							
Dose		0 1		-1 0 1 2		0 1 2 3	
4MBE		n 10 0		0 10 0 0		10 0 0 0	
0 mg/kg							
4MBE		n 10 0		0 10 0 0		10 0 0 0	
1000 mg/kg							
Test article							
Dose		0 1 2 3		0 1 2 3			
4MBE		n 10 0 0 0		10 0 0 0			
0 mg/kg							
4MBE		n 10 0 0 0		10 0 0 0			
1000 mg/kg							
Test article							
Dose		-1 0 1 2 3					
4MBE		n 0 10 0 0 0					
0 mg/kg							
4MBE		n 0 10 0 0 0					
1000 mg/kg							
4MBE :Benzenemethanol, 4-methyl-							
Piloerection) 0: Absent, 1: Present							
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis							
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked							
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe							
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive							
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward							
Not calculated : NC							

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

		In-the-hand observation										Period : Administration (non-mating group)										Species : Rat									
		Generation : F0					Sex : Female					Week : 4					Ease of remov- NC					Fur condition NC									
																	al from cage														
Test article	Dose	-1					0					1					2					3					0				
4MBE	0 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Skin NC										Secretions- NC										Exophthalmos NC									
												Eye, Nose																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
		Palpebral NC										Mucosal NC										Lacrimation NC									
												closure																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 74

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

In-the-hand observation

Period : Administration (non-mating group)

Generation : F0 Sex : Female Week : 4

Study No. : R-1273

Experiment 1 : Piloerection, Pupil size, Salivation, Abnormal respiration, Vocalization, Reactivity to handling																	
Generation : F0		Sex : Female		Week : 4		Piloerection NC		Pupil size NC		Salivation NC							
Test article																	
Dose		0		1		-1		0		1		2		3			
4MBE	n	10	0	0	0	10	0	0	0	10	0	0	0	0	0		
0 mg/kg																	
4MBE		n	10	0	0	10	0	0	0	10	0	0	0	0	0		
1000 mg/kg																	
Experiment 2 : Abnormal respiration, Vocalization																	
Test article		Abnormal NC respiration					Vocalization NC										
Dose		0		1		2		3		0		1		2		3	
4MBE	n	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0
0 mg/kg																	
4MBE		n	10	0	0	0	0	10	0	0	0	0	0	0	0	0	0
1000 mg/kg																	
Experiment 3 : Reactivity to handling																	
Test article																	
Dose		-1		0		1		2		3							
4MBE	n	0	10	0	0	0	0	0	0	0	0						
0 mg/kg																	
4MBE		n	0	10	0	0	0	0	0	0	0						
1000 mg/kg																	
4MBE :Benzenemethanol, 4-methyl-																	
Piloerection) 0: Absent, 1: Present																	
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis																	
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked																	
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe																	
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive																	
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward																	
Not calculated : NC																	

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Period : Administration (non-mating group)
Generation : F0 Sex : Female Week : 5

Study No. : R-1273

	Generation : F0	Sex : Female	Week : 5	Ease of removal from cage								Fur condition NC				Species : Rat
Test article																
Dose																
4MBE	n			-1	0	1	2	3	0	0	1	2	3	0		
0 mg/kg				0	10	0	0	0	0	10	0	0	0	0		
4MBE	n			0	10	0	0	0	0	10	0	0	0	0		
1000 mg/kg																
				Skin NC				Secretions- NC Eye, Nose		Exophthalmos NC						
Test article																
Dose																
4MBE	n			0	1	2	3	0	0	1	0	0	1	0		
0 mg/kg				10	0	0	0	0	10	0	10	0	0	0		
4MBE	n			10	0	0	0	0	10	0	10	0	0	0		
1000 mg/kg																
				Palpebral NC closure				Mucosal NC membranes			Lacrimation NC					
Test article																
Dose																
4MBE	n			0	1	2	3	0	0	1	2	3	0	0	1	0
0 mg/kg				10	0	0	0	0	10	0	0	0	0	10	0	0
4MBE	n			10	0	0	0	0	10	0	0	0	0	10	0	0
1000 mg/kg																
4MBE :Benzenemethanol, 4-methyl- Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe Secretions-Eye, Nose) 0: Absent, 1: Present Exophthalmos) 0: Absent, 1: Present Palpebral closure) 0: Absent, 1: Slightly closed, 2: Half closed, 3: Completely closed Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked Lacrimation) 0: Absent, 1: Present Not calculated : NC																

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

In-the-hand observation

Period : Administration (non-mating group)

Generation : F0 Sex : Female Week : 5

Study No. : R-1273

	Generation : F0	Sex : Female	Week : 5	Piloerection NC	Pupil size NC	Salivation NC
Test article						
Dose				0 1	-1 0 1 2	0 1 2 3
4MBE 0 mg/kg	n	10	0	0	10 0 0	10 0 0 0
4MBE 1000 mg/kg	n	10	0	0	10 0 0	10 0 0 0
				Abnormal NC respiration	Vocalization NC	
Test article						
Dose				0 1 2 3	0 1 2 3	
4MBE 0 mg/kg	n	10	0	0	0	10 0 0 0
4MBE 1000 mg/kg	n	10	0	0	0	10 0 0 0
				Reactivity to NC handling		
Test article						
Dose				-1 0 1 2 3		
4MBE 0 mg/kg	n	0	10	0	0	0
4MBE 1000 mg/kg	n	0	10	0	0	0

4MBE :Benzenemethanol, 4-methyl-

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 77

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

		In-the-hand observation										Period : Administration (non-mating group)										Species : Rat									
		Generation : F0					Sex : Female					Week : 6					Ease of remov- NC					Fur condition NC									
																	al from cage														
Test article	Dose	-1					0					1					2					3					0				
4MBE	0 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Skin NC										Secretions- NC										Exophthalmos NC									
												Eye, Nose																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	0	0	0
		Palpebral NC										Mucosal NC										Lacrimation NC									
												closure																			
Test article	Dose	0					1					2					3					0					1				
4MBE	0 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	0	10	0	0	0	0
4MBE	1000 mg/kg	n	10	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 78

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

In-the-hand observation

Period : Administration (non-mating group)

Generation : F0 Sex : Female Week : 6

Study No. : R-1273

Experiment 1 : Piloerection, Pupil size, Salivation, Abnormal respiration, Vocalization, Reactivity to handling																			
Generation : F0		Sex : Female		Week : 6		Piloerection NC		Pupil size NC		Salivation NC									
Test article																			
Dose																			
4MBE		n		0		1		-1		0		1		2		3			
0 mg/kg				10		0		0		10		0		0		0			
4MBE		n		10		0		0		10		0		0		0			
1000 mg/kg																			
Experiment 2 : Abnormal respiration, Vocalization, Reactivity to handling																			
Generation : F0		Sex : Female		Week : 6		Abnormal NC respiration		Vocalization NC											
Test article																			
Dose																			
4MBE		n		0		1		2		3		0		1		2		3	
0 mg/kg				10		0		0		0		10		0		0		0	
4MBE		n		10		0		0		0		10		0		0		0	
1000 mg/kg																			
Experiment 3 : Reactivity to handling																			
Generation : F0		Sex : Female		Week : 6		Reactivity to NC handling													
Test article																			
Dose																			
4MBE		n		-1		0		1		2		3		0					
0 mg/kg				0		10		0		0		0		0					
4MBE		n		0		10		0		0		0							
1000 mg/kg																			
4MBE : Benzenemethanol, 4-methyl- Piloerection) 0: Absent, 1: Present Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward Not calculated : NC																			

Table 2 - 79

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : Recovery

Study No. : R-1273

		Sex : Male		Week : 1		Ease of remov- NC		Fur condition NC		Species : Rat	
		Generation : F0				al from cage					
Test article	Dose	-1		0		1		2		3	
4MBE	0 mg/kg	n	0	5	0	0	0	0	5	0	0
4MBE	1000 mg/kg	n	0	5	0	0	0	5	0	0	0
		Skin NC		Secretions- NC		Exophthalmos NC					
				Eye, Nose							
Test article	Dose	0		1		2		3		0	
4MBE	0 mg/kg	n	5	0	0	0	0	5	0	5	0
4MBE	1000 mg/kg	n	5	0	0	0	0	5	0	5	0
		Palpebral NC		Mucosal NC		Lacrimation NC					
		closure		membranes							
Test article	Dose	0		1		2		3		0	
4MBE	0 mg/kg	n	5	0	0	0	0	5	0	0	0
4MBE	1000 mg/kg	n	5	0	0	0	0	5	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 80

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation

Period : Recovery

Generation : F0

Sex : Male

Week : 1

Species : Rat

		Piloerection NC			Pupil size NC				Salivation NC			
Test article												
Dose		0	1		-1	0	1	2	0	1	2	3
4MBE	n	5	0		0	5	0	0	5	0	0	0
0 mg/kg												
4MBE	n	5	0		0	5	0	0	5	0	0	0
1000 mg/kg												
		Abnormal NC respiration					Vocalization NC					
Test article												
Dose		0	1	2	3		0	1	2	3		
4MBE	n	5	0	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	5	0	0	0		5	0	0	0		
1000 mg/kg												
		Reactivity to NC handling										
Test article												
Dose		-1	0	1	2	3						
4MBE	n	0	5	0	0	0						
0 mg/kg												
4MBE	n	0	5	0	0	0						
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 81

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : Recovery

Study No. : R-1273

		Sex : Male		Week : 2		Ease of remov- NC		Fur condition NC		Species : Rat	
		Generation : F0		al from cage							
Test article	Dose	-1		0		1		2		3	
4MBE	0 mg/kg	n	0	5	0	0	0	0	5	0	0
4MBE	1000 mg/kg	n	0	5	0	0	0	5	0	0	0
		Skin NC		Secretions- NC		Exophthalmos NC					
				Eye, Nose							
Test article	Dose	0		1		2		3		0	
4MBE	0 mg/kg	n	5	0	0	0	0	5	0	5	0
4MBE	1000 mg/kg	n	5	0	0	0	0	5	0	5	0
		Palpebral NC		Mucosal NC		Lacrimation NC					
		closure		membranes							
Test article	Dose	0		1		2		3		0	
4MBE	0 mg/kg	n	5	0	0	0	0	5	0	0	0
4MBE	1000 mg/kg	n	5	0	0	0	0	5	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 82

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation

Period : Recovery

Generation : F0

Sex : Male

Week : 2

Species : Rat

		Piloerection NC					Pupil size NC					Salivation NC								
Test article																				
Dose		0			1		-1		0	1		2		0		1	2		3	
4MBE	n	5			0		0		5	0		0		5		0	0		0	
0 mg/kg																				
4MBE	n	5			0		0		5	0		0		5		0	0		0	
1000 mg/kg																				
		Abnormal NC respiration					Vocalization NC													
Test article																				
Dose		0			1		2		3	0		1		2		3				
4MBE	n	5			0		0		0	5		0		0		0				
0 mg/kg																				
4MBE	n	5			0		0		0	5		0		0		0				
1000 mg/kg																				
		Reactivity to NC handling																		
Test article																				
Dose		-1			0		1		2	3										
4MBE	n	0			5		0		0	0										
0 mg/kg																				
4MBE	n	0			5		0		0	0										
1000 mg/kg																				

4MBE :Benzenemethanol, 4-methyl-

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 83

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : Recovery (non-mating group)
Generation : F0 Sex : Female Week : 1

Study No. : R-1273

		Ease of removal NC al from cage								Fur condition NC				Species : Rat
Test article														
Dose		-1	0	1	2	3	0	5	1	2	3			
4MBE	n	0	5	0	0	0	0	5	0	0	0			
0 mg/kg														
4MBE	n	0	5	0	0	0	0	5	0	0	0			
1000 mg/kg														
		Skin NC				Secretions- NC Eye, Nose			Exophthalmos NC					
Test article														
Dose		0	1	2	3	0	1	0	0	1	0			
4MBE	n	5	0	0	0	5	0	0	5	0	0			
0 mg/kg														
4MBE	n	5	0	0	0	5	0	0	5	0	0			
1000 mg/kg														
		Palpebral NC closure				Mucosal NC membranes				Lacrimation NC				
Test article														
Dose		0	1	2	3	0	1	2	3	0	1			
4MBE	n	5	0	0	0	5	0	0	0	0	5	0		
0 mg/kg														
4MBE	n	5	0	0	0	5	0	0	0	0	5	0		
1000 mg/kg														

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Table 2 - 84

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Period : Recovery (non-mating group)
Generation : F0 Sex : Female Week : 1

Study No. : R-1273

Generation : F0		Sex : Female		Week : 1		Piloerection NC		Pupil size NC		Salivation NC		Species : Rat	
Test article													
Dose		0	1	-1	0	0	1	2	0	1	2	3	
4MBE	n	5	0	0	5	0	0	0	5	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	5	0	0	0	5	0	0	0	
1000 mg/kg													
		Abnormal NC respiration				Vocalization NC							
Test article													
Dose		0	1	2	3	0	1	2	3				
4MBE	n	5	0	0	0	5	0	0	0				
0 mg/kg													
4MBE	n	5	0	0	0	5	0	0	0				
1000 mg/kg													
		Reactivity to NC handling											
Test article													
Dose		-1	0	1	2	3							
4MBE	n	0	5	0	0	0							
0 mg/kg													
4MBE	n	0	5	0	0	0							
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Not calculated : NC

Table 2 - 85

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation Period : Recovery (non-mating group)
Generation : F0 Sex : Female Week : 2

Study No. : R-1273

		Ease of removal NC al from cage								Fur condition NC				Species : Rat
Test article														
Dose		-1	0	1	2	3	0	5	1	2	3			
4MBE 0 mg/kg	n	0	5	0	0	0	0	5	0	0	0			
4MBE 1000 mg/kg	n	0	5	0	0	0	0	5	0	0	0			
		Skin NC				Secretions- NC Eye, Nose			Exophthalmos NC					
Test article														
Dose		0	1	2	3	0	5	1	0	5	1	0		
4MBE 0 mg/kg	n	5	0	0	0	5	0	0	5	0	0			
4MBE 1000 mg/kg	n	5	0	0	0	5	0	0	5	0	0			
		Palpebral NC closure				Mucosal NC membranes				Lacrimation NC				
Test article														
Dose		0	1	2	3	0	5	1	2	3	0	5	1	0
4MBE 0 mg/kg	n	5	0	0	0	5	0	0	0	0	0	5	0	
4MBE 1000 mg/kg	n	5	0	0	0	5	0	0	0	0	0	5	0	

4MBE :Benzenemethanol, 4-methyl-
Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult
Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe
Secretions-Eye, Nose) 0: Absent, 1: Present
Exophthalmos) 0: Absent, 1: Present
Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed
Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked
Lacrimation) 0: Absent, 1: Present
Not calculated : NC

Generation : F0			Sex : Female			Week : 2			Piloerection NC						Pupil size NC						Salivation NC					
Test article																										
Dose																										
4MBE			n	0	1	-1	0	0	5	1	0	2	0	0	5	1	0	2	0	3	0					
0 mg/kg				5	0	0		5	0		0		5	0		0		0		0						
4MBE			n	5	0	0	5	0	0	5	0	0	5	0	0	0										
1000 mg/kg																										
Abnormal NC respiration												Vocalization NC														
Test article																										
Dose																										
4MBE			n	0	1	2	3	0	5	0	2	3	0													
0 mg/kg				5	0	0	0		5	0	0	0														
4MBE			n	5	0	0	0	5	0	0	0															
1000 mg/kg																										
Reactivity to NC handling																										
Test article																										
Dose																										
4MBE			n	-1	0	1	2	3	0																	
0 mg/kg				0	5	0	0	0																		
4MBE			n	0	5	0	0	0																		
1000 mg/kg																										
4MBE :Benzenemethanol, 4-methyl-																										
Piloerection) 0: Absent, 1: Present																										
Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis																										
Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked																										
Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe																										
Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive																										
Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward																										
Not calculated : NC																										

Table 2 - 87

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Arousal NC

Study No. : R-1273

		Arousal NC						Convulsion NC				Species : Rat
Test article												
Dose		-2	-1	0	1	2		0	1	2	3	
4MBE 0 mg/kg	n	0	0	12	0	0		12	0	0	0	
4MBE 100 mg/kg	n	0	0	12	0	0		12	0	0	0	
4MBE 300 mg/kg	n	0	0	12	0	0		12	0	0	0	
4MBE 1000 mg/kg	n	0	0	12	0	0		12	0	0	0	
		Abnormal NC behavior						Stereotypy NC				
Test article												
Dose		0	1	2	3			0	1	2	3	
4MBE 0 mg/kg	n	12	0	0	0			12	0	0	0	
4MBE 100 mg/kg	n	12	0	0	0			12	0	0	0	
4MBE 300 mg/kg	n	12	0	0	0			12	0	0	0	
4MBE 1000 mg/kg	n	12	0	0	0			12	0	0	0	

4MBE : Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Not calculated : NC

Table 2 - 88

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 before mating
Generation : F0 Sex : Male Week : 1

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article											
Dose		U	0	1	2	3	N	F	H		
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
1000 mg/kg											
		Grooming NC				Urination NC					
Test article											
Dose		0	1	2		0	1	2	3		
4MBE	n	12	0	0		12	0	0	0		
0 mg/kg											
4MBE	n	12	0	0		12	0	0	0		
100 mg/kg											
4MBE	n	12	0	0		11	1	0	0		
300 mg/kg											
4MBE	n	12	0	0		11	1	0	0		
1000 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 89

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
1000 mg/kg	Mean	2	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 90

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Arousal NC

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE 0 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 100 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 300 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 1000 mg/kg	n	0	0	12	0	0		12	0	0	0		
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE 0 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 100 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 1000 mg/kg	n	12	0	0	0			12	0	0	0		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 91

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article											
Dose		U	0	1	2	3	N	F	H		
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
1000 mg/kg											
		Grooming NC					Urination NC				
Test article											
Dose		0	1	2	0	1	2	3			
4MBE	n	12	0	0	11	1	0	0			
0 mg/kg											
4MBE	n	12	0	0	12	0	0	0			
100 mg/kg											
4MBE	n	12	0	0	10	2	0	0			
300 mg/kg											
4MBE	n	12	0	0	11	1	0	0			
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 92

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Open field observation
 Generation : F0 Sex : Male Week : 2 Period : F0 before mating

Study No. : R-1273

		Rearing	Defecation count	Species : Rat
Test article				
Dose				
4MBE	n	12	12	
0 mg/kg	Mean	3	0	
	S.D.	2	0	
4MBE	n	12	12	
100 mg/kg	Mean	3	0	
	S.D.	1	0	
4MBE	n	12	12	
300 mg/kg	Mean	2	0	
	S.D.	1	0	
4MBE	n	12	12	
1000 mg/kg	Mean	3	0	
	S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-
 Not significantly different from 4MBE 0 mg/kg

Table 2 - 93

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 3 Period : F0 mating

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE 0 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 100 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 300 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 1000 mg/kg	n	0	0	12	0	0		12	0	0	0		
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE 0 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 100 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 1000 mg/kg	n	12	0	0	0			12	0	0	0		

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 94

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 3

Species : Rat

		Gait NC					Posture NC			
Test article										
Dose		U	0	1	2	3	N	F	H	
4MBE	n	0	12	0	0	0	12	0	0	
0 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
100 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
300 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
1000 mg/kg										
		Grooming NC					Urination NC			
Test article										
Dose		0	1	2	0	1	2	3		
4MBE	n	12	0	0	11	1	0	0		
0 mg/kg										
4MBE	n	12	0	0	12	0	0	0		
100 mg/kg										
4MBE	n	12	0	0	10	2	0	0		
300 mg/kg										
4MBE	n	12	0	0	12	0	0	0		
1000 mg/kg										

4MBE :Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 95

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 3

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	2	0
	S.D.	1	0
4MBE	n	12	12
300 mg/kg	Mean	2	0
	S.D.	1	0
4MBE	n	12	12
1000 mg/kg	Mean	3	0
	S.D.	2	1

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 96

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation		Sex : Male		Week : 4		Period : F0 mating		Species : Rat			
Generation : F0		Arousal NC						Convulsion NC			
Test article											
Dose		-2	-1	0	1	2	0	1	2	3	
4MBE	n	0	0	12	0	0	12	0	0	0	
0 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	
100 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	
300 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	
1000 mg/kg											
		Abnormal NC behavior					Stereotypy NC				
Test article											
Dose		0	1	2	3	0	1	2	3		
4MBE	n	12	0	0	0	12	0	0	0		
0 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
100 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
300 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
1000 mg/kg											
4MBE :Benzenemethanol, 4-methyl-											
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert											
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe											
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe											
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe											
Not calculated : NC											

Table 2 - 97

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation		Sex : Male		Week : 4		Period : F0 mating		Species : Rat	
		Gait NC				Posture NC			
Test article									
Dose		U	0	1	2	3	N	F	H
4MBE	n	0	12	0	0	0	12	0	0
0 mg/kg									
4MBE	n	0	12	0	0	0	12	0	0
100 mg/kg									
4MBE	n	0	12	0	0	0	12	0	0
300 mg/kg									
4MBE	n	0	12	0	0	0	12	0	0
1000 mg/kg									
Grooming NC					Urination NC				
Test article									
Dose		0	1	2	0	1	2	3	
4MBE	n	12	0	0	9	3	0	0	
0 mg/kg									
4MBE	n	12	0	0	12	0	0	0	
100 mg/kg									
4MBE	n	12	0	0	11	1	0	0	
300 mg/kg									
4MBE	n	12	0	0	9	3	0	0	
1000 mg/kg									

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 98

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 4

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
1000 mg/kg	Mean	3	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 99

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 5

Species : Rat

		Arousal NC						Convulsion NC				
Test article												
Dose		-2	-1	0	1	2		0	1	2	3	
4MBE	n	0	0	12	0	0		12	0	0	0	
0 mg/kg												
4MBE	n	0	0	12	0	0		12	0	0	0	
100 mg/kg												
4MBE	n	0	0	12	0	0		12	0	0	0	
300 mg/kg												
4MBE	n	0	0	12	0	0		12	0	0	0	
1000 mg/kg												
		Abnormal NC behavior						Stereotypy NC				
Test article												
Dose		0	1	2	3			0	1	2	3	
4MBE	n	12	0	0	0			12	0	0	0	
0 mg/kg												
4MBE	n	12	0	0	0			12	0	0	0	
100 mg/kg												
4MBE	n	12	0	0	0			12	0	0	0	
300 mg/kg												
4MBE	n	12	0	0	0			12	0	0	0	
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 100

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 5

Species : Rat

		Gait NC					Posture NC			
Test article										
Dose		U	0	1	2	3	N	F	H	
4MBE	n	0	12	0	0	0	12	0	0	
0 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
100 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
300 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
1000 mg/kg										
		Grooming NC					Urination NC			
Test article										
Dose		0	1	2	0	1	2	3		
4MBE	n	12	0	0	11	1	0	0		
0 mg/kg										
4MBE	n	12	0	0	11	1	0	0		
100 mg/kg										
4MBE	n	12	0	0	10	2	0	0		
300 mg/kg										
4MBE	n	12	0	0	12	0	0	0		
1000 mg/kg										

4MBE :Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 101

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 5

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	4	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	4	0
	S.D.	3	0
4MBE	n	12	12
300 mg/kg	Mean	3	0
	S.D.	2	0
4MBE	n	12	12
1000 mg/kg	Mean	4	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 102

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 6

Species : Rat

		Arousal NC						Convulsion NC					
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
1000 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	12	0	0	0			12	0	0	0		
0 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
100 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
300 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
1000 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 103

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 6

Species : Rat

		Gait NC					Posture NC			
Test article										
Dose		U	0	1	2	3	N	F	H	
4MBE	n	0	12	0	0	0	12	0	0	
0 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
100 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
300 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
1000 mg/kg										
		Grooming NC				Urination NC				
Test article										
Dose		0	1	2		0	1	2	3	
4MBE	n	12	0	0		10	2	0	0	
0 mg/kg										
4MBE	n	12	0	0		10	2	0	0	
100 mg/kg										
4MBE	n	12	0	0		11	1	0	0	
300 mg/kg										
4MBE	n	12	0	0		12	0	0	0	
1000 mg/kg										

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 104

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 6

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	5	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	5	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	4	0
	S.D.	2	0
4MBE	n	12	12
1000 mg/kg	Mean	5	0
	S.D.	1	1

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 105

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation		Sex : Female		Week : 1		Period : F0 before mating		Species : Rat			
		Arousal NC						Convulsion NC			
Test article											
Dose											
4MBE	n	-2	-1	0	1	2	0	1	2	3	
0 mg/kg		0	0	12	0	0	12	0	0	0	
4MBE	n	0	0	12	0	0	12	0	0	0	
100 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	
300 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	
1000 mg/kg											
		Abnormal NC behavior						Stereotypy NC			
Test article											
Dose											
4MBE	n	0	1	2	3	0	1	2	3		
0 mg/kg		12	0	0	0	12	0	0	0		
4MBE	n	12	0	0	0	12	0	0	0		
100 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
300 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0		
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 106

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 before mating

Study No. : R-1273

Open field observation		Generation : F0		Sex : Female		Week : 1		Period : 1 h before mating				Species : Rat													
		Gait NC						Posture NC																	
Test article																									
Dose		U			0			1			2			3			N			F			H		
4MBE	n			0		12		0		0		0		0		12		0		0		0			
0 mg/kg																									
4MBE	n			0		12		0		0		0		0		12		0		0					
100 mg/kg																									
4MBE	n			0		12		0		0		0		0		12		0		0					
300 mg/kg																									
4MBE	n			0		11		1		0		0		0		11		1		0					
1000 mg/kg																									

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 107

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 1

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	6	0
	S.D.	2	0
4MBE	n	12	12
100 mg/kg	Mean	6	0
	S.D.	3	0
4MBE	n	12	12
300 mg/kg	Mean	5	0
	S.D.	2	0
4MBE	n	12	12
1000 mg/kg	Mean	2	0
	S.D.	2	0

DT **

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

DT : Dunnett test (two-side)

Table 2 - 108

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 before mating
Generation : F0 Sex : Female Week : 2

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE 0 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 100 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 300 mg/kg	n	0	0	12	0	0		12	0	0	0		
4MBE 1000 mg/kg	n	0	0	12	0	0		12	0	0	0		
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE 0 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 100 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 300 mg/kg	n	12	0	0	0			12	0	0	0		
4MBE 1000 mg/kg	n	12	0	0	0			12	0	0	0		

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 109

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 before mating
Generation : F0 Sex : Female Week : 2

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article											
Dose		U	0	1	2	3	N	F	H		
4MBE 0 mg/kg	n	0	12	0	0	0	12	0	0		
4MBE 100 mg/kg	n	0	12	0	0	0	12	0	0		
4MBE 300 mg/kg	n	0	12	0	0	0	12	0	0		
4MBE 1000 mg/kg	n	0	12	0	0	0	12	0	0		
		Grooming NC					Urination NC				
Test article											
Dose		0	1	2	0	1	2	3			
4MBE 0 mg/kg	n	12	0	0	12	0	0	0			
4MBE 100 mg/kg	n	12	0	0	12	0	0	0			
4MBE 300 mg/kg	n	12	0	0	12	0	0	0			
4MBE 1000 mg/kg	n	12	0	0	12	0	0	0			

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 110

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 before mating

Generation : F0

Sex : Female Week : 2

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	7	0
	S.D.	3	0
4MBE	n	12	12
100 mg/kg	Mean	8	0
	S.D.	3	0
4MBE	n	12	12
300 mg/kg	Mean	7	0
	S.D.	3	0
4MBE	n	12	12
1000 mg/kg	Mean	1	0
	S.D.	1	0

DT **

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

DT : Dunnett test (two-side)

Table 2 - 111

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 1

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	11	0	0		11	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	12	0	0	0			12	0	0	0		
0 mg/kg													
4MBE	n	11	0	0	0			11	0	0	0		
100 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
300 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 112

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 1

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article		U	0	1	2	3	N	F	H		
Dose	n										
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
		Grooming NC				Urination NC					
Test article		0	1	2		0	1	2	3		
Dose	n										
4MBE	n	12	0	0		12	0	0	0		
0 mg/kg											
4MBE	n	11	0	0		11	0	0	0		
100 mg/kg											
4MBE	n	12	0	0		12	0	0	0		
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 113

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 gestation

Generation : F0

Sex : Female Day : 1

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	6	0
	S.D.	3	0
4MBE	n	11	11
100 mg/kg	Mean	7	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	6	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 114

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 7

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	11	0	0		11	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	12	0	0	0			12	0	0	0		
0 mg/kg													
4MBE	n	11	0	0	0			11	0	0	0		
100 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
300 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 115

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 7

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article		U	0	1	2	3	N	F	H		
Dose	n										
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
		Grooming NC				Urination NC					
Test article		0	1	2		0	1	2	3		
Dose	n										
4MBE	n	12	0	0		12	0	0	0		
0 mg/kg											
4MBE	n	11	0	0		11	0	0	0		
100 mg/kg											
4MBE	n	12	0	0		12	0	0	0		
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 116

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 gestation

Generation : F0

Sex : Female Day : 7

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	7	0
	S.D.	2	0
4MBE	n	11	11
100 mg/kg	Mean	7	0
	S.D.	3	0
4MBE	n	12	12
300 mg/kg	Mean	6	0
	S.D.	1	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 117

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	11	0	0		11	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	12	0	0	0			12	0	0	0		
0 mg/kg													
4MBE	n	11	0	0	0			11	0	0	0		
100 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
300 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 118

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 14

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article		U	0	1	2	3	N	F	H		
Dose	n										
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
		Grooming NC				Urination NC					
Test article		0	1	2		0	1	2	3		
Dose	n										
4MBE	n	12	0	0		12	0	0	0		
0 mg/kg											
4MBE	n	11	0	0		11	0	0	0		
100 mg/kg											
4MBE	n	12	0	0		11	1	0	0		
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 119

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 gestation

Generation : F0

Sex : Female Day : 14

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	6	0
	S.D.	2	0
4MBE	n	11	11
100 mg/kg	Mean	6	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	6	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 120

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 20

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article		-2	-1	0	1	2		0	1	2	3		
Dose	n												
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	11	0	0		11	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
		Abnormal NC behavior					Stereotypy NC						
Test article		0	1	2	3		0	1	2	3			
Dose	n												
4MBE	n	12	0	0	0		12	0	0	0			
0 mg/kg													
4MBE	n	11	0	0	0		11	0	0	0			
100 mg/kg													
4MBE	n	12	0	0	0		12	0	0	0			
300 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 121

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 gestation
Generation : F0 Sex : Female Day : 20
Gait NC

Study No. : R-1273

		Gait NC					Posture NC				Species : Rat
Test article		U	0	1	2	3	N	F	H		
Dose											
4MBE	n	0	12	0	0	0	12	0	0		
0 mg/kg											
4MBE	n	0	11	0	0	0	11	0	0		
100 mg/kg											
4MBE	n	0	12	0	0	0	12	0	0		
300 mg/kg											
		Grooming NC				Urination NC					
Test article		0	1	2		0	1	2	3		
Dose											
4MBE	n	12	0	0		12	0	0	0		
0 mg/kg											
4MBE	n	11	0	0		11	0	0	0		
100 mg/kg											
4MBE	n	12	0	0		12	0	0	0		
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 122

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 gestation

Generation : F0

Sex : Female Day : 20

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	4	0
	S.D.	1	0
4MBE	n	11	11
100 mg/kg	Mean	4	0
	S.D.	1	0
4MBE	n	12	12
300 mg/kg	Mean	3	0
	S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 123

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Maternal & neonatal developmental toxicity screening test in rat											
Open field observation		Sex : Female		Day : 6		Period : F0 lactation				Species : Rat	
		Arousal NC						Convulsion NC			
Test article											
Dose											
4MBE	n	-2	-1	0	1	2	0	0	1	2	3
0 mg/kg		0	0	12	0	0	12	0	0	0	0
4MBE	n	0	0	11	0	0	11	0	0	0	0
100 mg/kg											
4MBE	n	0	0	12	0	0	12	0	0	0	0
300 mg/kg											
		Abnormal NC behavior						Stereotypy NC			
Test article											
Dose											
4MBE	n	0	1	2	3	0	0	1	2	3	0
0 mg/kg		12	0	0	0	12	0	0	0	0	
4MBE	n	11	0	0	0	11	0	0	0	0	
100 mg/kg											
4MBE	n	12	0	0	0	12	0	0	0	0	
300 mg/kg											

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 124

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 lactation

Generation : F0

Sex : Female

Day : 6

Species : Rat

		Gait NC					Posture NC			
Test article		U	0	1	2	3	N	F	H	
Dose										
4MBE	n	0	12	0	0	0	12	0	0	
0 mg/kg										
4MBE	n	0	11	0	0	0	11	0	0	
100 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
300 mg/kg										
		Grooming NC				Urination NC				
Test article		0	1	2		0	1	2	3	
Dose										
4MBE	n	12	0	0		12	0	0	0	
0 mg/kg										
4MBE	n	11	0	0		11	0	0	0	
100 mg/kg										
4MBE	n	12	0	0		11	1	0	0	
300 mg/kg										

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 125

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 lactation

Generation : F0

Sex : Female Day : 6

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	6	0
	S.D.	1	0
4MBE	n	11	11
100 mg/kg	Mean	6	0
	S.D.	1	0
4MBE	n	12	12
300 mg/kg	Mean	5	0
	S.D.	1	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 126

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : F0 lactation
Generation : F0 Sex : Female Day : 13

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	12	0	0		12	0	0	0		
0 mg/kg													
4MBE	n	0	0	11	0	0		11	0	0	0		
100 mg/kg													
4MBE	n	0	0	12	0	0		12	0	0	0		
300 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	12	0	0	0			12	0	0	0		
0 mg/kg													
4MBE	n	11	0	0	0			11	0	0	0		
100 mg/kg													
4MBE	n	12	0	0	0			12	0	0	0		
300 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Not calculated : NC

Table 2 - 127

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 lactation

Generation : F0

Sex : Female

Day : 13

Species : Rat

		Gait NC					Posture NC			
Test article		U	0	1	2	3	N	F	H	
Dose										
4MBE	n	0	12	0	0	0	12	0	0	
0 mg/kg										
4MBE	n	0	11	0	0	0	11	0	0	
100 mg/kg										
4MBE	n	0	12	0	0	0	12	0	0	
300 mg/kg										
		Grooming NC				Urination NC				
Test article		0	1	2		0	1	2	3	
Dose										
4MBE	n	12	0	0		12	0	0	0	
0 mg/kg										
4MBE	n	11	0	0		11	0	0	0	
100 mg/kg										
4MBE	n	12	0	0		12	0	0	0	
300 mg/kg										

4MBE : Benzenemethanol, 4-methyl-

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Not calculated : NC

Table 2 - 128

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : F0 lactation

Generation : F0

Sex : Female Day : 13

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	12	12
0 mg/kg	Mean	6	0
	S.D.	2	0
4MBE	n	11	11
100 mg/kg	Mean	6	0
	S.D.	2	0
4MBE	n	12	12
300 mg/kg	Mean	6	0
	S.D.	1	0

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 2 - 129

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : Administration (non-mating group)

Study No. : R-1273

		Generation : F0				Sex : Female				Week : 1				Period : Administration (non-mating group)												Species : Rat			
		Arousal NC												Convulsion NC															
Test article	Dose																												
4MBE	0 mg/kg	n	-2	0	-1	0	0	10	0	1	0	2	0	0	10	0	1	0	2	0	3	0							
4MBE	1000 mg/kg	n		0		0	10		0		0		10		0		0		0		0								
		Abnormal NC behavior												Stereotypy NC															
Test article	Dose																												
4MBE	0 mg/kg	n	0	10	1	0	2	0	3	0	0	0	10	0	1	0	2	0	3	0	0								
4MBE	1000 mg/kg	n		10		0	0	0	0		10		0		0		0		0		0								
		Gait NC												Posture NC															
Test article	Dose																												
4MBE	0 mg/kg	n	U	0	10	0	1	0	2	0	3	0	N	10	F	0	H	0											
4MBE	1000 mg/kg	n		0	10		0	0	0		0		10		0		0		0										

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 130

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Administration (non-mating group)
Species : Rat

		Grooming NC				Urination NC			
Test article		0	1	2		0	1	2	3
Dose	n								
4MBE	n	10	0	0		10	0	0	0
0 mg/kg									
4MBE	n	10	0	0		10	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 131

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Open field observation
 Generation : F0

Period : Administration (non-mating group)

Study No. : R-1273

		Sex : Female	Week : 1	Species : Rat
		Rearing	Defecation count	
Test article				
Dose				
4MBE	n	10	10	
0 mg/kg	Mean	7	0	
	S.D.	2	0	
4MBE	n	10	10	
1000 mg/kg	Mean	4	0	
	S.D.	2	0	
		T2 *		

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05

T2 : Student t-test (two-side)

Table 2 - 132

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation Period : Administration (non-mating group)

Study No. : R-1273

		Generation : F0		Sex : Female		Week : 2		Period : Administration (non-mating group)										Species : Rat			
		Arousal NC										Convulsion NC									
Test article																					
Dose																					
4MBE	n	-2	0	-1	0	0	10	1	0	2	0	0	10	1	0	2	0	3	0		
0 mg/kg																					
4MBE	n	0	0	0	10	0	0	0	10	0	0	10	0	0	0	0	0				
1000 mg/kg																					
		Abnormal NC behavior										Stereotypy NC									
Test article																					
Dose																					
4MBE	n	0	10	1	0	2	0	3	0	0	10	1	0	2	0	3	0				
0 mg/kg																					
4MBE	n	10	0	0	0	0	0	10	0	0	10	0	0	0	0	0					
1000 mg/kg																					
		Gait NC										Posture NC									
Test article																					
Dose																					
4MBE	n	U	0	10	1	0	2	0	3	0	N	10	F	0	H	0					
0 mg/kg																					
4MBE	n	0	10	0	0	0	0	0	10	0	0	10	0	0	0						
1000 mg/kg																					

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 133

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Administration (non-mating group)
Species : Rat

		Grooming NC				Urination NC			
Test article		0	1	2		0	1	2	3
Dose	n								
4MBE	n	10	0	0		10	0	0	0
0 mg/kg									
4MBE	n	10	0	0		10	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 134

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Administration (non-mating group)

Study No. : R-1273

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	10	10
0 mg/kg	Mean	7	0
	S.D.	2	0
4MBE	n	10	10
1000 mg/kg	Mean	3	0
	S.D.	2	0
		T2 **	

4MBE :Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : ** P<0.01
T2 : Student t-test (two-side)

Table 2 - 135

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	10	0	0		10	0	0	0		
0 mg/kg													
4MBE	n	0	0	10	0	0		10	0	0	0		
1000 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	10	0	0	0			10	0	0	0		
0 mg/kg													
4MBE	n	10	0	0	0			10	0	0	0		
1000 mg/kg													
		Gait NC						Posture NC					
Test article													
Dose		U	0	1	2	3		N	F	H			
4MBE	n	0	10	0	0	0		10	0	0			
0 mg/kg													
4MBE	n	0	10	0	0	0		10	0	0			
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 136

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article													
Dose		0	1	2	0	1	2	3					
4MBE	n	10	0	0	10	0	0	0					
0 mg/kg													
4MBE	n	10	0	0	10	0	0	0					
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 137

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)

Study No. : R-1273

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	10	10
0 mg/kg	Mean	9	0
	S.D.	2	0
4MBE	n	10	10
1000 mg/kg	Mean	6	0
	S.D.	2	0
		T2 **	

4MBE :Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : ** P<0.01
T2 : Student t-test (two-side)

Table 2 - 138

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 4 Period : Administration (non-mating group)

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	10	0	0		10	0	0	0		
0 mg/kg													
4MBE	n	0	0	10	0	0		10	0	0	0		
1000 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	10	0	0	0			10	0	0	0		
0 mg/kg													
4MBE	n	10	0	0	0			10	0	0	0		
1000 mg/kg													
		Gait NC						Posture NC					
Test article													
Dose		U	0	1	2	3		N	F	H			
4MBE	n	0	10	0	0	0		10	0	0			
0 mg/kg													
4MBE	n	0	10	0	0	0		10	0	0			
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 139

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 4 Period : Administration (non-mating group)
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article		Grooming NC				Urination NC			
Dose		0	1	2		0	1	2	3
4MBE	n	10	0	0		10	0	0	0
0 mg/kg									
4MBE	n	10	0	0		10	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 140

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 4 Period : Administration (non-mating group)

Study No. : R-1273

		Rearing	Defecation count	Species : Rat
Test article				
Dose				
4MBE	n	10	10	
0 mg/kg	Mean	7	0	
	S.D.	2	0	
4MBE	n	10	10	
1000 mg/kg	Mean	6	0	
	S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 141

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)

Study No. : R-1273

		Arousal NC						Convulsion NC						Species : Rat
Test article														
Dose		-2	-1	0	1	2		0	1	2	3			
4MBE	n	0	0	10	0	0		10	0	0	0			
0 mg/kg														
4MBE	n	0	0	10	0	0		10	0	0	0			
1000 mg/kg														
		Abnormal NC behavior						Stereotypy NC						
Test article														
Dose		0	1	2	3			0	1	2	3			
4MBE	n	10	0	0	0			10	0	0	0			
0 mg/kg														
4MBE	n	10	0	0	0			10	0	0	0			
1000 mg/kg														
		Gait NC						Posture NC						
Test article														
Dose		U	0	1	2	3		N	F	H				
4MBE	n	0	10	0	0	0		10	0	0				
0 mg/kg														
4MBE	n	0	10	0	0	0		10	0	0				
1000 mg/kg														

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 142

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article		0			1			2			3		
Dose	n												
4MBE	n	10	0	0	10	0	0	0	0	0	0	0	0
0 mg/kg													
4MBE	n	10	0	0	10	0	0	0	0	0	0	0	0
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 143

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)

Study No. : R-1273

		Rearing	Defecation count	Species : Rat
Test article				
Dose				
4MBE	n	10	10	
0 mg/kg	Mean	7	0	
	S.D.	2	0	
4MBE	n	10	10	
1000 mg/kg	Mean	5	0	
	S.D.	1	0	

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 144

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 6 Period : Administration (non-mating group)

Study No. : R-1273

		Arousal NC						Convulsion NC					Species : Rat
Test article													
Dose		-2	-1	0	1	2		0	1	2	3		
4MBE	n	0	0	10	0	0		10	0	0	0		
0 mg/kg													
4MBE	n	0	0	10	0	0		10	0	0	0		
1000 mg/kg													
		Abnormal NC behavior						Stereotypy NC					
Test article													
Dose		0	1	2	3			0	1	2	3		
4MBE	n	10	0	0	0			10	0	0	0		
0 mg/kg													
4MBE	n	10	0	0	0			10	0	0	0		
1000 mg/kg													
		Gait NC						Posture NC					
Test article													
Dose		U	0	1	2	3		N	F	H			
4MBE	n	0	10	0	0	0		10	0	0			
0 mg/kg													
4MBE	n	0	10	0	0	0		10	0	0			
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 145

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 6 Period : Administration (non-mating group)
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article		Grooming NC				Urination NC			
Dose		0	1	2		0	1	2	3
4MBE	n	10	0	0		10	0	0	0
0 mg/kg									
4MBE	n	10	0	0		9	1	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 146

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 6 Period : Administration (non-mating group)

Study No. : R-1273

Species : Rat

	Rearing	Defecation count	
Test article			
Dose			
4MBE	n	10	10
0 mg/kg	Mean	9	0
	S.D.	3	0
4MBE	n	10	10
1000 mg/kg	Mean	5	0
	S.D.	1	0
	A2 **		

4MBE :Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : ** P<0.01
A2 : Welch test (two-side)

Table 2 - 147

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Open field observation

Period : Recovery

Generation : F0

Sex : Male

Week : 1

Species : Rat

		Arousal NC					Convulsion NC				
Test article											
Dose		-2	-1	0	1	2	0	1	2	3	
4MBE	n	0	0	5	0	0	5	0	0	0	
0 mg/kg											
4MBE	n	0	0	5	0	0	5	0	0	0	
1000 mg/kg											
		Abnormal NC behavior					Stereotypy NC				
Test article											
Dose		0	1	2	3		0	1	2	3	
4MBE	n	5	0	0	0		5	0	0	0	
0 mg/kg											
4MBE	n	5	0	0	0		5	0	0	0	
1000 mg/kg											
		Gait NC					Posture NC				
Test article											
Dose		U	0	1	2	3	N	F	H		
4MBE	n	0	5	0	0	0	5	0	0		
0 mg/kg											
4MBE	n	0	5	0	0	0	5	0	0		
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Not calculated : NC

Table 2 - 148

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : Recovery
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article		Grooming NC				Urination NC			
Dose		0	1	2		0	1	2	3
4MBE	n	5	0	0		4	1	0	0
0 mg/kg									
4MBE	n	5	0	0		5	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 149

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : Recovery

Study No. : R-1273

		Rearing	Defecation count	Species : Rat
Test article				
Dose				
4MBE	n	5	5	
0 mg/kg	Mean	5	0	
	S.D.	1	0	
4MBE	n	5	5	
1000 mg/kg	Mean	5	0	
	S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 150

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : Recovery

Study No. : R-1273

		Arousal NC					Convulsion NC					Species : Rat
Test article												
Dose		-2	-1	0	1	2	0	1	2	3		
4MBE	n	0	0	5	0	0	5	0	0	0		
0 mg/kg												
4MBE	n	0	0	5	0	0	5	0	0	0		
1000 mg/kg												
		Abnormal NC behavior					Stereotypy NC					
Test article												
Dose		0	1	2	3		0	1	2	3		
4MBE	n	5	0	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	5	0	0	0		5	0	0	0		
1000 mg/kg												
		Gait NC					Posture NC					
Test article												
Dose		U	0	1	2	3	N	F	H			
4MBE	n	0	5	0	0	0	5	0	0			
0 mg/kg												
4MBE	n	0	5	0	0	0	5	0	0			
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-
Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe
Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe
Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly
Posture) N: Normal, F: Flattened, H: Hunched
Not calculated : NC

Table 2 - 151

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : Recovery
Grooming NC Urination NC

Study No. : R-1273

Species : Rat

Test article		Grooming NC				Urination NC			
Dose		0	1	2		0	1	2	3
4MBE	n	5	0	0		3	2	0	0
0 mg/kg									
4MBE	n	5	0	0		4	1	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 152

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : Recovery

Study No. : R-1273

		Rearing	Defecation count	Species : Rat
Test article				
Dose				
4MBE	n	5	5	
0 mg/kg	Mean	6	0	
	S.D.	1	0	
4MBE	n	5	5	
1000 mg/kg	Mean	6	0	
	S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 153

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)

Study No. : R-1273

		Arousal NC					Convulsion NC					Species : Rat
Test article												
Dose		-2	-1	0	1	2	0	1	2	3		
4MBE	n	0	0	5	0	0	5	0	0	0		
0 mg/kg												
4MBE	n	0	0	5	0	0	5	0	0	0		
1000 mg/kg												
		Abnormal NC behavior					Stereotypy NC					
Test article												
Dose		0	1	2	3		0	1	2	3		
4MBE	n	5	0	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	5	0	0	0		5	0	0	0		
1000 mg/kg												
		Gait NC					Posture NC					
Test article												
Dose		U	0	1	2	3	N	F	H			
4MBE	n	0	5	0	0	0	5	0	0			
0 mg/kg												
4MBE	n	0	5	0	0	0	5	0	0			
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Not calculated : NC

Table 2 - 154

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)

Species : Rat

		Grooming NC				Urination NC			
Test article		0	1	2		0	1	2	3
Dose	n	5	0	0		5	0	0	0
4MBE	n	5	0	0		5	0	0	0
0 mg/kg									
4MBE	n	5	0	0		5	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 155

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)

Study No. : R-1273

Species : Rat

		Rearing	Defecation count
Test article			
Dose			
4MBE	n	5	5
0 mg/kg	Mean	9	0
	S.D.	2	0
4MBE	n	5	5
1000 mg/kg	Mean	7	0
	S.D.	1	0

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 156

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)

Study No. : R-1273

		Arousal NC					Convulsion NC					Species : Rat
Test article												
Dose		-2	-1	0	1	2	0	1	2	3		
4MBE	n	0	0	5	0	0	5	0	0	0		
0 mg/kg												
4MBE	n	0	0	5	0	0	5	0	0	0		
1000 mg/kg												
		Abnormal NC behavior					Stereotypy NC					
Test article												
Dose		0	1	2	3		0	1	2	3		
4MBE	n	5	0	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	5	0	0	0		5	0	0	0		
1000 mg/kg												
		Gait NC					Posture NC					
Test article												
Dose		U	0	1	2	3	N	F	H			
4MBE	n	0	5	0	0	0	5	0	0			
0 mg/kg												
4MBE	n	0	5	0	0	0	5	0	0			
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Not calculated : NC

Table 2 - 157

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)

Species : Rat

		Grooming NC				Urination NC			
Test article		0	1	2		0	1	2	3
Dose	n	5	0	0		5	0	0	0
4MBE	n	5	0	0		5	0	0	0
0 mg/kg									
4MBE	n	5	0	0		5	0	0	0
1000 mg/kg									

4MBE :Benzenemethanol, 4-methyl-
Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)
Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount
Not calculated : NC

Table 2 - 158

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Open field observation
 Generation : F0

Period : Recovery (non-mating group)

Study No. : R-1273

		Sex : Female	Week : 2	Species : Rat
		Rearing	Defecation count	
Test article				
Dose				
4MBE	n	5	5	
0 mg/kg	Mean	9	0	
	S.D.	2	0	
4MBE	n	5	5	
1000 mg/kg	Mean	7	0	
	S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-
 Not significantly different from 4MBE 0 mg/kg

Table 2 - 159

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Manipulative test
Generation : F0 Sex : Male Week : 6 Period : F0 mating

Study No. : R-1273

Test article Dose	n	Auditory response				Approach response				Touch response			
		-2	-1	0	1	-1	0	1	0	-1	0	1	0
4MBE 0 mg/kg	n	0	0	5	0	0	5	0	0	0	5	0	0
4MBE 100 mg/kg	n	0	0	5	0	0	5	0	0	0	5	0	0
4MBE 300 mg/kg	n	0	0	5	0	0	5	0	0	0	5	0	0
4MBE 1000 mg/kg	n	0	0	5	0	0	5	0	0	0	5	0	0
Test article Dose	n	Tail pinch response				Pupillary reflex							
		-2	-1	0	1	P	F	L	R				
4MBE 0 mg/kg	n	0	0	5	0	5	0	0	0				
4MBE 100 mg/kg	n	0	0	5	0	5	0	0	0				
4MBE 300 mg/kg	n	0	0	5	0	5	0	0	0				
4MBE 1000 mg/kg	n	0	0	5	0	5	0	0	0				
Test article Dose	n	Aerial right-ing reflex-total											
		0	1	2	3	4	5	6	0				
4MBE 0 mg/kg	n	5	0	0	0	0	0	0	0				
4MBE 100 mg/kg	n	5	0	0	0	0	0	0	0				
4MBE 300 mg/kg	n	5	0	0	0	0	0	0	0				
4MBE 1000 mg/kg	n	5	0	0	0	0	0	0	0				

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-total) Total score of 3 times

Table 2 - 160

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Manipulative test
Generation : F0 Sex : Female Day : 13
Period : F0 lactation

Study No. : R-1273

Generation : F0		Sex : Female Day : 13					Species : Rat									
Test article		Auditory response					Approach response					Touch response				
Dose		-2	-1	0	1		-1	0	1		-1	0	1			
4MBE 0 mg/kg	n	0	0	5	0		0	5	0		0	5	0			
4MBE 100 mg/kg	n	0	0	5	0		0	5	0		0	5	0			
4MBE 300 mg/kg	n	0	0	5	0		0	5	0		0	5	0			
Test article		Tail pinch response					Pupillary reflex									
Dose		-2	-1	0	1		P	F	L		R					
4MBE 0 mg/kg	n	0	0	5	0		5	0	0		0					
4MBE 100 mg/kg	n	0	0	5	0		5	0	0		0					
4MBE 300 mg/kg	n	0	0	5	0		5	0	0		0					
Test article		Aerial right-ing reflex-total														
Dose		0	1	2	3	4	5	6								
4MBE 0 mg/kg	n	5	0	0	0	0	0	0								
4MBE 100 mg/kg	n	5	0	0	0	0	0	0								
4MBE 300 mg/kg	n	5	0	0	0	0	0	0								

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-total) Total score of 3 times

Table 2 - 161

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Manipulative test
Generation : F0 Sex : Female Week : 6 Period : Administration (non-mating group)

Study No. : R-1273

		Manipulative test		Sex : Female		Week : 6		Period : Administration (non-mating group)								Species : Rat	
				Auditory response				Approach response				Touch response					
Test article	Dose	-2	-1	0	1			-1	0	1			-1	0	1		
4MBE	n	0	0	5	0			0	5	0			0	5	0		
0 mg/kg																	
4MBE	n	0	0	5	0			0	5	0			0	5	0		
1000 mg/kg																	
		Tail pinch response				Pupillary reflex											
Test article	Dose	-2	-1	0	1			P	F	L			R				
4MBE	n	0	0	5	0			5	0	0			0				
0 mg/kg																	
4MBE	n	0	0	5	0			5	0	0			0				
1000 mg/kg																	
		Aerial right-ing reflex-total															
Test article	Dose	0	1	2	3	4	5	6									
Dodecyloxirane	n	5	0	0	0	0	0	0									
0 mg/kg																	
Dodecyloxirane	n	5	0	0	0	0	0	0									
1000 mg/kg																	

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-total) Total score of 3 times

Table 2 - 162

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Manipulative test
Generation : F0

Sex : Male

Week : 2

Period : Recovery

Study No. : R-1273

		Auditory response					Approach response					Species : Rat Touch response				
Test article	Dose	-2	-1	0	1	0	-1	0	0	1	0	-1	0	0	1	0
4MBE 0 mg/kg	n	0	0	0	5	0	0	0	5	0	0	0	0	5	0	0
4MBE 1000 mg/kg	n	0	0	5	0	0	0	5	0	0	0	5	0			
		Tail pinch response					Pupillary reflex									
Test article	Dose	-2	-1	0	1	0	P	F	L	R						
4MBE 0 mg/kg	n	0	0	5	0	0	5	0	0	0						
4MBE 1000 mg/kg	n	0	0	5	0	0	5	0	0	0						
		Aerial right- ing reflex-total														
Test article	Dose	0	1	2	3	4	5	6								
Dodecyloxirane 0 mg/kg	n	5	0	0	0	0	0	0								
Dodecyloxirane 1000 mg/kg	n	5	0	0	0	0	0	0								

4MBE : Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-total) Total score of 3 times

Table 2 - 163

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Manipulative test
Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)

Study No. : R-1273

		Manipulative test		Period : Recovery (non-mating group)															
		Generation : F0		Sex : Female		Week : 2								Species : Rat					
Test article				Auditory response						Approach response				Touch response					
Dose				-2		-1		0		1		-1		0		1			
4MBE 0 mg/kg		n		0		0		5		0		0		5		0		-1 0 5 0	
4MBE 1000 mg/kg		n		0		0		5		0		0		5		0		0 5 0	
Test article				Tail pinch response						Pupillary reflex									
Dose				-2		-1		0		1		P		F		L		R	
4MBE 0 mg/kg		n		0		0		5		0		5		0		0		0	
4MBE 1000 mg/kg		n		0		0		5		0		5		0		0		0	
Test article		Aerial right-ing reflex-total																	
Dose				0		1		2		3		4		5		6			
Dodecyloxirane 0 mg/kg		n		5		0		0		0		0		0		0			
Dodecyloxirane 1000 mg/kg		n		5		0		0		0		0		0		0			

4MBE : Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-total) Total score of 3 times

Table 2 - 164

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Grip strength
Generation : F0 Sex : Male Week : 6 Period : F0 mating

Study No. : R-1273

		Species : Rat	
Test article Dose		Grip strength of fore limb g	Grip strength of hind limb g
4MBE 0 mg/kg	n	5	5
	Mean	1587	795
	S.D.	372	131
4MBE 100 mg/kg	n	5	5
	Mean	1689	802
	S.D.	153	97
4MBE 300 mg/kg	n	5	5
	Mean	1498	679
	S.D.	209	58
4MBE 1000 mg/kg	n	5	5
	Mean	1528	699
	S.D.	266	123

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 165

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Grip strength
Generation : F0 Sex : Female Day : 13 Period : F0 lactation

Study No. : R-1273

		Species : Rat	
Test article		Grip strength of fore limb g	Grip strength of hind limb g
Dose			
4MBE 0 mg/kg	n	5	5
	Mean	1217	639
	S.D.	114	59
4MBE 100 mg/kg	n	5	5
	Mean	1133	698
	S.D.	128	64
4MBE 300 mg/kg	n	5	5
	Mean	1158	631
	S.D.	100	87

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 166

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Grip strength
Generation : F0 Sex : Female Week : 6
Period : Administration (non-mating group)

Study No. : R-1273

		Grip strength		Grip strength		Species : Rat	
		of fore limb		of hind limb			
		g		g			
Test article	Dose	n	5	5			
4MBE		Mean	1127	638			
0 mg/kg		S.D.	107	112			
4MBE		n	5	5			
1000 mg/kg		Mean	1142	592			
		S.D.	100	86			

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 167

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Grip strength
Generation : F0 Sex : Male Week : 2 Period : Recovery

Study No. : R-1273

		Species : Rat	
		Grip strength of fore limb g	Grip strength of hind limb g
Test article			
Dose			
4MBE	n	5	5
0 mg/kg	Mean	1703	816
	S.D.	162	128
4MBE	n	5	5
1000 mg/kg	Mean	1534	823
	S.D.	86	82

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 168

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Grip strength
 Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)

Study No. : R-1273

		Species : Rat	
Test article		Grip strength of fore limb g	Grip strength of hind limb g
Dose			
4MBE 0 mg/kg	n	5	5
	Mean	1184	643
	S.D.	168	72
4MBE 1000 mg/kg	n	5	5
	Mean	1077	709
	S.D.	91	75

4MBE :Benzenemethanol, 4-methyl-
 Not significantly different from 4MBE 0 mg/kg

Table 2 - 169

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Motor activity
Generation : F0
Sex : Male
Week : 6
Period : F0 mating

Study No. : R-1273

		Species : Rat						
		0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Test article		Count	Count	Count	Count	Count	Count	Count
Dose								
4MBE	n	5	5	5	5	5	5	5
0 mg/kg	Mean	409	262	203	149	37	26	1086
	S.D.	35	106	95	116	34	12	317
4MBE	n	5	5	5	5	5	5	5
100 mg/kg	Mean	430	328	303	121	63	64	1309
	S.D.	27	77	56	72	59	78	245
4MBE	n	5	5	5	5	5	5	5
300 mg/kg	Mean	433	273	195	88	110	93	1191
	S.D.	36	139	141	98	124	118	400
4MBE	n	5	5	5	5	5	5	5
1000 mg/kg	Mean	382	268	278	185	133	105	1352
	S.D.	80	141	79	148	125	132	419

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 170

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Motor activity
Generation : F0
Sex : Female
Day : 13
Period : F0 lactation

Study No. : R-1273

		Species : Rat						
		0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Test article		Count	Count	Count	Count	Count	Count	Count
Dose								
4MBE	n	5	5	5	5	5	5	5
0 mg/kg	Mean	411	239	238	180	89	141	1298
	S.D.	49	135	121	99	93	73	392
4MBE	n	5	5	5	5	5	5	5
100 mg/kg	Mean	395	270	231	229	190	204	1519
	S.D.	45	135	139	143	163	116	658
4MBE	n	5	5	5	5	5	5	5
300 mg/kg	Mean	380	207	157	181	242	150	1317
	S.D.	49	142	134	89	36	124	502

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 171

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Motor activity
Generation : F0
Sex : Female
Week : 6
Period : Administration (non-mating group)

Study No. : R-1273

		0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')	Species : Rat
Test article		Count	Count	Count	Count	Count	Count	Count	
Dose									
4MBE 0 mg/kg	n	5	5	5	5	5	5	5	
	Mean	423	316	267	227	217	182	1632	
	S.D.	54	64	35	124	87	135	394	
4MBE 1000 mg/kg	n	5	5	5	5	5	5	5	
	Mean	287	74	166	67	116	122	833	
	S.D.	99	88	112	44	80	71	301	
		T2 *	T2 **		A2 *			T2 **	

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

A2 : Welch test (two-side), T2 : Student t-test (two-side)

Table 2 - 172

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Motor activity
Generation : F0
Sex : Male
Week : 2
Period : Recovery

Study No. : R-1273

		Species : Rat						
		0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Test article		Count	Count	Count	Count	Count	Count	Count
Dose								
4MBE	n	5	5	5	5	5	5	5
0 mg/kg	Mean	422	354	257	208	145	46	1432
	S.D.	36	48	99	115	76	37	279
4MBE	n	5	5	5	5	5	5	5
1000 mg/kg	Mean	440	356	285	324	248	156	1809
	S.D.	43	66	94	46	137	110	237

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 2 - 173

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Motor activity
Generation : F0
Sex : Female
Week : 2
Period : Recovery (non-mating group)

Study No. : R-1273

		0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')	Species : Rat
Test article		Count	Count	Count	Count	Count	Count	Count	
Dose									
4MBE	n	5	5	5	5	5	5	5	
0 mg/kg	Mean	357	272	236	281	217	121	1484	
	S.D.	33	65	49	67	71	112	287	
4MBE	n	5	5	5	5	5	5	5	
1000 mg/kg	Mean	379	312	205	229	170	134	1429	
	S.D.	54	53	117	89	126	115	427	

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 3 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Male
Period : F0 before mating Day 1-15, F0 mating Day 15-43

Study No. : R-1273

Test article		/Day							Unit : g	Species : Rat
Dose		1	8	15	22	29	36	42	Body weight gain	
4MBE 0 mg/kg	n	12	12	12	12	12	12	12	12	
	Mean	402	434	462	485	511	534	545	143	
	S.D.	21	24	26	27	30	31	35	20	
4MBE 100 mg/kg	n	12	12	12	12	12	12	12	12	
	Mean	405	438	463	483	508	530	541	136	
	S.D.	18	20	25	25	27	32	33	21	
4MBE 300 mg/kg	n	12	12	12	12	12	12	12	12	
	Mean	402	435	464	483	508	533	546	144	
	S.D.	19	23	27	34	38	40	44	28	
4MBE 1000 mg/kg	n	12	12	12	12	12	12	12	12	
	Mean	402	419	442	455	473	495	499	97	
	S.D.	17	21	24	25	22	27	28	25	
					DT *	DT **	DT *	DT **	DT **	

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

DT : Dunnett test (two-side)

Table 3 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : F0 before mating Day 1-15

Study No. : R-1273

Test article		/Day			Body weight		Unit : g	Species : Rat
Dose		1	8	15	gain			
4MBE 0 mg/kg	n	12	12	12	12			
	Mean	240	252	259	19			
	S.D.	11	18	23	16			
4MBE 100 mg/kg	n	12	12	12	12			
	Mean	243	253	263	20			
	S.D.	10	14	15	11			
4MBE 300 mg/kg	n	12	12	12	12			
	Mean	238	253	268	30			
	S.D.	12	14	15	8			
4MBE 1000 mg/kg	n	12	12	12	12			
	Mean	238	266	282	43			
	S.D.	13	13	19	12			
				DT *	DT **			

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

DT : Dunnett test (two-side)

Table 3 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : F0 gestation Day 0-25

Study No. : R-1273

Test article Dose		/Day				Body weight gain	Unit : g	Species : Rat
		0	7	14	20			
4MBE 0 mg/kg	n	12	12	12	12	12		
	Mean	267	308	348	433	166		
	S.D.	22	24	25	27	17		
4MBE 100 mg/kg	n	11	11	11	11	11		
	Mean	275	310	348	433	159		
	S.D.	22	18	21	29	23		
4MBE 300 mg/kg	n	12	12	12	12	12		
	Mean	279	315	357	442	163		
	S.D.	20	18	18	22	14		

4MBE :Benzenemethanol, 4-methyl-
 Not significantly different from 4MBE 0 mg/kg

Table 3 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : F0 lactation Day 0-14

Study No. : R-1273

Test article		/Day				Body weight	Unit : g	Species : Rat
Dose		0	4	7	13	gain		
4MBE 0 mg/kg	n	12	12	12	12	12		
	Mean	321	341	341	364	43		
	S.D.	36	26	23	23	19		
4MBE 100 mg/kg	n	11	11	11	11	11		
	Mean	337	344	346	360	23		
	S.D.	19	24	19	20	17		
						DT *		
4MBE 300 mg/kg	n	12	12	12	12	12		
	Mean	339	346	350	366	27		
	S.D.	25	19	18	20	20		

4MBE : Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : * P<0.05
DT : Dunnett test (two-side)

Table 3 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : Administration (non-mating group)

Study No. : R-1273

Test article		Unit : g								Species : Rat
Dose		/Day	1	8	15	22	29	36	42	Body weight gain
4MBE 0 mg/kg	n		10	10	10	10	10	10	10	10
	Mean		241	257	270	281	294	304	306	65
	S.D.		7	7	8	10	10	10	17	19
4MBE 1000 mg/kg	n		10	10	10	10	10	10	10	10
	Mean		241	259	276	281	287	302	304	64
	S.D.		7	9	14	16	15	20	24	24

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 3 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Male
Period : Recovery Day 1-15

Study No. : R-1273

Test article Dose		/Day			Body weight gain	Unit : g	Species : Rat
		1	8	14			
4MBE 0 mg/kg	n	5	5	5	5		
	Mean	542	559	568	26		
	S.D.	33	32	30	5		
4MBE 1000 mg/kg	n	5	5	5	5		
	Mean	508	525	542	34		
	S.D.	44	49	50	16		

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 3 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : Recovery Day 1-15 (non-mating group)

Study No. : R-1273

Test article Dose		/Day			Body weight gain	Unit : g	Species : Rat
		1	8	14			
4MBE 0 mg/kg	n	5	5	5	5		
	Mean	299	309	315	17		
	S.D.	6	9	11	6		
4MBE 1000 mg/kg	n	5	5	5	5		
	Mean	294	289	294	0		
	S.D.	11	5	2	10		
			T2 **	A2 **	T2 *		

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

A2 : Welch test (two-side), T2 : Student t-test (two-side)

Table 4 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : F0 before mating Day 1-15
Sex : Male

Study No. : R-1273

Test article Dose		/Day			Total food consumption	Unit : g	Species : Rat
		2	8	15			
4MBE 0 mg/kg	n	12	12	12	12		
	Mean	26	26	26	78		
	S.D.	2	3	2	7		
4MBE 100 mg/kg	n	12	12	12	12		
	Mean	25	26	25	76		
	S.D.	2	2	3	6		
4MBE 300 mg/kg	n	12	12	12	12		
	Mean	25	26	26	77		
	S.D.	3	2	3	7		
4MBE 1000 mg/kg	n	12	12	12	12		
	Mean	22	24	27	73		
	S.D.	4	5	3	9		
		DT **					

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

DT : Dunnett test (two-side)

Table 4 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : F0 mating Day 15-43
Sex : Male

Study No. : R-1273

		Unit : g			Species : Rat	
Test article Dose		/Day				
		30	36	42		
4MBE 0 mg/kg	n	12	12	12		
	Mean	25	26	26		
	S.D.	1	3	2		
4MBE 100 mg/kg	n	12	12	12		
	Mean	24	26	27		
	S.D.	2	3	2		
4MBE 300 mg/kg	n	12	12	12		
	Mean	24	27	29		
	S.D.	3	3	4		
4MBE 1000 mg/kg	n	12	12	12		
	Mean	25	28	28		
	S.D.	3	3	3		

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : F0 before mating Day 1-15
Sex : Female

Study No. : R-1273

Test article		/Day			Total food	Unit : g	Species : Rat
Dose		2	8	15	consumption		
4MBE 0 mg/kg	n	12	12	12	12		
	Mean	16	18	16	50		
	S.D.	4	3	3	7		
4MBE 100 mg/kg	n	12	12	12	12		
	Mean	16	18	17	50		
	S.D.	2	3	3	5		
4MBE 300 mg/kg	n	12	12	12	12		
	Mean	15	18	19	53		
	S.D.	2	3	1	4		
					DT *		
4MBE 1000 mg/kg	n	12	12	12	12		
	Mean	14	18	21	53		
	S.D.	3	2	3	6		
					DT **		

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

DT : Dunnett test (two-side)

Table 4 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : F0 gestation Day 0-25
Sex : Female

Study No. : R-1273

Test article		/Day				Total food
Dose		1	7	14	20	consumption
4MBE 0 mg/kg	n	12	12	12	12	12
	Mean	21	23	22	24	91
	S.D.	3	2	4	2	8
4MBE 100 mg/kg	n	11	11	11	11	11
	Mean	19	21	23	26	89
	S.D.	3	2	3	3	8
4MBE 300 mg/kg	n	12	12	12	12	12
	Mean	19	23	25	25	92
	S.D.	3	2	3	3	7

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : F0 lactation Day 0-14
Sex : Female

Study No. : R-1273

Test article		/Day				Total food
Dose		2	4	7	13	consumption
4MBE 0 mg/kg	n	12	12	12	12	12
	Mean	32	45	43	63	182
	S.D.	5	5	3	6	15
4MBE 100 mg/kg	n	11	11	11	11	11
	Mean	29	40	44	62	174
	S.D.	7	8	6	7	24
4MBE 300 mg/kg	n	12	12	12	12	12
	Mean	29	44	46	62	180
	S.D.	6	4	3	5	13

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Administration Day 1-15(non-mating group)

Study No. : R-1273

Test article Dose		/Day			Total food consumption	Unit : g	Species : Rat
		2	8	15			
4MBE 0 mg/kg	n	10	10	10	10		
	Mean	15	19	19	53		
	S.D.	2	2	3	5		
4MBE 1000 mg/kg	n	10	10	10	10		
	Mean	17	18	21	56		
	S.D.	2	3	3	5		

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Administration Day 15-43(non-mating group)

Study No. : R-1273

		Unit : g			Species : Rat	
Test article	/Day					
Dose		30	36	42		
4MBE	n	10	10	10		
0 mg/kg	Mean	17	20	18		
	S.D.	4	3	4		
4MBE	n	10	10	10		
1000 mg/kg	Mean	17	20	19		
	S.D.	3	3	2		

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption Period : Recovery Day 1-15
Sex : Male

Study No. : R-1273

Test article Dose		/Day			Total food consumption	Unit : g	Species : Rat
		2	8	14			
4MBE 0 mg/kg	n	5	5	5	5		
	Mean	24	26	26	76		
	S.D.	3	1	2	4		
4MBE 1000 mg/kg	n	5	5	5	5		
	Mean	27	26	29	81		
	S.D.	3	4	5	11		

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 4 - 9

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption Period : Recovery Day 1-15 (non-mating group)
 Sex : Female

Study No. : R-1273

Test article Dose		/Day			Total food consumption	Unit : g	Species : Rat
		2	8	14			
4MBE 0 mg/kg	n	5	5	5	5		
	Mean	17	20	19	56		
	S.D.	3	3	4	10		
4MBE 1000 mg/kg	n	5	5	5	5		
	Mean	16	16	18	50		
	S.D.	3	3	2	5		

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

Table 5 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 6 of administration
Sex : Male

Study No. : R-1273

Species : Rat

	Sex : male	pH									Species : Rat
Test article Dose		5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	>=9.0	
4MBE 0 mg/kg	n	0	0	0	0	0	0	2	1	2	
4MBE 100 mg/kg	n	0	0	0	0	1	2	1	1	0	
4MBE 300 mg/kg	n	0	0	0	0	2	1	1	1	0	
4MBE 1000 mg/kg	n	0	1	0	0	0	3	1	0	0	
		Protein					Ketones				
Test article Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+
4MBE 0 mg/kg	n	1	3	1	0	0	2	2	1	0	0
4MBE 100 mg/kg	n	1	4	0	0	0	1	2	2	0	0
4MBE 300 mg/kg	n	1	3	1	0	0	4	1	0	0	0
4MBE 1000 mg/kg	n	3	1	1	0	0	4	1	0	0	0

4MBE :Benzenemethanol, 4-methyl-
Protein) -:Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL
Ketones) -:Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Table 5 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 6 of administration

Study No. : R-1273

Sex : Male		Stage : Week 6 of administration										Species : Rat	
		Glucose						Occult Blood					
Test article													
Dose		-	1+	2+	3+	4+		-	+/-	1+	2+	3+	
4MBE	n	5	0	0	0	0		3	2	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	0	0		1	4	0	0	0	
100 mg/kg													
4MBE	n	5	0	0	0	0		5	0	0	0	0	
300 mg/kg													
4MBE	n	5	0	0	0	0		4	1	0	0	0	
1000 mg/kg													
		Bilirubin					Urobilinogen						
Test article													
Dose		-	1+	2+	3+		+/-	1+	2+	3+			
4MBE	n	5	0	0	0		5	0	0	0			
0 mg/kg													
4MBE	n	5	0	0	0		5	0	0	0			
100 mg/kg													
4MBE	n	5	0	0	0		5	0	0	0			
300 mg/kg													
4MBE	n	5	0	0	0		5	0	0	0			
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl-													
Glucose) -:Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL													
Occult Blood) -:Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL													
Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL													
Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL													

Table 5 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 6 of administration
Sex : Male

Study No. : R-1273

		Color											Species : Rat
Test article		LY	Y	DY	BR	RE	RB	WH	BL	CL	OT		
Dose	n												
4MBE	n	0	5	0	0	0	0	0	0	0	0	0	
0 mg/kg													
4MBE	n	0	5	0	0	0	0	0	0	0	0	0	
100 mg/kg													
4MBE	n	0	5	0	0	0	0	0	0	0	0	0	
300 mg/kg													
4MBE	n	0	5	0	0	0	0	0	0	0	0	0	
1000 mg/kg													

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Table 5 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Urinalysis	Stage : Week 6 of administration (non-mating group)
Sex : Female	

Study No. : R-1273

Species : Rat

Sex : Female		pH										Species : Rat	
Test article													
Dose		5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	>=9.0			
4MBE 0 mg/kg	n	0	0	0	0	0	0	0	4	1			
4MBE 1000 mg/kg	n	0	0	0	3	0	2	0	0	0			
Protein						Ketones							
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
Dose													
4MBE 0 mg/kg	n	5	0	0	0	0	5	0	0	0	0	0	
4MBE 1000 mg/kg	n	5	0	0	0	0	5	0	0	0	0	0	
Glucose						Occult Blood							
Test article		-	1+	2+	3+	4+	-	+/-	1+	2+	3+		
Dose													
4MBE 0 mg/kg	n	5	0	0	0	0	5	0	0	0	0	0	
4MBE 1000 mg/kg	n	5	0	0	0	0	5	0	0	0	0	0	
4MBE :Benzenemethanol, 4-methyl- Protein) -:Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL Ketones) -:Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL Glucose) -:Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL Occult Blood) -:Negative , +/-:-0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL													

Table 5 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 6 of administration (non-mating group)
Sex : Female

Study No. : R-1273

		Bilirubin					Urobilinogen					Species : Rat
Test article		-	1+	2+	3+		+/-	1+	2+	3+		
Dose	n											
4MBE	n	5	0	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	5	0	0	0		5	0	0	0		
1000 mg/kg												
Color												
Test article		LY	Y	DY	BR		RE	RB	WH	BL	CL	OT
Dose	n											
4MBE	n	0	5	0	0		0	0	0	0	0	0
0 mg/kg												
4MBE	n	0	5	0	0		0	0	0	0	0	0
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-
Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL
Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL
Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Table 5 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male

Study No. : R-1273

Sex : Male		RBC					WBC					Species : Rat				
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+	-	+/-	1+	2+	3+
Dose	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
0 mg/kg	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
100 mg/kg	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
300 mg/kg	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
1000 mg/kg	n	5	0	0	0	0	5	0	0	0	0	5	0	0	0	0
Squamous epithelial cells								Small round epithelial cells								
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+	-	+/-	1+	2+	3+
Dose	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
0 mg/kg	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
100 mg/kg	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
300 mg/kg	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
1000 mg/kg	n	0	5	0	0	0	5	0	0	0	0	5	0	0	0	0
4MBE :Benzenemethanol, 4-methyl-																
RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe																
WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe																
Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe																
Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe																

Table 5 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 6 of administration

Study No. : R-1273

		Cast					Crystal phosphate salts				
Test article											
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+
4MBE	n	5	0	0	0	0	5	0	0	0	0
0 mg/kg											
4MBE	n	5	0	0	0	0	5	0	0	0	0
100 mg/kg											
4MBE	n	5	0	0	0	0	4	1	0	0	0
300 mg/kg											
4MBE	n	5	0	0	0	0	5	0	0	0	0
1000 mg/kg											
		Crystal calcium oxalate									
Test article											
Dose		-	+/-	1+	2+	3+					
4MBE	n	5	0	0	0	0					
0 mg/kg											
4MBE	n	5	0	0	0	0					
100 mg/kg											
4MBE	n	5	0	0	0	0					
300 mg/kg											
4MBE	n	5	0	0	0	0					
1000 mg/kg											

4MBE :Benzenemethanol, 4-methyl-

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Table 5 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 6 of administration (non-mating group)
Sex : Female

Study No. : R-1273

Sex : Female		RBC					WBC					Species : Rat	
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
Dose													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
Squamous epithelial cells						Small round epithelial cells							
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
Dose													
4MBE	n	0	5	0	0	0	5	0	0	0	0	0	
0 mg/kg													
4MBE	n	0	5	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
Cast						Crystal phosphate salts							
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
Dose													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl- RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													

Table 5 - 9

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis Stage : Week 6 of administration (non-mating group)
 Sex : Female

Study No. : R-1273

Species : Rat

		Crystal calcium oxalate				
Test article						
Dose		-	+/-	1+	2+	3+
4MBE	n	5	0	0	0	0
0 mg/kg						
4MBE	n	5	0	0	0	0
1000 mg/kg						
4MBE :Benzenemethanol, 4-methyl- Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe						

Table 5 - 10

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Stage : Week 6 of administration
Sex : Male

Study No. : R-1273

		Species : Rat					
Test article		Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
Dose							
4MBE	n	5	5	5	5	5	5
0 mg/kg	Mean	40	18.4	1801	2.3	4.9	3.1
	S.D.	5	5.0	289	0.5	1.0	0.5
4MBE	n	5	5	5	5	5	5
100 mg/kg	Mean	41	13.8	2066	2.1	4.2	2.8
	S.D.	2	2.6	155	0.3	1.0	0.5
4MBE	n	5	5	5	5	5	5
300 mg/kg	Mean	39	17.5	1929	2.0	4.5	2.9
	S.D.	7	6.1	272	0.4	1.2	0.8
4MBE	n	5	5	5	5	5	5
1000 mg/kg	Mean	57	30.3	1572	2.6	5.9	3.5
	S.D.	12	9.2	357	0.4	0.8	0.6
		DT **	DT *				

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

DT : Dunnett test (two-side)

Table 5 - 11

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Stage : Week 6 of administration (non-mating group)

Study No. : R-1273

Sex : Female		Species : Rat					
Test article		Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
Dose							
4MBE	n	5	5	5	5	5	5
0 mg/kg	Mean	34	11.7	1743	1.2	2.5	1.6
	S.D.	9	6.7	751	0.3	0.5	0.4
4MBE	n	5	5	5	5	5	5
1000 mg/kg	Mean	48	22.7	1271	1.6	3.6	2.2
	S.D.	6	5.4	208	0.3	0.3	0.4
		T2 *	T2 *			T2 **	

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 5 - 12

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male

Study No. : R-1273

Analysis		Stage : Week 2 or recovery										Species : Rat	
Sex : Male		pH											
Test article													
Dose		5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	>=9.0			
4MBE	n	0	0	0	0	1	0	1	3	0			
0 mg/kg													
4MBE	n	0	0	0	0	0	0	0	4	1			
1000 mg/kg													
		Protein					Ketones						
Test article		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
Dose													
4MBE	n	2	1	1	1	0	1	1	3	0	0		
0 mg/kg													
4MBE	n	2	1	2	0	0	1	0	4	0	0		
1000 mg/kg													
		Glucose					Occult Blood						
Test article		-	1+	2+	3+	4+	-	+/-	1+	2+	3+		
Dose													
4MBE	n	5	0	0	0	0	3	2	0	0	0		
0 mg/kg													
4MBE	n	5	0	0	0	0	4	1	0	0	0		
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl-													
Protein) :-Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL													
Ketones) :-Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL													
Glucose) :-Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL													
Occult Blood) :-Negative , +/-:-0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL													

Table 5 - 13

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 2 of recovery

Study No. : R-1273

Sex : Male		Bilirubin					Urobilinogen					Species : Rat	
Test article													
Dose	n	-	1+	2+	3+		+/-	1+	2+	3+			
4MBE	n	4	1	0	0		5	0	0	0			
0 mg/kg													
4MBE	n	5	0	0	0		5	0	0	0			
1000 mg/kg													
Color													
Test article		LY	Y	DY	BR		RE	RB	WH	BL	CL	OT	
Dose	n												
4MBE	n	0	5	0	0		0	0	0	0	0	0	
0 mg/kg													
4MBE	n	0	5	0	0		0	0	0	0	0	0	
1000 mg/kg													

4MBE :Benzenemethanol, 4-methyl-
Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL
Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL
Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Table 5 - 14

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 2 of recovery (non-mating group)
Sex : Female

Study No. : R-1273

Primary Analysis		Stage : Week 2 on recovery (non-mating group)										Species : Rat	
		pH											
Test article													
Dose		5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	>=9.0			
4MBE	n	0	0	0	2	0	1	0	2	0			
0 mg/kg													
4MBE	n	0	0	1	0	0	0	0	4	0			
1000 mg/kg													
		Protein					Ketones						
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE	n	4	0	1	0	0	3	1	1	0	0		
0 mg/kg													
4MBE	n	2	3	0	0	0	1	3	1	0	0		
1000 mg/kg													
		Glucose					Occult Blood						
Test article													
Dose		-	1+	2+	3+	4+	-	+/-	1+	2+	3+		
4MBE	n	5	0	0	0	0	5	0	0	0	0		
0 mg/kg													
4MBE	n	5	0	0	0	0	5	0	0	0	0		
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl-													
Protein) :-Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL													
Ketones) :-Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL													
Glucose) :-Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL													
Occult Blood) :-Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL													

Table 5 - 15

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 2 of recovery (non-mating group)
Sex : Female

Study No. : R-1273

		Bilirubin					Urobilinogen					Species : Rat
Test article		-	1+	2+	3+		+/-	1+	2+	3+		
Dose	n											
4MBE	n	4	1	0	0		5	0	0	0		
0 mg/kg												
4MBE	n	4	1	0	0		5	0	0	0		
1000 mg/kg												
Color												
Test article		LY	Y	DY	BR	RE	RB	WH	BL	CL	OT	
Dose	n											
4MBE	n	0	5	0	0	0	0	0	0	0	0	0
0 mg/kg												
4MBE	n	0	5	0	0	0	0	0	0	0	0	0
1000 mg/kg												

4MBE :Benzenemethanol, 4-methyl-

Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Table 5 - 16

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male

Study No. : R-1273

Sex : Male		RBC					WBC					Species : Rat	
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE 0 mg/kg	n	5	0	0	0	0	5	0	0	0	0		
4MBE 1000 mg/kg	n	5	0	0	0	0	5	0	0	0	0		
Squamous epithelial cells							Small round epithelial cells						
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE 0 mg/kg	n	0	5	0	0	0	5	0	0	0	0		
4MBE 1000 mg/kg	n	0	5	0	0	0	5	0	0	0	0		
Cast							Crystal phosphate salt						
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE 0 mg/kg	n	5	0	0	0	0	3	2	0	0	0		
4MBE 1000 mg/kg	n	5	0	0	0	0	4	1	0	0	0		
4MBE :Benzenemethanol, 4-methyl- RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													

Table 5 - 17

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis Stage : Week 2 of recovery
 Sex : Male

Study No. : R-1273

		Crystal calcium oxalate					Species : Rat
Test article							
Dose		-	+/-	1+	2+	3+	
4MBE	n	5	0	0	0	0	
0 mg/kg							
4MBE	n	5	0	0	0	0	
1000 mg/kg							
4MBE :Benzenemethanol, 4-methyl- Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe							

Table 5 - 18

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Female
Stage : Week 2 of recovery (non-mating group)

Study No. : R-1273

Analysis		Stage : Week 2 of recovery (non-mating group)										Species : Rat	
Sex : Female		RBC					WBC						
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
Squamous epithelial cells						Small round epithelial cells							
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE	n	0	5	0	0	0	5	0	0	0	0	0	
0 mg/kg													
4MBE	n	0	5	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
Cast						Crystal phosphate salt							
Test article													
Dose		-	+/-	1+	2+	3+	-	+/-	1+	2+	3+		
4MBE	n	5	0	0	0	0	4	1	0	0	0	0	
0 mg/kg													
4MBE	n	5	0	0	0	0	5	0	0	0	0	0	
1000 mg/kg													
4MBE :Benzenemethanol, 4-methyl-													
RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													
WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													
Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													
Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													
Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													
Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe													

Table 5 - 19

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 2 of recovery (non-mating group)
Sex : Female

Study No. : R-1273

		Crystal calcium oxalate						Species : Rat
Test article		-	+/-	1+	2+	3+		
Dose	n							
4MBE	n	5	0	0	0	0		
0 mg/kg								
4MBE	n	4	1	0	0	0		
1000 mg/kg								
4MBE :Benzenemethanol, 4-methyl- Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe								

Table 5 - 20

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Stage : Week 2 of recovery
Sex : Male

Study No. : R-1273

		Species : Rat					
Test article Dose		Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
4MBE 0 mg/kg	n	5	5	5	5	5	5
	Mean	42	14.9	1957	2.2	4.0	2.7
	S.D.	8	7.8	549	1.1	1.6	1.3
4MBE 1000 mg/kg	n	5	5	5	5	5	5
	Mean	47	16.9	1611	1.8	4.2	2.7
	S.D.	10	7.7	280	0.6	1.3	0.9

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 5 - 21

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Stage : Week 2 of recovery (non-mating group)

Study No. : R-1273

Sex : Female		Species : Rat					
Test article		Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
Dose							
4MBE	n	5	5	5	5	5	5
0 mg/kg	Mean	39	7.2	1905	0.9	1.7	1.1
	S.D.	10	4.7	683	0.2	0.6	0.4
4MBE	n	5	5	5	5	5	5
1000 mg/kg	Mean	34	7.8	1825	1.0	2.1	1.4
	S.D.	5	2.6	405	0.4	0.5	0.4

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 6 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Male
Stage : End of administration

Study No. : R-1273

		Sex : Male							Species : Rat		
		RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC
Test article	Dose	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	866	15.6	46.1	53.2	18.0	33.8	12.7	194.9	105.9	90.1
	S.D.	24	0.5	1.4	1.2	0.4	0.2	0.6	31.9	11.5	20.8
4MBE	n	5	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	847	15.5	45.6	53.8	18.3	34.1	12.5	195.7	112.7	92.1
	S.D.	35	0.8	2.4	1.3	0.6	0.6	1.1	35.2	15.2	30.4
4MBE	n	5	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	851	15.2	44.8	52.6	17.9	34.0	13.0	206.6	103.7	86.6
	S.D.	32	0.4	2.0	1.1	0.6	1.0	0.6	28.9	15.1	20.6
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	796	14.5	42.9	54.0	18.3	33.9	14.1	259.2	100.8	84.6
	S.D.	42	0.2	0.7	2.2	1.0	0.5	0.8	37.8	10.9	23.0
		DT *	DT *	DT *				DT *	DT *		
		#LYMP	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB	
Test article	Dose	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL	
4MBE	n	5	5	5	5	5	5	5	5	5	
0 mg/kg	Mean	67.0	18.0	1.2	0.3	2.4	1.3	13.3	19.8	279	
	S.D.	16.6	4.6	0.3	0.1	1.2	0.8	0.9	4.5	33	
4MBE	n	5	5	5	5	5	5	5	5	5	
100 mg/kg	Mean	68.7	18.4	1.1	0.2	2.6	1.2	13.2	17.3	285	
	S.D.	23.0	8.5	0.4	0.1	1.0	0.4	0.7	1.4	27	
4MBE	n	5	5	5	5	5	5	5	5	5	
300 mg/kg	Mean	66.8	15.0	1.4	0.1	2.4	0.9	13.1	17.4	273	
	S.D.	16.9	5.3	0.7	0.0	0.8	0.5	0.6	1.9	17	
				DT *	DT *						
4MBE	n	5	5	5	5	5	5	5	5	5	
1000 mg/kg	Mean	58.7	22.3	0.4	0.1	2.4	0.8	13.4	16.9	277	
	S.D.	16.3	6.8	0.2	0.0	0.6	0.6	0.8	1.6	30	
				DT *	DT *						

4MBE : Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : * P<0.05
DT : Dunnett test (two-side)

Table 6 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Stage : End of lactation (F0 dams)
Sex : Female

Study No. : R-1273

Sex : Female		Species : Rat									
		RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC
Test article		10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL
Dose											
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	766	15.2	44.1	57.5	19.8	34.5	13.6	238.1	126.2	102.1
	S.D.	29	0.4	1.0	2.3	0.6	0.5	0.7	60.7	10.8	14.1
4MBE	n	5	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	776	15.0	43.6	56.3	19.5	34.5	13.5	214.9	108.7	103.9
	S.D.	52	0.6	1.9	2.2	0.8	0.3	0.8	39.5	10.8	20.1
4MBE	n	5	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	769	14.9	43.3	56.4	19.4	34.3	13.7	228.4	128.9	106.9
	S.D.	29	0.6	1.7	1.0	0.4	0.3	0.6	33.7	13.5	36.6
		#LYMP	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB	
Test article		10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL	
Dose											
4MBE	n	5	5	5	5	5	5	5	5	5	
0 mg/kg	Mean	51.8	45.2	0.8	0.1	3.2	0.9	13.1	15.7	412	
	S.D.	10.7	11.4	0.2	0.1	1.3	0.3	0.6	1.4	104	
4MBE	n	5	5	5	5	5	5	5	5	5	
100 mg/kg	Mean	48.6	49.1	1.0	0.2	3.6	1.3	13.1	16.2	478	
	S.D.	11.7	13.4	0.3	0.1	1.7	0.6	0.6	2.3	98	
4MBE	n	5	5	5	5	5	5	5	5	5	
300 mg/kg	Mean	50.9	50.0	1.0	0.2	3.3	1.5	13.0	16.0	478	
	S.D.	22.7	14.0	0.8	0.1	2.7	1.2	0.5	1.7	39	

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 6 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Stage : End of administration (non-mating group)
Sex : Female

Study No. : R-1273

Sex : Female									Species : Rat		
		RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC
Test article		10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL
Dose											
4MBE 0 mg/kg	n	5	5	5	5	5	5	5	5	5	5
	Mean	813	15.1	43.7	53.8	18.5	34.5	11.9	167.7	114.0	63.2
	S.D.	25	0.5	1.5	1.6	0.6	0.3	0.4	31.3	6.3	14.5
4MBE 1000 mg/kg	n	5	5	5	5	5	5	5	5	5	5
	Mean	783	14.7	42.8	54.6	18.8	34.5	12.1	199.3	89.8	85.2
	S.D.	8	0.7	2.0	2.2	0.8	0.2	0.4	40.0	14.3	32.4
		T2 **									
		#LYMP	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB	
Test article		10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL	
Dose											
4MBE 0 mg/kg	n	5	5	5	5	5	5	5	5	5	
	Mean	49.7	10.0	1.2	0.1	1.7	0.6	12.8	13.8	195	
	S.D.	14.6	0.8	0.3	0.1	0.5	0.2	0.4	1.0	16	
4MBE 1000 mg/kg	n	5	5	5	5	5	5	5	5	5	
	Mean	70.8	10.9	0.8	0.1	1.8	0.7	13.4	14.5	216	
	S.D.	28.8	5.8	0.4	0.1	0.4	0.7	0.6	1.6	8	
		T2 *									

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 6 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Stage : End of recovery
Sex : Male

Study No. : R-1273

Sex : Male		Species : Rat									
		RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC
Test article		10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL
Dose											
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	848	15.3	44.7	52.7	18.0	34.2	13.6	217.2	98.0	83.7
	S.D.	38	0.8	1.8	1.4	0.5	0.9	1.1	66.4	16.9	16.4
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	832	15.2	45.0	54.1	18.3	33.9	14.0	202.8	103.9	76.9
	S.D.	51	0.5	1.8	1.8	0.6	0.3	0.9	41.3	14.2	17.3
		#LYMP	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB	
Test article		10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL	
Dose											
4MBE	n	5	5	5	5	5	5	5	5	5	
0 mg/kg	Mean	60.7	17.8	1.4	0.1	2.8	0.9	13.7	19.2	288	
	S.D.	10.8	6.1	0.4	0.1	0.6	0.6	0.4	1.0	29	
4MBE	n	5	5	5	5	5	5	5	5	5	
1000 mg/kg	Mean	58.9	14.0	1.2	0.1	1.6	1.1	13.7	17.7	279	
	S.D.	17.0	4.0	0.5	0.0	0.5	0.6	0.6	2.0	34	
T2 *											

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05

T2 : Student t-test (two-side)

T2 *

Table 6 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Stage : End of recovery (non-mating group)
Sex : Female

Study No. : R-1273

Sex : Female		Species : Rat									
		RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC
Test article	Dose	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	803	15.3	44.2	55.1	19.0	34.5	12.3	171.1	105.0	66.1
	S.D.	34	0.3	0.9	1.4	0.7	0.6	0.3	18.7	17.2	31.9
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	777	14.6	42.0	54.1	18.7	34.6	12.4	158.5	118.8	55.7
	S.D.	10	0.2	0.7	1.3	0.4	0.3	0.3	34.5	12.5	15.4
			T2 **	T2 **							
		#LYMP	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB	
Test article	Dose	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL	
4MBE	n	5	5	5	5	5	5	5	5	5	
0 mg/kg	Mean	54.5	8.5	0.8	0.1	1.5	0.7	14.1	15.0	197	
	S.D.	28.2	3.1	0.2	0.1	0.6	0.2	0.5	0.7	11	
4MBE	n	5	5	5	5	5	5	5	5	5	
1000 mg/kg	Mean	44.6	8.9	0.8	0.1	1.0	0.4	14.0	15.4	230	
	S.D.	11.6	5.2	0.2	0.0	0.5	0.1	0.5	1.3	22	
							T2 *			T2 *	

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 7 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of administration

Study No. : R-1273

		Species : Rat								
		AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL
		IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	60	34	399	0	18.9	62	60	99	0.1
	S.D.	3	6	85	0	8.5	13	37	18	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	59	34	380	0	32.8	67	50	102	0.1
	S.D.	7	4	74	0	16.7	14	18	19	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	63	39	387	0	44.6	68	71	108	0.1
	S.D.	8	7	83	0	32.9	15	28	16	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	74	45	641	0	35.3	52	46	97	0.1
	S.D.	10	12	84	0	21.2	8	14	14	0.0
		DT *		DT **						
		BUN	CRNN	Na	K	Cl	Ca	P	TP	ALB
		mg/dL	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	15	0.25	145	3.9	105	10.4	5.9	6.4	3.2
	S.D.	2	0.02	1	0.2	2	0.3	0.5	0.2	0.1
4MBE	n	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	17	0.26	144	3.9	105	10.5	6.0	6.3	3.2
	S.D.	6	0.06	1	0.3	2	0.4	0.2	0.3	0.1
4MBE	n	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	18	0.26	144	4.0	104	10.5	6.0	6.3	3.2
	S.D.	3	0.03	1	0.2	2	0.4	0.3	0.2	0.1
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	18	0.32	143	4.0	106	10.1	5.9	6.1	3.3
	S.D.	3	0.04	2	0.2	2	0.3	0.4	0.5	0.2
			DT *							

4MBE : Benzenemethanol, 4-methyl-
Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01
DT : Dunnett test (two-side)

Table 7 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of lactation (F0 dams)

Study No. : R-1273

		Species : Rat								
		AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL
		IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	137	78	426	0	53.2	88	111	172	0.1
	S.D.	64	30	91	0	26.2	13	71	18	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	144	85	393	0	39.4	99	156	202	0.1
	S.D.	79	40	157	1	23.9	15	78	35	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	127	79	457	0	43.3	95	116	188	0.1
	S.D.	29	15	106	1	30.7	22	49	29	0.1
		BUN	CRNN	Na	K	Cl	Ca	P	TP	ALB
		mg/dL	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	26	0.34	140	3.4	100	10.8	9.4	6.6	3.5
	S.D.	5	0.04	2	0.1	2	0.5	1.2	0.6	0.2
4MBE	n	5	5	5	5	5	5	5	5	5
100 mg/kg	Mean	28	0.40	138	3.5	99	11.2	10.0	6.8	3.5
	S.D.	4	0.04	2	0.5	2	0.3	1.3	0.5	0.2
4MBE	n	5	5	5	5	5	5	5	5	5
300 mg/kg	Mean	40	0.46	140	3.6	100	11.1	9.6	6.6	3.3
	S.D.	15	0.08	2	0.4	3	0.3	1.4	0.3	0.3

DT **

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

DT : Dunnett test (two-side)

Table 7 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of administration (non-mating group)

Study No. : R-1273

		Species : Rat								
		AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL
		IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	56	34	174	0	15.9	71	31	140	0.1
	S.D.	7	8	42	1	4.8	16	14	26	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	64	44	345	1	60.3	74	35	144	0.1
	S.D.	4	9	84	1	42.2	12	10	14	0.0
		T2 **								
		BUN	CRNN	Na	K	Cl	Ca	P	TP	ALB
		mg/dL	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	18	0.32	142	3.6	105	10.5	3.8	6.8	3.8
	S.D.	6	0.05	1	0.1	1	0.2	0.3	0.3	0.3
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	18	0.34	140	3.6	108	9.9	4.2	6.2	3.4
	S.D.	1	0.03	2	0.7	3	0.1	0.5	0.3	0.2
		T2 **							T2 **	T2 *

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 7 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of recovery

Study No. : R-1273

		Species : Rat								
		AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL
		IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	58	31	259	0	27.4	64	58	102	0.1
	S.D.	6	6	55	0	30.3	14	19	11	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	59	31	379	0	27.0	60	41	95	0.1
	S.D.	4	4	68	0	13.5	4	16	12	0.0
		T2 *								
		BUN	CRNN	Na	K	Cl	Ca	P	TP	ALB
		mg/dL	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	18	0.31	143	3.9	105	10.2	5.3	6.3	3.2
	S.D.	1	0.03	1	0.1	1	0.1	0.3	0.2	0.1
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	16	0.28	144	3.7	106	10.5	6.0	6.4	3.2
	S.D.	2	0.02	1	0.2	1	0.2	0.3	0.1	0.1
		T2 * T2 **								

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 7 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of recovery (non-mating group)

Study No. : R-1273

		Species : Rat								
		AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL
		IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	55	29	165	0	20.3	64	27	129	0.1
	S.D.	7	3	32	0	8.6	6	12	14	0.0
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	52	26	187	0	34.0	78	34	145	0.1
	S.D.	5	4	35	0	32.6	7	22	18	0.0
		T2 *								
		BUN	CRNN	Na	K	Cl	Ca	P	TP	ALB
		mg/dL	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
Test article	Dose									
4MBE	n	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	18	0.33	142	3.6	106	10.5	3.9	6.9	3.8
	S.D.	2	0.03	1	0.1	2	0.4	0.6	0.5	0.3
4MBE	n	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	19	0.35	142	3.5	106	10.6	4.8	6.6	3.5
	S.D.	1	0.04	1	0.2	1	0.2	0.6	0.2	0.2
		T2 *								

4MBE : Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : * P<0.05

T2 : Student t-test (two-side)

Table 8 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight
Sex : Male

Stage : End of administration

Species : Rat

Test article Dose		Body weight		Brain		Thyroid-RL		Thymus		Heart	
		g	7	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
4MBE	n	7	7	7	7	7	7	7	7	7	7
0 mg/kg	Mean	528		2.18	0.41	25.4	4.8	315	60	1.46	0.28
	S.D.	37		0.07	0.04	4.0	0.9	70	16	0.13	0.02
4MBE	n	12	12	12	12	12	12	12	12	12	12
100 mg/kg	Mean	519		2.18	0.42	23.8	4.6	364	70	1.53	0.29
	S.D.	33		0.09	0.04	3.1	0.5	107	19	0.13	0.02
4MBE	n	12	12	12	12	12	12	12	12	12	12
300 mg/kg	Mean	523		2.12	0.41	22.4	4.3	323	62	1.48	0.28
	S.D.	42		0.08	0.03	2.9	0.7	95	20	0.13	0.02
4MBE	n	7	7	7	7	7	7	7	7	7	7
1000 mg/kg	Mean	470		2.17	0.46	21.3	4.6	320	68	1.38	0.30
	S.D.	14		0.05	0.02	2.8	0.6	113	25	0.08	0.02
		DT **		DT *							
Test article Dose		Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
		AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
4MBE	n	7	7	7	7	7	7	7	7	7	7
0 mg/kg	Mean	14.17	2.67	0.79	0.15	3.53	0.67	63	12.0	3.32	0.63
	S.D.	1.73	0.16	0.12	0.02	0.43	0.05	8	1.4	0.40	0.06
4MBE	n	12	12	12	12	12	12	12	12	12	12
100 mg/kg	Mean	13.18	2.53	0.81	0.15	3.48	0.67	66	12.7	3.54	0.68
	S.D.	1.47	0.17	0.10	0.01	0.24	0.05	11	2.0	0.25	0.06
4MBE	n	12	12	12	12	12	12	12	12	12	12
300 mg/kg	Mean	14.05	2.68	0.78	0.15	3.47	0.66	62	11.9	3.50	0.68
	S.D.	1.86	0.17	0.15	0.02	0.35	0.04	6	1.5	0.26	0.09
4MBE	n	7	7	7	7	7	7	7	7	7	7
1000 mg/kg	Mean	13.70	2.92	0.71	0.15	3.29	0.70	60	12.7	3.30	0.70
	S.D.	0.60	0.11	0.14	0.03	0.24	0.05	6	1.3	0.14	0.04
		DT *									

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

DT : Dunnett test (two-side)

Table 8 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study

Study No. : R-1273

with the reproduction/ developmental toxicity screening test in rats

Organ weight

Stage : End of administration

Sex : Male

Species : Rat

		Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		mg	mg/100g	g	g/100g	g	g/100g	g	g/100g	mg	mg/100g
4MBE	n	7	7	7	7	7	7	7	7	7	7
0 mg/kg	Mean	1294	245	1.18	0.22	1.64	0.31	1.42	0.27	130.0	24.7
	S.D.	126	23	0.13	0.02	0.17	0.03	0.22	0.06	19.2	4.2
4MBE	n	12	12	12	12	12	12	12	12	12	12
100 mg/kg	Mean	1319	255	1.24	0.24	1.63	0.32	1.47	0.28	117.3	22.7
	S.D.	79	21	0.11	0.03	0.30	0.06	0.14	0.03	30.4	6.2
4MBE	n	12	12	12	12	12	12	12	12	12	12
300 mg/kg	Mean	1354	261	1.33	0.25	1.69	0.32	1.52	0.29	119.7	23.1
	S.D.	122	33	0.20	0.04	0.31	0.05	0.15	0.03	18.0	4.4
4MBE	n	7	7	7	7	7	7	7	7	7	7
1000 mg/kg	Mean	1279	273	1.15	0.25	1.45	0.31	1.31	0.28	116.2	24.7
	S.D.	209	49	0.15	0.03	0.21	0.04	0.31	0.07	26.2	5.4
Glans penis											
Test article		AB	RE								
Dose		mg	mg/100g								
4MBE	n	7	7								
0 mg/kg	Mean	114.9	21.8								
	S.D.	11.9	1.8								
4MBE	n	12	12								
100 mg/kg	Mean	118.7	22.9								
	S.D.	19.4	3.7								
4MBE	n	12	12								
300 mg/kg	Mean	112.2	21.4								
	S.D.	18.5	2.7								
4MBE	n	7	7								
1000 mg/kg	Mean	100.9	21.5								
	S.D.	8.0	2.0								

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Not significantly different from 4MBE 0 mg/kg

Table 8 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight
Sex : Female

Stage : End of lactation (F0 dams)

Species : Rat

		Body weight		Brain		Thyroid-RL		Thymus		Heart	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	mg	mg/100g	mg	mg/100g	g	g/100g
4MBE	n	12	12	12	12	12	12	12	12	12	12
0 mg/kg	Mean	333	1.99	0.60	16.1	4.9	244	73	1.12	0.34	
	S.D.	25	0.10	0.04	2.7	0.8	54	14	0.08	0.02	
4MBE	n	11	11	11	11	11	11	11	11	11	11
100 mg/kg	Mean	333	1.99	0.60	16.9	5.1	242	73	1.12	0.34	
	S.D.	19	0.07	0.04	3.8	1.3	65	19	0.08	0.03	
4MBE	n	12	12	12	12	12	12	12	12	12	12
300 mg/kg	Mean	340	1.94	0.58	16.3	4.8	239	70	1.18	0.35	
	S.D.	18	0.06	0.03	3.6	1.0	40	13	0.09	0.03	
		Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	g	g/100g	mg	mg/100g	mg	mg/100g
4MBE	n	12	12	12	12	12	12	12	12	12	12
0 mg/kg	Mean	11.69	3.52	0.55	0.17	2.35	0.71	76	23.0	90.9	27.3
	S.D.	0.79	0.24	0.10	0.03	0.24	0.04	7	3.3	7.7	1.4
4MBE	n	11	11	11	11	11	11	11	11	11	11
100 mg/kg	Mean	11.34	3.40	0.59	0.18	2.33	0.70	77	23.2	90.3	27.2
	S.D.	1.24	0.24	0.08	0.02	0.17	0.03	9	2.3	13.0	3.6
4MBE	n	12	12	12	12	12	12	12	12	12	12
300 mg/kg	Mean	12.19	3.59	0.61	0.18	2.37	0.70	76	22.3	94.2	27.8
	S.D.	1.25	0.32	0.14	0.04	0.24	0.06	9	2.5	11.3	3.7

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Not significantly different from 4MBE 0 mg/kg

Table 8 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight
Sex : Female

Stage : End of lactation (F0 dams)

Species : Rat

		Uterus	
Test article Dose		AB	RE
		mg	mg/100g
4MBE 0 mg/kg	n	12	12
	Mean	510	153
	S.D.	64	17
4MBE 100 mg/kg	n	11	11
	Mean	585	176
	S.D.	139	38
4MBE 300 mg/kg	n	12	12
	Mean	596	175
	S.D.	87	21

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Not significantly different from 4MBE 0 mg/kg

Table 8 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight
Sex : Female

Stage : End of administration (non-mating group)

Species : Rat

		Body weight		Brain		Thyroid-RL		Thymus		Heart	
Test article				AB	RE	AB	RE	AB	RE	AB	RE
Dose		g		g	g/100g	mg	mg/100g	mg	mg/100g	g	g/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	301	2.01	0.67	17.7	5.9	337	112	0.99	0.33	
	S.D.	11	0.04	0.02	3.0	1.0	77	26	0.08	0.02	
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	302	1.91	0.64	15.9	5.3	305	101	1.01	0.34	
	S.D.	28	0.05	0.08	1.6	0.3	70	16	0.06	0.02	
			T2 **								
		Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	g	g/100g	mg	mg/100g	mg	mg/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	7.69	2.56	0.53	0.18	2.09	0.70	69	22.9	90.4	30.1
	S.D.	0.26	0.12	0.04	0.02	0.10	0.05	10	3.7	23.8	8.1
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	9.24	3.06	0.52	0.17	2.16	0.72	66	22.2	83.7	27.9
	S.D.	0.93	0.07	0.06	0.01	0.22	0.05	13	5.1	22.7	7.8
		A2 *	T2 **								
		Uterus									
Test article		AB	RE								
Dose		mg	mg/100g								
4MBE	n	5	5								
0 mg/kg	Mean	567	188								
	S.D.	101	30								
4MBE	n	5	5								
1000 mg/kg	Mean	515	173								
	S.D.	102	39								

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

A2 : Welch test (two-side), T2 : Student t-test (two-side)

Table 8 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight

Stage : End of recovery

Sex : Male

Species : Rat

		Sex : Male	Species : Rat								
		Body weight	Brain		Thyroid-RL		Thymus		Heart		
Test article			AB	RE	AB	RE	AB	RE	AB	RE	
Dose		g	g	g/100g	mg	mg/100g	mg	mg/100g	g	g/100g	
4MBE	n	5	5	5	5	5	5	5	5	5	
0 mg/kg	Mean	544	2.17	0.40	23.9	4.4	324	60	1.56	0.29	
	S.D.	27	0.06	0.03	2.4	0.4	100	18	0.08	0.01	
4MBE	n	5	5	5	5	5	5	5	5	5	
1000 mg/kg	Mean	519	2.22	0.43	21.5	4.2	363	71	1.47	0.28	
	S.D.	50	0.11	0.04	2.6	0.6	76	18	0.20	0.02	
		Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	g	g/100g	mg	mg/100g	g	g/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	13.42	2.46	0.81	0.15	3.64	0.67	55	10.2	3.72	0.69
	S.D.	1.49	0.18	0.13	0.02	0.38	0.07	6	1.3	0.18	0.05
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	13.18	2.54	0.78	0.15	3.56	0.69	66	12.7	3.11	0.61
	S.D.	2.00	0.25	0.10	0.02	0.38	0.04	7	1.5	0.33	0.09
								T2 *	T2 *	T2 **	
		Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		mg	mg/100g	g	g/100g	g	g/100g	g	g/100g	mg	mg/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	1442	266	1.43	0.26	1.60	0.30	1.67	0.31	141.0	26.1
	S.D.	87	15	0.22	0.04	0.24	0.05	0.16	0.03	19.7	5.0
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	1103	215	1.28	0.25	1.63	0.32	1.40	0.27	134.2	26.0
	S.D.	169	45	0.12	0.03	0.29	0.06	0.15	0.05	22.6	4.9
		T2 **						T2 *			

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 8 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight

Stage : End of recovery

Sex : Male

Species : Rat

		Glans penis	
Test article Dose		AB	RE
		mg	mg/100g
4MBE	n	5	5
0 mg/kg	Mean	134.5	25.0
	S.D.	25.6	6.1
4MBE	n	5	5
1000 mg/kg	Mean	115.0	22.3
	S.D.	13.0	3.5

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Not significantly different from 4MBE 0 mg/kg

Table 8 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight
Sex : Female

Stage : End of recovery (non-mating group)

Species : Rat

		Body weight		Brain		Thyroid-RL		Thymus		Heart	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	mg	mg/100g	mg	mg/100g	g	g/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	299	2.04	0.68	17.7	5.9	258	86	1.01	0.34	
	S.D.	9	0.07	0.01	1.9	0.6	67	22	0.17	0.05	
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	281	1.99	0.71	17.3	6.2	318	113	0.95	0.34	
	S.D.	5	0.07	0.02	2.8	1.1	75	26	0.04	0.02	
		T2 **		T2 *							
		Liver		Spleen		Kidney-RL		Adrenal -RL		Ovary-RL	
Test article		AB	RE	AB	RE	AB	RE	AB	RE	AB	RE
Dose		g	g/100g	g	g/100g	g	g/100g	mg	mg/100g	mg	mg/100g
4MBE	n	5	5	5	5	5	5	5	5	5	5
0 mg/kg	Mean	7.28	2.43	0.56	0.19	2.03	0.68	68	22.7	96.6	32.3
	S.D.	0.44	0.11	0.05	0.02	0.09	0.03	14	4.2	19.3	6.3
4MBE	n	5	5	5	5	5	5	5	5	5	5
1000 mg/kg	Mean	7.31	2.60	0.49	0.18	1.90	0.68	65	23.2	88.4	31.5
	S.D.	0.65	0.20	0.06	0.02	0.14	0.04	8	2.7	19.8	7.3
		Uterus									
Test article		AB	RE								
Dose		mg	mg/100g								
4MBE	n	5	5								
0 mg/kg	Mean	625	209								
	S.D.	97	34								
4MBE	n	5	5								
1000 mg/kg	Mean	648	231								
	S.D.	105	40								

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Significantly different from 4MBE 0 mg/kg : * P<0.05, ** P<0.01

T2 : Student t-test (two-side)

Table 9-1 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (End of dosing)

Organs	Sex:	M	M	M	M
	Dose (mg/kg) :	0	100	300	1000
Findings	Number:	7	12	12	7
Epididymis					
Focus, white		0	0	0	1

M : Male

Table 9-2 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (End of dosing)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
All tissues			
Not remarkable		5	5

F : Female

Table 9-3 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (End of dosing,Dams)

Organs	Sex:	F	F	F
	Dose (mg/kg) :	0	100	300
Findings	Number:	12	11	12
All tissues				
Not remarkable		12	11	12

F : Female

Table 9-4 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (End of recovery)

Organs	Sex:	M	M
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
All tissues			
Not remarkable		5	5

M : Male

Table 9-5 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (End of recovery)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
All tissues			
Not remarkable		5	5

F : Female

Table 9-6 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings (Undelivered)

Organs	Sex:	F	F
	Dose (mg/kg) :	100	1000
Findings	Number:	1	12
All tissues			
Not remarkable		1	12

F : Female

Table 10-1 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	M	M	M	M
	Dose (mg/kg) :	0	100	300	1000
Findings	Number:	7	12	12	7
Adrenal					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Bone, femur					
Number examined		5	6	5	7
Not remarkable		5	6	5	0
Bone, increased, trabeculae		0	0	0	7
minimal		0	0	0	1
mild		0	0	0	6
Bone marrow, femur					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Brain (cerebrum, cerebellum, pons)					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Coagulating gland					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Epididymis					
Number examined		5	6	5	7
Not remarkable		5	6	5	0
Edema		0	0	0	5
minimal		0	0	0	2
mild		0	0	0	3
Sperm granuloma		0	0	0	2
mild		0	0	0	2
Cell debris, lumen		0	0	0	7
minimal		0	0	0	7
Eye					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Heart					
Number examined		5	1	0	7
Not remarkable		4	1	0	7
Rodent progressive cardiomyopathy		1	0	0	0
minimal		1	0	0	0
Intestine, cecum					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Intestine, colon					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Intestine, duodenum					
Number examined		5	1	0	7
Not remarkable		5	1	0	6
Infiltrate, inflammatory cell		0	0	0	1
minimal		0	0	0	1
Intestine, ileum					
Number examined		5	1	0	7
Not remarkable		5	1	0	7

M : Male

Table 10-2 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	M	M	M	M
	Dose (mg/kg) :	0	100	300	1000
Findings	Number:	7	12	12	7
Intestine, jejunum					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Intestine, rectum					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Kidney					
Number examined		5	6	5	7
Not remarkable		3	5	4	0
Dilatation, tubule		1	0	0	0
minimal		1	0	0	0
Basophilia, tubule		1	1	1	3
minimal		1	1	1	2
mild		0	0	0	1
Infiltrate, inflammatory cell		0	0	0	1
minimal		0	0	0	1
Vacuolation, urothelium		0	0	0	6
minimal		0	0	0	5
mild		0	0	0	1
Liver					
Number examined		5	1	0	7
Not remarkable		2	1	0	6
Vacuolation, hepatocyte, periportal		0	0	0	1
minimal		0	0	0	1
Extramedullary hematopoiesis		1	0	0	0
minimal		1	0	0	0
Infiltrate, inflammatory cell		2	0	0	0
minimal		2	0	0	0
Lung (bronchus)					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Lymph node, mesenteric					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Lymph node, submandibular					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Mammary gland, inguinal					
Number examined		5	1	0	7
Not remarkable		5	1	0	6
Hyperplasia, lobuloalveolar, diffuse		0	0	0	1
minimal		0	0	0	1
Medulla oblongata					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Muscle, quadriceps femoris					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Optic nerve					
Number examined		5	1	0	7
Not remarkable		5	1	0	7

M : Male

Table 10-3 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	M	M	M	M
	Dose (mg/kg) :	0	100	300	1000
Findings	Number:	7	12	12	7
Pancreas					
Number examined		5	1	0	7
Not remarkable		3	1	0	7
Infiltrate, inflammatory cell		1	0	0	0
minimal		1	0	0	0
Focus, basophilic		1	0	0	0
minimal		1	0	0	0
Parathyroid					
Number examined		4	1	0	7
Not remarkable		4	1	0	7
No sample		1	0	0	0
Peyer's patch, ileal					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Pituitary					
Number examined		5	1	0	7
Not remarkable		3	1	0	7
Aberrant craniopharyngeal tissue		1	0	0	0
minimal		1	0	0	0
Cyst		2	0	0	0
minimal		2	0	0	0
Prostate					
Number examined		5	1	0	7
Not remarkable		1	1	0	7
Infiltrate, inflammatory cell		4	0	0	0
minimal		1	0	0	0
mild		2	0	0	0
moderate		1	0	0	0
Salivary gland, submandibular					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Sciatic nerve					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Seminal vesicle					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Spinal cord, thoracic					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Spleen					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Skin, inguinal					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Stomach					
Number examined		5	6	5	7
Not remarkable		5	6	3	0
Erosion, glandular stomach		0	0	0	3
minimal		0	0	0	3

M : Male

Table 10-4 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	M	M	M	M
	Dose (mg/kg) :	0	100	300	1000
Findings	Number:	7	12	12	7
Stomach (continued)					
Hyperkeratosis, forestomach		0	0	2	7
minimal		0	0	2	5
mild		0	0	0	2
Hyperplasia, squamous cell, forestomach		0	0	2	7
minimal		0	0	2	5
mild		0	0	0	2
Testis					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Thymus					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Thyroid					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Trachea					
Number examined		5	1	0	7
Not remarkable		5	1	0	7
Urinary bladder					
Number examined		5	6	5	7
Not remarkable		4	6	5	0
Calculus		1	0	0	0
mild		1	0	0	0
Infiltrate, inflammatory cell		0	0	0	1
minimal		0	0	0	1
Vacuolation, urothelium		0	0	0	7
mild		0	0	0	7

M : Male

Table 10-5 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Adrenal			
Number examined		5	5
Not remarkable		5	5
Bone, femur			
Number examined		5	5
Not remarkable		5	0
Bone, increased, trabeculae		0	5
minimal		0	1
mild		0	4
Bone marrow, femur			
Number examined		5	5
Not remarkable		5	5
Brain (cerebrum, cerebellum, pons)			
Number examined		5	5
Not remarkable		5	5
Eye			
Number examined		5	5
Not remarkable		5	5
Heart			
Number examined		5	5
Not remarkable		5	5
Intestine, cecum			
Number examined		5	5
Not remarkable		5	5
Intestine, colon			
Number examined		5	5
Not remarkable		5	5
Intestine, duodenum			
Number examined		5	5
Not remarkable		5	4
Erosion/ulcer		0	1
minimal		0	1
Intestine, ileum			
Number examined		5	5
Not remarkable		5	5
Intestine, jejunum			
Number examined		5	5
Not remarkable		5	5
Intestine, rectum			
Number examined		5	5
Not remarkable		5	5
Kidney			
Number examined		5	5
Not remarkable		5	3
Vacuolation, urothelium		0	2
minimal		0	2
Liver			
Number examined		5	5
Not remarkable		5	4
Vacuolation, hepatocyte, periportal		0	1
mild		0	1

F : Female

Table 10-6 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Lung (bronchus)			
Number examined	5	5	
Not remarkable	5	5	
Lymph node,mesenteric			
Number examined	5	5	
Not remarkable	5	5	
Lymph node,submandibular			
Number examined	5	5	
Not remarkable	5	5	
Mammary gland,inguinal			
Number examined	5	5	
Not remarkable	5	3	
Hyperplasia,lobuloalveolar,diffuse	0	2	
minimal	0	1	
mild	0	1	
Medulla oblongata			
Number examined	5	5	
Not remarkable	5	5	
Muscle,quadriceps femoris			
Number examined	5	5	
Not remarkable	5	5	
Optic nerve			
Number examined	5	5	
Not remarkable	5	5	
Ovary			
Number examined	5	5	
Not remarkable	5	3	
Hyperplasia,interstitial cell	0	2	
minimal	0	2	
Decreased No./absent,large follicles	0	2	
moderate	0	2	
Hypertrophy,corpora lutea	0	1	
mild	0	1	
Pancreas			
Number examined	5	5	
Not remarkable	5	4	
Infiltrate,inflammatory cell	0	1	
minimal	0	1	
Parathyroid			
Number examined	4	5	
Not remarkable	4	5	
No sample	1	0	
Peyer's patch,ileal			
Number examined	5	5	
Not remarkable	5	5	
Pituitary			
Number examined	5	5	
Not remarkable	5	5	

F : Female

Table 10-7 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Salivary gland, submandibular			
Number examined		5	5
Not remarkable		5	5
Sciatic nerve			
Number examined		5	5
Not remarkable		5	5
Spinal cord, thoracic			
Number examined		5	5
Not remarkable		5	5
Spleen			
Number examined		5	5
Not remarkable		5	5
Skin, inguinal			
Number examined		5	5
Not remarkable		5	5
Stomach			
Number examined		5	5
Not remarkable		5	0
Edema, lamina propria, forestomach		0	2
minimal		0	2
Hyperkeratosis, forestomach		0	5
minimal		0	5
Hyperplasia, squamous cell, forestomach		0	5
minimal		0	5
Thymus			
Number examined		5	5
Not remarkable		5	5
Thyroid			
Number examined		5	5
Not remarkable		5	5
Trachea			
Number examined		5	5
Not remarkable		5	4
Necrosis		0	1
moderate		0	1
Urinary bladder			
Number examined		5	5
Not remarkable		5	0
Vacuolation, urothelium		0	5
mild		0	5
Uterus			
Number examined		5	5
Not remarkable		5	5
Vagina			
Number examined		5	5
Not remarkable		5	4
Mucification, increased		0	1
mild		0	1

F : Female

Table 10-8 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing,Dams)

Organs	Sex:	F	F	F
	Dose (mg/kg) :	0	100	300
Findings	Number:	12	11	12
Adrenal				
Number examined		5	0	0
Not remarkable		4	0	0
Hypertrophy, cortex, diffuse		1	0	0
minimal		1	0	0
Bone, femur				
Number examined		5	5	5
Not remarkable		5	5	5
Bone marrow, femur				
Number examined		5	0	0
Not remarkable		5	0	0
Brain (cerebrum, cerebellum, pons)				
Number examined		5	0	0
Not remarkable		5	0	0
Eye				
Number examined		5	0	0
Not remarkable		5	0	0
Heart				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, cecum				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, colon				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, duodenum				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, ileum				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, jejunum				
Number examined		5	0	0
Not remarkable		5	0	0
Intestine, rectum				
Number examined		5	0	0
Not remarkable		5	0	0
Kidney				
Number examined		5	5	5
Not remarkable		5	4	4
Dilatation, tubule		0	1	0
minimal		0	1	0
Basophilia, tubule		0	1	0
minimal		0	1	0
Infiltrate, inflammatory cell		0	0	1
minimal		0	0	1
Liver				
Number examined		5	0	0
Not remarkable		5	0	0

F : Female

Table 10-9 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing,Dams)

Organs	Sex:	F	F	F
	Dose (mg/kg) :	0	100	300
Findings	Number:	12	11	12
Lung (bronchus)				
Number examined		5	0	0
Not remarkable		4	0	0
Macrophage, increased		1	0	0
minimal		1	0	0
Lymph node, mesenteric				
Number examined		5	0	0
Not remarkable		5	0	0
Lymph node, submandibular				
Number examined		5	0	0
Not remarkable		5	0	0
Mammary gland, inguinal				
Number examined		5	5	5
Not remarkable		5	5	4
Necrosis, acinar cell		0	0	1
mild		0	0	1
Medulla oblongata				
Number examined		5	0	0
Not remarkable		5	0	0
Muscle, quadriceps femoris				
Number examined		5	0	0
Not remarkable		5	0	0
Optic nerve				
Number examined		5	0	0
Not remarkable		5	0	0
Ovary				
Number examined		5	5	5
Not remarkable		5	5	5
Pancreas				
Number examined		5	0	0
Not remarkable		5	0	0
Parathyroid				
Number examined		4	0	0
Not remarkable		4	0	0
No sample		1	0	0
Peyer's patch, ileal				
Number examined		5	0	0
Not remarkable		5	0	0
Pituitary				
Number examined		5	0	0
Not remarkable		4	0	0
Cyst		1	0	0
mild		1	0	0
Salivary gland, submandibular				
Number examined		5	0	0
Not remarkable		5	0	0
Sciatic nerve				
Number examined		5	0	0
Not remarkable		5	0	0

F : Female

Table 10-10 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of dosing,Dams)

Organs	Sex:	F	F	F
	Dose (mg/kg) :	0	100	300
Findings	Number:	12	11	12
Spinal cord, thoracic				
Number examined		5	0	0
Not remarkable		5	0	0
Spleen				
Number examined		5	0	0
Not remarkable		5	0	0
Skin, inguinal				
Number examined		5	0	0
Not remarkable		5	0	0
Stomach				
Number examined		5	5	5
Not remarkable		5	4	4
Hyperkeratosis, forestomach		0	0	1
minimal		0	0	1
Hyperplasia, squamous cell, forestomach		0	0	1
minimal		0	0	1
Vacuolation, limiting ridge		0	1	0
minimal		0	1	0
Thymus				
Number examined		5	0	0
Not remarkable		5	0	0
Thyroid				
Number examined		5	0	0
Not remarkable		5	0	0
Trachea				
Number examined		5	0	0
Not remarkable		5	0	0
Urinary bladder				
Number examined		5	5	5
Not remarkable		5	5	5
Uterus				
Number examined		5	0	0
Not remarkable		5	0	0
Vagina				
Number examined		5	5	5
Not remarkable		5	5	5

F : Female

Table 10-11 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	M	M
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Adrenal			
Number examined		5	5
Not remarkable		5	5
Bone, femur			
Number examined		5	5
Not remarkable		5	1
Bone, increased, trabeculae		0	4
minimal		0	3
mild		0	1
Bone marrow, femur			
Number examined		5	5
Not remarkable		5	5
Brain (cerebrum, cerebellum, pons)			
Number examined		5	5
Not remarkable		5	5
Coagulating gland			
Number examined		5	5
Not remarkable		5	5
Epididymis			
Number examined		5	5
Not remarkable		5	3
Sperm, decreased, lumen		0	2
moderate		0	1
severe		0	1
Eye			
Number examined		5	5
Not remarkable		5	5
Heart			
Number examined		5	5
Not remarkable		4	5
Rodent progressive cardiomyopathy		1	0
minimal		1	0
Intestine, cecum			
Number examined		5	5
Not remarkable		5	5
Intestine, colon			
Number examined		5	5
Not remarkable		5	5
Intestine, duodenum			
Number examined		5	5
Not remarkable		5	5
Intestine, ileum			
Number examined		5	5
Not remarkable		5	5
Intestine, jejunum			
Number examined		5	5
Not remarkable		5	5
Intestine, rectum			
Number examined		5	5
Not remarkable		5	5

M : Male

Table 10-12 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	M	M
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Kidney			
Number examined		5	5
Not remarkable		4	5
Basophilia,tubule		1	0
minimal		1	0
Liver			
Number examined		5	5
Not remarkable		5	4
Infiltrate,inflammatory cell		0	1
minimal		0	1
Lung (bronchus)			
Number examined		5	5
Not remarkable		5	5
Lymph node,mesenteric			
Number examined		5	5
Not remarkable		5	5
Lymph node,submandibular			
Number examined		5	5
Not remarkable		5	5
Mammary gland,inguinal			
Number examined		5	5
Not remarkable		5	5
Medulla oblongata			
Number examined		5	5
Not remarkable		5	5
Muscle,quadriceps femoris			
Number examined		5	5
Not remarkable		5	5
Optic nerve			
Number examined		5	5
Not remarkable		5	5
Pancreas			
Number examined		5	5
Not remarkable		5	5
Parathyroid			
Number examined		5	5
Not remarkable		5	5
Peyer's patch,ileal			
Number examined		5	5
Not remarkable		5	5
Pituitary			
Number examined		5	5
Not remarkable		5	5
Prostate			
Number examined		5	5
Not remarkable		4	3
Infiltrate,inflammatory cell		1	2
minimal		1	2

M : Male

Table 10-13 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	M	M
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Salivary gland, submandibular			
Number examined		5	5
Not remarkable		5	5
Sciatic nerve			
Number examined		5	5
Not remarkable		5	5
Seminal vesicle			
Number examined		5	5
Not remarkable		5	5
Spinal cord, thoracic			
Number examined		5	5
Not remarkable		5	5
Spleen			
Number examined		5	5
Not remarkable		5	5
Skin, inguinal			
Number examined		5	5
Not remarkable		5	5
Stomach			
Number examined		5	5
Not remarkable		5	5
Testis			
Number examined		5	5
Not remarkable		5	3
Degeneration/atrophy, tubule		0	2
mild		0	1
severe		0	1
Thymus			
Number examined		5	5
Not remarkable		5	5
Thyroid			
Number examined		5	5
Not remarkable		5	5
Trachea			
Number examined		5	5
Not remarkable		5	5
Urinary bladder			
Number examined		5	5
Not remarkable		5	5

M : Male

Table 10-14 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Adrenal			
Number examined		5	5
Not remarkable		4	4
Hypertrophy, cortex, focal		1	0
minimal		1	0
Hypertrophy, cortex, diffuse		0	1
minimal		0	1
Bone, femur			
Number examined		5	5
Not remarkable		5	1
Bone, increased, trabeculae		0	4
minimal		0	4
Bone marrow, femur			
Number examined		5	5
Not remarkable		5	5
Brain (cerebrum, cerebellum, pons)			
Number examined		5	5
Not remarkable		5	5
Eye			
Number examined		5	5
Not remarkable		5	5
Heart			
Number examined		5	5
Not remarkable		4	5
Infiltrate, inflammatory cell		1	0
minimal		1	0
Intestine, cecum			
Number examined		5	5
Not remarkable		5	5
Intestine, colon			
Number examined		5	5
Not remarkable		5	5
Intestine, duodenum			
Number examined		5	5
Not remarkable		5	5
Intestine, ileum			
Number examined		5	5
Not remarkable		5	5
Intestine, jejunum			
Number examined		5	5
Not remarkable		5	5
Intestine, rectum			
Number examined		5	5
Not remarkable		5	5
Kidney			
Number examined		5	5
Not remarkable		5	5
Liver			
Number examined		5	5
Not remarkable		5	5

F : Female

Table 10-15 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Lung (bronchus)			
Number examined	5	5	
Not remarkable	5	5	
Lymph node,mesenteric			
Number examined	5	5	
Not remarkable	5	5	
Lymph node,submandibular			
Number examined	5	5	
Not remarkable	5	5	
Mammary gland,inguinal			
Number examined	5	5	
Not remarkable	5	5	
Medulla oblongata			
Number examined	5	5	
Not remarkable	5	5	
Muscle,quadriceps femoris			
Number examined	5	5	
Not remarkable	5	5	
Optic nerve			
Number examined	5	5	
Not remarkable	5	5	
Ovary			
Number examined	5	5	
Not remarkable	5	5	
Pancreas			
Number examined	5	5	
Not remarkable	5	5	
Parathyroid			
Number examined	5	5	
Not remarkable	5	4	
No sample	0	1	
Peyer's patch,ileal			
Number examined	5	5	
Not remarkable	5	5	
Pituitary			
Number examined	5	5	
Not remarkable	5	5	
Salivary gland,submandibular			
Number examined	5	5	
Not remarkable	5	5	
Sciatic nerve			
Number examined	5	5	
Not remarkable	5	5	
Spinal cord,thoracic			
Number examined	5	5	
Not remarkable	5	5	
Spleen			
Number examined	5	5	
Not remarkable	5	5	

F : Female

Table 10-16 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (End of recovery)

Organs	Sex:	F	F
	Dose (mg/kg) :	0	1000
Findings	Number:	5	5
Skin, inguinal			
Number examined		5	5
Not remarkable		5	5
Stomach			
Number examined		5	5
Not remarkable		5	4
Cyst, glandular stomach		0	1
minimal		0	1
Thymus			
Number examined		5	5
Not remarkable		5	5
Thyroid			
Number examined		5	5
Not remarkable		5	5
Trachea			
Number examined		5	5
Not remarkable		5	5
Urinary bladder			
Number examined		5	5
Not remarkable		5	5
Uterus			
Number examined		5	5
Not remarkable		5	5
Vagina			
Number examined		5	5
Not remarkable		5	5

F : Female

Table 10-17 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (Undelivered)

Organs	Sex:	F	F
	Dose (mg/kg) :	100	1000
Findings	Number:	1	12
Adrenal			
Number examined		1	12
Not remarkable		1	12
Bone, femur			
Number examined		1	12
Not remarkable		1	0
Bone, increased, trabeculae		0	12
minimal		0	1
mild		0	10
moderate		0	1
Bone marrow, femur			
Number examined		1	12
Not remarkable		1	12
Brain (cerebrum, cerebellum, pons)			
Number examined		1	12
Not remarkable		1	12
Eye			
Number examined		1	12
Not remarkable		1	12
Heart			
Number examined		1	12
Not remarkable		1	12
Intestine, cecum			
Number examined		1	12
Not remarkable		1	12
Intestine, colon			
Number examined		1	12
Not remarkable		1	12
Intestine, duodenum			
Number examined		1	12
Not remarkable		1	12
Intestine, ileum			
Number examined		1	12
Not remarkable		1	12
Intestine, jejunum			
Number examined		1	12
Not remarkable		1	12
Intestine, rectum			
Number examined		1	12
Not remarkable		1	12
Kidney			
Number examined		1	12
Not remarkable		1	7
Basophilia, tubule		0	1
minimal		0	1
Infiltrate, inflammatory cell		0	1
minimal		0	1
Vacuolation, urothelium		0	4
minimal		0	4

F : Female

Table 10-18 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (Undelivered)

Organs	Sex:	F	F
	Dose (mg/kg) :	100	1000
Findings	Number:	1	12
Liver			
Number examined		1	12
Not remarkable		1	12
Lung (bronchus)			
Number examined		1	12
Not remarkable		1	11
Metaplasia, osseous		0	1
minimal		0	1
Lymph node, mesenteric			
Number examined		1	12
Not remarkable		1	12
Lymph node, submandibular			
Number examined		1	12
Not remarkable		1	12
Mammary gland, inguinal			
Number examined		1	12
Not remarkable		1	2
Hyperplasia, lobuloalveolar, diffuse		0	10
minimal		0	3
mild		0	7
Medulla oblongata			
Number examined		1	12
Not remarkable		1	12
Muscle, quadriceps femoris			
Number examined		1	12
Not remarkable		1	12
Optic nerve			
Number examined		1	12
Not remarkable		1	12
Ovary			
Number examined		1	12
Not remarkable		1	5
Hyperplasia, interstitial cell		0	4
minimal		0	3
mild		0	1
Decreased No./absent, large follicles		0	6
minimal		0	1
mild		0	5
Hypertrophy, corpora lutea		0	5
mild		0	5
Pancreas			
Number examined		1	12
Not remarkable		1	12
Parathyroid			
Number examined		1	12
Not remarkable		1	12
Peyer's patch, ileal			
Number examined		1	12
Not remarkable		1	12

F : Female

Table 10-19 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (Undelivered)

Organs	Sex:	F	F
	Dose (mg/kg) :	100	1000
Findings	Number:	1	12
Pituitary			
Number examined		1	11
Not remarkable		1	9
No sample		0	1
Cyst		0	1
mild		0	1
Pseudocyst		0	1
minimal		0	1
Salivary gland, submandibular			
Number examined		1	12
Not remarkable		1	11
Secretion, decreased, granular duct		0	1
mild		0	1
Sciatic nerve			
Number examined		1	12
Not remarkable		1	12
Spinal cord, thoracic			
Number examined		1	12
Not remarkable		1	12
Spleen			
Number examined		1	12
Not remarkable		0	12
Pigmentation, increased		1	0
moderate		1	0
Skin, inguinal			
Number examined		1	12
Not remarkable		1	12
Stomach			
Number examined		1	12
Not remarkable		1	0
Edema, lamina propria, forestomach		0	2
minimal		0	2
Hyperkeratosis, forestomach		0	12
minimal		0	12
Hyperplasia, squamous cell, forestomach		0	12
minimal		0	12
Thymus			
Number examined		1	12
Not remarkable		1	12
Thyroid			
Number examined		1	12
Not remarkable		1	12
Trachea			
Number examined		1	12
Not remarkable		1	12
Urinary bladder			
Number examined		1	12
Not remarkable		1	2
Vacuolation, urothelium		0	10
minimal		0	5
mild		0	5

F : Female

Table 10-20 Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats
Histopathological findings (Undelivered)

Organs	Sex:	F	F
	Dose (mg/kg) :	100	1000
Findings	Number:	1	12
Uterus			
Number examined		1	12
Not remarkable		1	12
Vagina			
Number examined		1	12
Not remarkable		1	9
Mucification, increased		0	3
mild		0	3

F : Female

Table 11

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Estrus cycles
Generation : F0

Study No. : R-1273

Species : Rat

Test article Dose		/Before mating			
		Mean estrous cycle (Days)	Number of estrus	Number of animals with abnormal estrous cycle	Abnormal estrous cycle index (%)
4MBE 0 mg/kg	n	12	12	12	8.3
	Mean	4.2	3.5	(1)	
	S.D.	0.3	0.5		
4MBE 100 mg/kg	n	12	12	12	0.0
	Mean	4.0	3.8	(0)	
	S.D.	0.0	0.5		
4MBE 300 mg/kg	n	12	12	12	0.0
	Mean	4.2	3.8	(0)	
	S.D.	0.4	0.5		
4MBE 1000 mg/kg	n	7	12	12	75.0
	Mean	4.2	1.9	(9)	
	S.D.	0.4	1.2		
			ST **	FT **	

4MBE : Benzenemethanol, 4-methyl-

(): Values in brackets represent number of animals with abnormal estrous cycle.

Abnormal estrous cycle index = (No. of animals with abnormal estrous cycle / No. of animals examined) × 100

Significantly different from 4MBE 0 mg/kg : ** P < 0.01

FT : Fisher's exact test (two-side), ST : Steel test (two-side)

Table 12 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Reproductive performance

Generation : F0

Sex : Male

Species : Rat

Test article Dose		Number of pairs	Elapsed day of conceiving	1st mating	
				Copulation index (%) a)	Fertility index (%) b)
4MBE	n	12	12	(12/12)	(12/12)
0 mg/kg	Mean		1.9	100.0	100.0
	S.D.		1.2		
4MBE	n	12	11	(11/12)	(11/11)
100 mg/kg	Mean		3.5	91.7	100.0
	S.D.		3.7		
4MBE	n	12	12	(12/12)	(12/12)
300 mg/kg	Mean		3.3	100.0	100.0
	S.D.		3.4		
4MBE	n	12	12	(12/12)	(0/12)
1000 mg/kg	Mean		2.4	100.0	0.0
	S.D.		1.0		
FT **					

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

FT : Fisher's exact test (two-side)

a): (Number of copulated animals / Number of mated animals)x 100

b): (Number of males which impregnated females / Number of copulated males)x 100

Table 12 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Reproductive performance

Generation : F0

Sex : Female

Species : Rat

Test article Dose		Number of pairs	Elapsed day of conceiving	1st mating	
				Copulation index (%) a)	Fertility index (%) b)
4MBE 0 mg/kg	n Mean S.D.	12	12 1.9 1.2	(12/12) 100.0	(12/12) 100.0
4MBE 100 mg/kg	n Mean S.D.	12	11 3.5 3.7	(11/12) 91.7	(11/11) 100.0
4MBE 300 mg/kg	n Mean S.D.	12	12 3.3 3.4	(12/12) 100.0	(12/12) 100.0
4MBE 1000 mg/kg	n Mean S.D.	12	12 2.4 1.0	(12/12) 100.0	(0/12) 0.0
FT **					

4MBE :Benzenemethanol, 4-methyl-

Significantly different from 4MBE 0 mg/kg : ** P<0.01

FT : Fisher's exact test (two-side)

a): (Number of copulated animals / Number of mated animals)x 100

b): (Number of pregnant females / Number of copulated females)x 100

Table 13

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

With the Reproduction developmental toxicity screening test in rats													
Delivery data											Species : Rat		
Generation : F0													
Test article	Dose	n	Gestation period (day)	Gestation index (%) a)	Number of implan- tation	Delivery index (%) b)	Live birth index (%) c)	Number of offspring	Number of live newborns			Sex retio (%) d)	Number of dead newborns
									M	F	Total		
4MBE	0 mg/kg	n	12	12/12	12	12	12	12	12	12	12	98/186	12
		Mean	22.0	100.0	16.8	93.2	98.8	15.7	8.2	7.3	15.5	52.7	0.2
		S.D.	0.3		1.4	7.2	2.8	1.6	2.2	1.4	1.8		0.4
4MBE	100 mg/kg	n	11	11/11	11	11	11	11	11	11	11	88/157	11
		Mean	21.9	100.0	15.1	95.0	99.1	14.4	8.0	6.3	14.3	56.1	0.1
		S.D.	0.3		2.4	8.3	3.0	2.8	3.3	2.1	2.9		0.3
4MBE	300 mg/kg	n	12	12/12	12	12	12	12	12	12	12	90/185	12
		Mean	22.0	100.0	16.5	94.4	99.5	15.5	7.5	7.9	15.4	48.6	0.1
		S.D.	0.2		1.9	5.8	1.8	1.4	1.9	1.9	1.4		0.3

4MBE :Benzenemethanol, 4-methyl-

M : Male, F : Female

Not significantly different from 4MBE 0 mg/kg

a): (Number of females delivered live newborns / Number of pregnant females) x 100

b): (Number of delivered pups / Number of implantation) x 100

c): (Number of liveborns / Number of delivered pups) x 100

d): (Number of live males / Number of liveborns) x 100

Table 14

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
External examination of offspring
Generation : F0

Study No. : R-1273

Days after birth : 0
Species : Rat

	4MBE	4MBE	4MBE
Test article			
Dose	0	100	300
Dose unit	mg/kg	mg/kg	mg/kg
Number of dams	12	11	12
Number of offspring	188	158	186
Number of dams with anomalous offspring (incidence %) a)	0(0.0)	0(0.0)	0(0.0)
Number of offspring with any anomaly (incidence %) b)	0(0.0)	0(0.0)	0(0.0)

4MBE :Benzenemethanol, 4-methyl-

The group mean is the same and unbiased variance 0 for all groups. All data of all groups are same.

a): (Number of dams bearing pups with external anomalies / Number of dams) x 100

b): (Number of pups with external anomalies / Number of delivered pups) x 100

Table 15

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Anogenital of offspring
Generation : F0

Study No. : R-1273

		Sex		/Days after birth	Unit : mm	Species : Rat
				0		
Dose Test article				AGD	Normalized AGD	a)
4MBE 0 mg/kg	Male	n		12	12	
		Mean		2.3	1.2	
		S.D.		0.1	0.1	
	Female	n		12	12	
		Mean		0.8	0.5	
		S.D.		0.1	0.1	
4MBE 100 mg/kg	Male	n		11	11	
		Mean		2.4	1.3	
		S.D.		0.1	0.1	
	Female	n		11	11	
		Mean		0.8	0.5	
		S.D.		0.1	0.1	
4MBE 300 mg/kg	Male	n		12	12	
		Mean		2.4	1.3	
		S.D.		0.1	0.0	
	Female	n		12	12	
		Mean		0.8	0.5	
		S.D.		0.1	0.1	

4MBE : Benzenemethanol, 4-methyl-

AGD : Anogenital Distance

Significantly different from 4MBE 0 mg/kg : * P<0.05

DT : Dunnett test (two-side)

a): AGD (mm) / Cube root of body weight (g)

Table 16

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Litter size and viability index of offspring

Study No. : R-1273

Generation : F0		Species : Rat					
/Days after birth		0	4	4	4	13	13
Test article			Pre-culled	Viability index (%) a)	Culled		Viability index (%) b)
Dose							
4MBE	Total	186	184		96	96	
0 mg/kg	n	12	12	12	12	12	12
	Mean			98.9			100.0
	S.D.			2.5			0.0
4MBE	Total	157	157		88	88	
100 mg/kg	n	11	11	11	11	11	11
	Mean			100.0			100.0
	S.D.			0.0			0.0
4MBE	Total	185	179		96	96	
300 mg/kg	n	12	12	12	12	12	12
	Mean			96.6			100.0
	S.D.			4.8			0.0

4MBE :Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

a): (Number of pups alive on day 4 after birth / Number of live born pups) × 100

b): (Number of pups alive on day 13 after birth / Number of pups after culling on day 4 after birth) × 100

Table 17

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Sex ratio

Generation : F0

Species : Rat

Test article Dose	Number of dams	day 4 after birth		
		Number of males	Number of females	Sex ratio (%) a)
4MBE 0 mg/kg	12	Total (%)	97 87	97/184 52.7
4MBE 100 mg/kg	11	Total (%)	88 69	88/157 56.1
4MBE 300 mg/kg	12	Total (%)	89 90	89/179 49.7

4MBE : Benzenemethanol, 4-methyl-

Not significantly different from 4MBE 0 mg/kg

a): $(\text{Number of male pups alive on day 4 after birth} / \text{Number of pups alive on day 4 after birth}) \times 100$

Table 18 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight of offspring
Generation : F0

Study No. : R-1273

			Unit : g					Species : Rat
Test article Dose			/Days after birth					
			0	4/Pre-culled	4/Culled	7	13	
4MBE 0 mg/kg	Male	n	12	12	12	12	12	
		Mean	6.5	10.4	10.6	17.3	33.3	
		S.D.	0.3	0.7	0.8	1.4	2.2	
	Female	n	12	12	12	12	12	
		Mean	6.2	9.8	10.2	16.5	31.9	
		S.D.	0.4	0.7	0.7	1.4	2.1	
4MBE 100 mg/kg	Male	n	11	11	11	11	11	
		Mean	6.4	10.4	10.7	17.5	33.1	
		S.D.	0.5	1.4	1.3	1.4	2.0	
	Female	n	11	11	11	11	11	
		Mean	5.9	9.5	9.8	15.9	31.3	
		S.D.	0.3	1.0	1.1	1.5	2.4	
4MBE 300 mg/kg	Male	n	12	12	12	12	12	
		Mean	6.5	10.5	10.7	18.0	33.8	
		S.D.	0.4	0.7	0.6	1.0	1.8	
	Female	n	12	12	12	12	12	
		Mean	6.1	10.0	10.3	17.2	32.8	
		S.D.	0.4	1.0	0.8	1.4	2.3	

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 18 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight gain of offspring
Generation : F0

Study No. : R-1273

Base : Day 4 after birth
Unit : g

Species : Rat

Test article			/Days after birth		
			/Before culling /After culling		
Dose			0-4	4-7	4-13
4MBE 0 mg/kg	Male	n	12	12	12
		Mean	3.8	6.7	22.7
		S.D.	0.5	0.8	1.6
	Female	n	12	12	12
		Mean	3.7	6.3	21.8
		S.D.	0.4	0.8	1.5
4MBE 100 mg/kg	Male	n	11	11	11
		Mean	4.0	6.9	22.4
		S.D.	1.0	0.7	1.9
	Female	n	11	11	11
		Mean	3.6	6.2	21.5
		S.D.	0.7	0.7	2.0
4MBE 300 mg/kg	Male	n	12	12	12
		Mean	4.0	7.3	23.1
		S.D.	0.5	0.6	1.7
	Female	n	12	12	12
		Mean	3.9	6.9	22.4
		S.D.	0.9	0.8	1.9

4MBE : Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg

Table 19

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Externally for gross abnormalities in dead pups

Study No. : R-1273

	Test article	4MBE	4MBE	4MBE
	Dose	0 mg/kg	100 mg/kg	300 mg/kg
Male				
Number of pups examined		1	0	1
Number of pups with abnormal findings		0	0	0
Female				
Number of pups examined		1	0	2
Number of pups with abnormal findings		0	0	0

4MBE :Benzenemethanol, 4-methyl-

Table 20

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Nipple retention of male pups
Generation : F0

Study No. : R-1273

Test article		Unit : No.		Species : Rat	
Dose		/Days after birth			
		13			
4MBE 0 mg/kg	Male	n	12		
		Mean	0.0		
		S.D.	0.0		
4MBE 100 mg/kg	Male	n	11		
		Mean	0.0		
		S.D.	0.0		
4MBE 300 mg/kg	Male	n	12		
		Mean	0.0		
		S.D.	0.0		

4MBE :Benzenemethanol, 4-methyl-
Not significantly different from 4MBE 0 mg/kg
Nipple retention: Number of nipple / areolae

Table 21

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Gross pathological findings in pups on postnatal day 13

Study No. : R-1273

	Test article	4MBE	4MBE	4MBE
	Dose	0 mg/kg	100 mg/kg	300 mg/kg
Male				
Number of pups examined		48	44	48
Number of pups with abnormal findings		0	0	0
Female				
Number of pups examined		48	44	48
Number of pups with abnormal findings		0	0	0

4MBE :Benzenemethanol, 4-methyl-

Table 22 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight

Stage : After culled (F1 males)

Sex : Male

Species : Rat

Test article Dose		Body weight g	Thyroid-RL	
			AB mg	RE mg/100g
4MBE	n	12	12	12
0 mg/kg	Mean	34.2	3.6	10.5
	S.D.	3.2	0.9	2.5
4MBE	n	11	11	11
100 mg/kg	Mean	33.7	3.3	9.6
	S.D.	2.2	1.1	2.9
4MBE	n	12	12	12
300 mg/kg	Mean	34.6	3.2	9.4
	S.D.	2.5	0.9	2.7

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Not significantly different from 4MBE 0 mg/kg

Table 22 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Organ weight

Stage : After culled (F1 females)

Sex : Female

Species : Rat

Test article Dose		Body weight g	Thyroid-RL	
			AB mg	RE mg/100g
4MBE	n	12	12	12
0 mg/kg	Mean	33.2	4.3	13.0
	S.D.	1.9	1.2	3.6
4MBE	n	11	11	11
100 mg/kg	Mean	31.9	3.5	10.7
	S.D.	2.8	1.2	3.1
4MBE	n	12	12	12
300 mg/kg	Mean	33.9	4.0	11.8
	S.D.	2.2	0.9	2.7

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Not significantly different from 4MBE 0 mg/kg

Clinical signs
Sex : Male

Period : F0 before mating Day 1-15, F0 mating Day 15-43
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	/Day																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
1001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
1001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1003	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1004	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1005	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1007	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1011	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1012	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Appendix 1 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Clinical signs

Period : F0 before mating Day 1-15, F0 mating Day 15-43

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

	Sex : Male											Dose : 4MBE 100 mg/kg											Species : Rat						
	/Day																												
Animal No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

4MBE : Benzenemethanol, 4-methyl-

:- No abnormal findings

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
2001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2005	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2007	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2011	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2012	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Animal No.	/Day																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
3001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-
-: No abnormal findings

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
3001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3003	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3004	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3005	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3007	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3011	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3012	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Clinical signs
Sex : Male

Period : F0 before mating Day 1-15, F0 mating Day 15-43
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	/Day																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
4001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4003	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4005	-	A	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-
4010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4011	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4012	-	-	-	-	A	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

A: Prone position

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
4001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4003	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4004	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4005	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4006	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4007	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4008	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4009	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4010	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4011	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4012	A	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

A: Prone position

a): Day of necropsy

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
3101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4101	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-
4102	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-
4103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4104	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-
4105	-	-	-	A	-	-	-	-	A	-	-	-	-	A	-
4106	-	-	-	A	A	-	A	-	-	-	-	-	-	-	-
4107	-	-	A	A	-	-	-	-	-	-	-	-	-	-	-
4108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4110	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-
4111	-	A	A	-	A	-	-	-	-	-	-	-	-	-	-
4112	-	-	-	A	-	-	A	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

A: Prone position

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Period : F0 gestation Day 0-25
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	/Day																									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings

Clinical signs in dams

Period : F0 gestation Day 0-25

Sex : Female

Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
2101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Period : F0 gestation Day 0-25
Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	/Day																									
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
3101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-
-: No abnormal findings

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Period : F0 lactation Day 0-14
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	/Day													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13 14 a)
1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1106	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1109	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1111	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1112	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings
a): Day of necropsy

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Period : F0 lactation Day 0-14
Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	/Day													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13 14 a)
2101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2106	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2111	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2112	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Animal No. 2109: Non-pregnancy
4MBE :Benzenemethanol, 4-methyl-
-: No abnormal findings
a): Day of necropsy

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Clinical signs in dams
Sex : Female

Period : F0 lactation Day 0-14
Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	/Day													
	0	1	2	3	4	5	6	7	8	9	10	11	12	13 14 a)
3101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3106	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3109	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3111	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3112	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-
-: No abnormal findings
a): Day of necropsy

Clinical signs
Sex : Female

Period : Administration day 1-43(non-mating group)

Dose : 4MBE 0 mg/kg

Species : Rat

	Sex : Female										Dose : 4mBE 0 mg/kg										Species : Rat								
Animal No.	/Day																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
5101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
5110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
5101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5106	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5109	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5110	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Clinical signs
Sex : FemalePeriod : Administration day 1-43(non-mating group)
Dose : 4MBE 1000 mg/kg

Species : Rat

	Sex : Female										Dose : 4MBE 1000 mg/kg										Species : Rat								
Animal No.	/Day																												
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
6101	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6103	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6104	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6105	-	-	-	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6106	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	
6107	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6108	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-	-	
6109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Animal No.	/Day													
	30	31	32	33	34	35	36	37	38	39	40	41	42	43 a)
6101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6106	-	A	-	-	-	-	-	-	-	-	-	-	-	-
6107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6109	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6110	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE : Benzenemethanol, 4-methyl-

-: No abnormal findings

A: Prone position

a): Day of necropsy

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
1008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
4008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4012	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
5106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Animal No.	/Day														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 a)
6106	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

4MBE :Benzenemethanol, 4-methyl-

-: No abnormal findings

a): Day of necropsy

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Dose : 4MBE 0 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
1001	N	0	0
1002	N	0	0
1003	N	0	0
1004	N	0	0
1005	N	0	0
1006	N	0	0
1007	N	0	0
1008	N	0	0
1009	N	0	0
1010	N	0	0
1011	N	0	0
1012	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Appendix 2 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Dose : 4MBE 100 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
2001	N	0	0
2002	N	0	0
2003	N	0	0
2004	N	0	0
2005	N	0	0
2006	N	0	0
2007	N	0	0
2008	N	0	0
2009	N	0	0
2010	N	0	0
2011	N	0	0
2012	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Dose : 4MBE 300 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4001	N	0	0	
4002	N	0	0	
4003	N	0	0	
4004	N	0	0	
4005	N	0	0	
4006	N	0	0	
4007	N	0	0	
4008	N	0	0	
4009	N	0	0	
4010	N	0	0	
4011	N	0	0	
4012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1001	N	0	0	
1002	N	0	0	
1003	N	0	0	
1004	N	0	0	
1005	N	0	0	
1006	N	0	0	
1007	N	0	0	
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2001	N	0	0	
2002	N	0	0	
2003	N	0	0	
2004	N	0	0	
2005	N	0	0	
2006	N	0	0	
2007	N	0	0	
2008	N	0	0	
2009	N	0	0	
2010	N	0	0	
2011	N	0	0	
2012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4001	N	0	0	
4002	N	0	0	
4003	N	0	0	
4004	N	0	0	
4005	N	0	0	
4006	N	0	0	
4007	N	0	0	
4008	N	0	0	
4009	N	0	0	
4010	N	0	0	
4011	N	0	0	
4012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 3 Period : F0 mating
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1001	N	0	0	
1002	N	0	0	
1003	N	0	0	
1004	N	0	0	
1005	N	0	0	
1006	N	0	0	
1007	N	0	0	
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2001	N	0	0	
2002	N	0	0	
2003	N	0	0	
2004	N	0	0	
2005	N	0	0	
2006	N	0	0	
2007	N	0	0	
2008	N	0	0	
2009	N	0	0	
2010	N	0	0	
2011	N	0	0	
2012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior
Animal No.			
4001	N	0	0
4002	N	0	0
4003	N	0	0
4004	N	0	0
4005	N	0	0
4006	N	0	0
4007	N	0	0
4008	N	0	0
4009	N	0	0
4010	N	0	0
4011	N	0	0
4012	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1001	N	0	0	
1002	N	0	0	
1003	N	0	0	
1004	N	0	0	
1005	N	0	0	
1006	N	0	0	
1007	N	0	0	
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2001	N	0	0	
2002	N	0	0	
2003	N	0	0	
2004	N	0	0	
2005	N	0	0	
2006	N	0	0	
2007	N	0	0	
2008	N	0	0	
2009	N	0	0	
2010	N	0	0	
2011	N	0	0	
2012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4001	N	0	0	
4002	N	0	0	
4003	N	0	0	
4004	N	0	0	
4005	N	0	0	
4006	N	0	0	
4007	N	0	0	
4008	N	0	0	
4009	N	0	0	
4010	N	0	0	
4011	N	0	0	
4012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 5 Period : F0 mating
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1001	N	0	0	
1002	N	0	0	
1003	N	0	0	
1004	N	0	0	
1005	N	0	0	
1006	N	0	0	
1007	N	0	0	
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2001	N	0	0	
2002	N	0	0	
2003	N	0	0	
2004	N	0	0	
2005	N	0	0	
2006	N	0	0	
2007	N	0	0	
2008	N	0	0	
2009	N	0	0	
2010	N	0	0	
2011	N	0	0	
2012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4001	N	0	0	
4002	N	0	0	
4003	N	0	0	
4004	N	0	0	
4005	N	0	0	
4006	N	0	0	
4007	N	0	0	
4008	N	0	0	
4009	N	0	0	
4010	N	0	0	
4011	N	0	0	
4012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Male Week : 6 Period : F0 mating
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1001	N	0	0	
1002	N	0	0	
1003	N	0	0	
1004	N	0	0	
1005	N	0	0	
1006	N	0	0	
1007	N	0	0	
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2001	N	0	0	
2002	N	0	0	
2003	N	0	0	
2004	N	0	0	
2005	N	0	0	
2006	N	0	0	
2007	N	0	0	
2008	N	0	0	
2009	N	0	0	
2010	N	0	0	
2011	N	0	0	
2012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3001	N	0	0	
3002	N	0	0	
3003	N	0	0	
3004	N	0	0	
3005	N	0	0	
3006	N	0	0	
3007	N	0	0	
3008	N	0	0	
3009	N	0	0	
3010	N	0	0	
3011	N	0	0	
3012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4001	N	0	0	
4002	N	0	0	
4003	N	0	0	
4004	N	0	0	
4005	N	0	0	
4006	N	0	0	
4007	N	0	0	
4008	N	0	0	
4009	N	0	0	
4010	N	0	0	
4011	N	0	0	
4012	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 1

Dose : 4MBE 0 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
1101	N	0	0
1102	N	0	0
1103	N	0	0
1104	N	0	0
1105	N	0	0
1106	N	0	0
1107	N	0	0
1108	N	0	0
1109	N	0	0
1110	N	0	0
1111	N	0	0
1112	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

With the reproduction and developmental toxicity screening test in Home cage observation				Period : F0 before mating	Species : Rat
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 100 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
2101	N	0	0		
2102	N	0	0		
2103	N	0	0		
2104	N	0	0		
2105	N	0	0		
2106	N	0	0		
2107	N	0	0		
2108	N	0	0		
2109	N	0	0		
2110	N	0	0		
2111	N	0	0		
2112	N	0	0		
n	12	12	12		

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 1

Dose : 4MBE 300 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
3101	N	0	0
3102	N	0	0
3103	N	0	0
3104	N	0	0
3105	N	0	0
3106	N	0	0
3107	N	0	0
3108	N	0	0
3109	N	0	0
3110	N	0	0
3111	N	0	0
3112	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4101	N	0	0	
4102	F	0	0	
4103	N	0	0	
4104	N	0	0	
4105	N	0	0	
4106	N	0	0	
4107	N	0	0	
4108	N	0	0	
4109	N	0	0	
4110	N	0	0	
4111	N	0	0	
4112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 2

Dose : 4MBE 0 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
1101	N	0	0
1102	N	0	0
1103	N	0	0
1104	N	0	0
1105	N	0	0
1106	N	0	0
1107	N	0	0
1108	N	0	0
1109	N	0	0
1110	N	0	0
1111	N	0	0
1112	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2109	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 2

Dose : 4MBE 300 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
3101	N	0	0
3102	N	0	0
3103	N	0	0
3104	N	0	0
3105	N	0	0
3106	N	0	0
3107	N	0	0
3108	N	0	0
3109	N	0	0
3110	N	0	0
3111	N	0	0
3112	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
4101	N	0	0	
4102	N	0	0	
4103	N	0	0	
4104	N	0	0	
4105	N	0	0	
4106	N	0	0	
4107	N	0	0	
4108	N	0	0	
4109	N	0	0	
4110	N	0	0	
4111	N	0	0	
4112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 1 Period : F0 gestation
Dose : 4MBE 100 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : F0 gestation

Generation : F0

Sex : Female

Day : 1

Dose : 4MBE 300 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
3101	N	0	0
3102	N	0	0
3103	N	0	0
3104	N	0	0
3105	N	0	0
3106	N	0	0
3107	N	0	0
3108	N	0	0
3109	N	0	0
3110	N	0	0
3111	N	0	0
3112	N	0	0
n	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 7 Period : F0 gestation
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 7 Period : F0 gestation
Dose : 4MBE 100 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 7 Period : F0 gestation
Dose : 4MBE 300 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3101	N	0	0	
3102	N	0	0	
3103	N	0	0	
3104	N	0	0	
3105	N	0	0	
3106	N	0	0	
3107	N	0	0	
3108	N	0	0	
3109	N	0	0	
3110	N	0	0	
3111	N	0	0	
3112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3101	N	0	0	
3102	N	0	0	
3103	N	0	0	
3104	N	0	0	
3105	N	0	0	
3106	N	0	0	
3107	N	0	0	
3108	N	0	0	
3109	N	0	0	
3110	N	0	0	
3111	N	0	0	
3112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 20 Period : F0 gestation
Dose : 4MBE 100 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 20 Period : F0 gestation
Dose : 4MBE 300 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3101	N	0	0	
3102	N	0	0	
3103	N	0	0	
3104	N	0	0	
3105	N	0	0	
3106	N	0	0	
3107	N	0	0	
3108	N	0	0	
3109	N	0	0	
3110	N	0	0	
3111	N	0	0	
3112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 6 Period : F0 lactation
Dose : 4MBE 100 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 6 Period : F0 lactation
Dose : 4MBE 300 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3101	N	0	0	
3102	N	0	0	
3103	N	0	0	
3104	N	0	0	
3105	N	0	0	
3106	N	0	0	
3107	N	0	0	
3108	N	0	0	
3109	N	0	0	
3110	N	0	0	
3111	N	0	0	
3112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 13 Period : F0 lactation
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1101	N	0	0	
1102	N	0	0	
1103	N	0	0	
1104	N	0	0	
1105	N	0	0	
1106	N	0	0	
1107	N	0	0	
1108	N	0	0	
1109	N	0	0	
1110	N	0	0	
1111	N	0	0	
1112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Day : 13 Period : F0 lactation
Dose : 4MBE 100 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
2101	N	0	0	
2102	N	0	0	
2103	N	0	0	
2104	N	0	0	
2105	N	0	0	
2106	N	0	0	
2107	N	0	0	
2108	N	0	0	
2110	N	0	0	
2111	N	0	0	
2112	N	0	0	
n	11	11	11	

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
3101	N	0	0	
3102	N	0	0	
3103	N	0	0	
3104	N	0	0	
3105	N	0	0	
3106	N	0	0	
3107	N	0	0	
3108	N	0	0	
3109	N	0	0	
3110	N	0	0	
3111	N	0	0	
3112	N	0	0	
n	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation

Period : Administration (non-mating group)

Generation : F0

Sex : Female

Week : 1

Dose : 4MBE 0 mg/kg

Species : Rat

	Posture	Convulsion	Abnormal behavior
Animal No.			
5101	N	0	0
5102	N	0	0
5103	N	0	0
5104	N	0	0
5105	N	0	0
5106	N	0	0
5107	N	0	0
5108	N	0	0
5109	N	0	0
5110	N	0	0
n	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Administration (non-mating group)	Species : Rat
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 1000 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
6101	N	0	0		
6102	N	0	0		
6103	N	0	0		
6104	N	0	0		
6105	N	0	0		
6106	N	0	0		
6107	N	0	0		
6108	N	0	0		
6109	N	0	0		
6110	N	0	0		
n	10	10	10		

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 2 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5101	N	0	0	
5102	N	0	0	
5103	N	0	0	
5104	N	0	0	
5105	N	0	0	
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation		Period : Administration (non-mating group)		Species : Rat
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg	
Animal No.	Posture	Convulsion	Abnormal behavior	
6101	N	0	0	
6102	N	0	0	
6103	N	0	0	
6104	N	0	0	
6105	N	0	0	
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5101	N	0	0	
5102	N	0	0	
5103	N	0	0	
5104	N	0	0	
5105	N	0	0	
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)
Dose : 4MBE 1000 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
6101	N	0	0	
6102	N	0	0	
6103	N	0	0	
6104	N	0	0	
6105	N	0	0	
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 4 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5101	N	0	0	
5102	N	0	0	
5103	N	0	0	
5104	N	0	0	
5105	N	0	0	
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation		Period : Administration (non-mating group)		Species : Rat
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 1000 mg/kg	
Animal No.	Posture	Convulsion	Abnormal behavior	
6101	N	0	0	
6102	N	0	0	
6103	N	0	0	
6104	N	0	0	
6105	N	0	0	
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5101	N	0	0	
5102	N	0	0	
5103	N	0	0	
5104	N	0	0	
5105	N	0	0	
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation		Period : Administration (non-mating group)		Species : Rat
Generation : F0	Sex : Female	Week : 5	Dose : 4MBE 1000 mg/kg	
Animal No.	Posture	Convulsion	Abnormal behavior	
6101	N	0	0	
6102	N	0	0	
6103	N	0	0	
6104	N	0	0	
6105	N	0	0	
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 6 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5101	N	0	0	
5102	N	0	0	
5103	N	0	0	
5104	N	0	0	
5105	N	0	0	
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation		Period : Administration (non-mating group)		Species : Rat
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg	
Animal No.	Posture	Convulsion	Abnormal behavior	
6101	N	0	0	
6102	N	0	0	
6103	N	0	0	
6104	N	0	0	
6105	N	0	0	
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
1008	N	0	0	
1009	N	0	0	
1010	N	0	0	
1011	N	0	0	
1012	N	0	0	
n	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Recovery	Species : Rat
Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 1000 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
4008	N	0	0		
4009	N	0	0		
4010	N	0	0		
4011	N	0	0		
4012	N	0	0		
n	5	5	5		

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Recovery	Species : Rat
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
1008	N	0	0		
1009	N	0	0		
1010	N	0	0		
1011	N	0	0		
1012	N	0	0		
n	5	5	5		

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Recovery	Species : Rat
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 1000 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
4008	N	0	0		
4009	N	0	0		
4010	N	0	0		
4011	N	0	0		
4012	N	0	0		
n	5	5	5		

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)
Dose : 4MBE 0 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
5106	N	0	0	
5107	N	0	0	
5108	N	0	0	
5109	N	0	0	
5110	N	0	0	
n	5	5	5	

4MBE :Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Home cage observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

	Posture	Convulsion	Abnormal behavior	Species : Rat
Animal No.				
6106	N	0	0	
6107	N	0	0	
6108	N	0	0	
6109	N	0	0	
6110	N	0	0	
n	5	5	5	

4MBE : Benzenemethanol, 4-methyl-
Posture) N: Normal, F: Flattened, H: Hunched
Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe
Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Recovery (non-mating group)	Species : Rat
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
5106	N	0	0		
5107	N	0	0		
5108	N	0	0		
5109	N	0	0		
5110	N	0	0		
n	5	5	5		

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Home cage observation				Period : Recovery (non-mating group)	Species : Rat
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg		
Animal No.	Posture	Convulsion	Abnormal behavior		
6106	N	0	0		
6107	N	0	0		
6108	N	0	0		
6109	N	0	0		
6110	N	0	0		
n	5	5	5		

4MBE : Benzenemethanol, 4-methyl-

Posture) N: Normal, F: Flattened, H: Hunched

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 before mating		Species : Rat				
Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
1001	0	0	0	0	0
1002	0	0	0	0	0
1003	0	0	0	0	0
1004	0	0	0	0	0
1005	0	0	0	0	0
1006	0	0	0	0	0
1007	0	0	0	0	0
1008	0	0	0	0	0
1009	0	0	0	0	0
1010	0	0	0	0	0
1011	0	0	0	0	0
1012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 before mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2001	0	0	0	0	0	0
2002	0	0	0	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3001	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3001	0	0	0	0	0	0
3002	0	0	0	0	0	0
3003	0	0	0	0	0	0
3004	0	0	0	0	0	0
3005	0	0	0	0	0	0
3006	0	0	0	0	0	0
3007	0	0	0	0	0	0
3008	0	0	0	0	0	0
3009	0	0	0	0	0	0
3010	0	0	0	0	0	0
3011	0	0	0	0	0	0
3012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4001	0	0	0	0	0	0
4002	0	0	0	0	0	0
4003	0	0	0	0	0	0
4004	0	0	0	0	0	0
4005	0	0	0	0	0	0
4006	0	0	0	0	0	0
4007	0	0	0	0	0	0
4008	0	0	0	0	0	0
4009	0	0	0	0	0	0
4010	0	0	0	0	0	0
4011	0	0	0	0	0	0
4012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 before mating		Species : Rat				
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
1001	0	0	0	0	0
1002	0	0	0	0	0
1003	0	0	0	0	0
1004	0	0	0	0	0
1005	0	0	0	0	0
1006	0	0	0	0	0
1007	0	0	0	0	0
1008	0	0	0	0	0
1009	0	0	0	0	0
1010	0	0	0	0	0
1011	0	0	0	0	0
1012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2001	0	0	0	0	0	0
2002	0	0	0	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3001	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3001	0	0	0	0	0	0
3002	0	0	0	0	0	0
3003	0	0	0	0	0	0
3004	0	0	0	0	0	0
3005	0	0	0	0	0	0
3006	0	0	0	0	0	0
3007	0	0	0	0	0	0
3008	0	0	0	0	0	0
3009	0	0	0	0	0	0
3010	0	0	0	0	0	0
3011	0	0	0	0	0	0
3012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4001	0	0	0	0	0	0
4002	0	0	0	0	0	0
4003	0	0	0	0	0	0
4004	0	0	0	0	0	0
4005	0	0	0	0	0	0
4006	0	0	0	0	0	0
4007	0	0	0	0	0	0
4008	0	0	0	0	0	0
4009	0	0	0	0	0	0
4010	0	0	0	0	0	0
4011	0	0	0	0	0	0
4012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 3	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
1001	0	0	0	0	0
1002	0	0	0	0	0
1003	0	0	0	0	0
1004	0	0	0	0	0
1005	0	0	0	0	0
1006	0	0	0	0	0
1007	0	0	0	0	0
1008	0	0	0	0	0
1009	0	0	0	0	0
1010	0	0	0	0	0
1011	0	0	0	0	0
1012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 3	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
2001	0	0	0	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 3	Dose : 4MBE 300 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
3001	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
3001	0	0	0	0	0
3002	0	0	0	0	0
3003	0	0	0	0	0
3004	0	0	0	0	0
3005	0	0	0	0	0
3006	0	0	0	0	0
3007	0	0	0	0	0
3008	0	0	0	0	0
3009	0	0	0	0	0
3010	0	0	0	0	0
3011	0	0	0	0	0
3012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 3	Dose : 4MBE 1000 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
4001	0	0	0	0	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of removal from cage	Fur condition	Skin					
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1001	0	0	0	0	0	0
1002	0	0	0	0	0	0
1003	0	0	0	0	0	0
1004	0	0	0	0	0	0
1005	0	0	0	0	0	0
1006	0	0	0	0	0	0
1007	0	0	0	0	0	0
1008	0	0	0	0	0	0
1009	0	0	0	0	0	0
1010	0	0	0	0	0	0
1011	0	0	0	0	0	0
1012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 4							
Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation		
Animal No.									
2001	0	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling		
Animal No.							
2001	0	0	0	0	0		
2002	0	0	0	0	0		
2003	0	0	0	0	0		
2004	0	0	0	0	0		
2005	0	0	0	0	0		
2006	0	0	0	0	0		
2007	0	0	0	0	0		
2008	0	0	0	0	0		
2009	0	0	0	0	0		
2010	0	0	0	0	0		
2011	0	0	0	0	0		
2012	0	0	0	0	0		
n	12	12	12	12	12		

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 300 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
3001	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
3001	0	0	0	0	0
3002	0	0	0	0	0
3003	0	0	0	0	0
3004	0	0	0	0	0
3005	0	0	0	0	0
3006	0	0	0	0	0
3007	0	0	0	0	0
3008	0	0	0	0	0
3009	0	0	0	0	0
3010	0	0	0	0	0
3011	0	0	0	0	0
3012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
4001	0	0	0	0	0
4002	0	0	0	0	0
4003	0	0	0	0	0
4004	0	0	0	0	0
4005	0	0	0	0	0
4006	0	0	0	0	0
4007	0	0	0	0	0
4008	0	0	0	0	0
4009	0	0	0	0	0
4010	0	0	0	0	0
4011	0	0	0	0	0
4012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 5	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of removal from cage	Fur condition	Skin					
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1001	0	0	0	0	0	0
1002	0	0	0	0	0	0
1003	0	0	0	0	0	0
1004	0	0	0	0	0	0
1005	0	0	0	0	0	0
1006	0	0	0	0	0	0
1007	0	0	0	0	0	0
1008	0	0	0	0	0	0
1009	0	0	0	0	0	0
1010	0	0	0	0	0	0
1011	0	0	0	0	0	0
1012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	Species : Rat							
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2001	0	0	0	0	0	0
2002	0	0	0	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 5	Dose : 4MBE 300 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
3001	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
3001	0	0	0	0	0
3002	0	0	0	0	0
3003	0	0	0	0	0
3004	0	0	0	0	0
3005	0	0	0	0	0
3006	0	0	0	0	0
3007	0	0	0	0	0
3008	0	0	0	0	0
3009	0	0	0	0	0
3010	0	0	0	0	0
3011	0	0	0	0	0
3012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 5	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
4001	0	0	0	0	0
4002	0	0	0	0	0
4003	0	0	0	0	0
4004	0	0	0	0	0
4005	0	0	0	0	0
4006	0	0	0	0	0
4007	0	0	0	0	0
4008	0	0	0	0	0
4009	0	0	0	0	0
4010	0	0	0	0	0
4011	0	0	0	0	0
4012	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : F0 mating		Species : Rat				
Generation : F0	Sex : Male	Week : 6	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of removal from cage	Fur condition	Skin					
1001	0	0	0	0	0	0	0	0
1002	0	0	0	0	0	0	0	0
1003	0	0	0	0	0	0	0	0
1004	0	0	0	0	0	0	0	0
1005	0	0	0	0	0	0	0	0
1006	0	0	0	0	0	0	0	0
1007	0	0	0	0	0	0	0	0
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1001	0	0	0	0	0	0
1002	0	0	0	0	0	0
1003	0	0	0	0	0	0
1004	0	0	0	0	0	0
1005	0	0	0	0	0	0
1006	0	0	0	0	0	0
1007	0	0	0	0	0	0
1008	0	0	0	0	0	0
1009	0	0	0	0	0	0
1010	0	0	0	0	0	0
1011	0	0	0	0	0	0
1012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 6	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2001	0	0	0	0	0	0	0	0
2002	0	0	0	0	0	0	0	0
2003	0	0	0	0	0	0	0	0
2004	0	0	0	0	0	0	0	0
2005	0	0	0	0	0	0	0	0
2006	0	0	0	0	0	0	0	0
2007	0	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0	0
2010	0	0	0	0	0	0	0	0
2011	0	0	0	0	0	0	0	0
2012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2001	0	0	0	0	0	0
2002	0	0	0	0	0	0
2003	0	0	0	0	0	0
2004	0	0	0	0	0	0
2005	0	0	0	0	0	0
2006	0	0	0	0	0	0
2007	0	0	0	0	0	0
2008	0	0	0	0	0	0
2009	0	0	0	0	0	0
2010	0	0	0	0	0	0
2011	0	0	0	0	0	0
2012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation			Period : F0 mating			Species : Rat		
	Generation : F0	Sex : Male	Week : 6	Dose : 4MBE 300 mg/kg					
	Ease of removal from cage	Fur condition	Skin	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation	
3001	0	0	0	0	0	0	0	0	
3002	0	0	0	0	0	0	0	0	
3003	0	0	0	0	0	0	0	0	
3004	0	0	0	0	0	0	0	0	
3005	0	0	0	0	0	0	0	0	
3006	0	0	0	0	0	0	0	0	
3007	0	0	0	0	0	0	0	0	
3008	0	0	0	0	0	0	0	0	
3009	0	0	0	0	0	0	0	0	
3010	0	0	0	0	0	0	0	0	
3011	0	0	0	0	0	0	0	0	
3012	0	0	0	0	0	0	0	0	
n	12	12	12	12	12	12	12	12	

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
3001	0	0	0	0	0	0	0	0	0	0	0	0
3002	0	0	0	0	0	0	0	0	0	0	0	0
3003	0	0	0	0	0	0	0	0	0	0	0	0
3004	0	0	0	0	0	0	0	0	0	0	0	0
3005	0	0	0	0	0	0	0	0	0	0	0	0
3006	0	0	0	0	0	0	0	0	0	0	0	0
3007	0	0	0	0	0	0	0	0	0	0	0	0
3008	0	0	0	0	0	0	0	0	0	0	0	0
3009	0	0	0	0	0	0	0	0	0	0	0	0
3010	0	0	0	0	0	0	0	0	0	0	0	0
3011	0	0	0	0	0	0	0	0	0	0	0	0
3012	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 6	Dose : 4MBE 1000 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
4001	0	0	0	0	0	0	0	0
4002	0	0	0	0	0	0	0	0
4003	0	0	0	0	0	0	0	0
4004	0	0	0	0	0	0	0	0
4005	0	0	0	0	0	0	0	0
4006	0	0	0	0	0	0	0	0
4007	0	0	0	0	0	0	0	0
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4001	0	0	0	0	0	0
4002	0	0	0	0	0	0
4003	0	0	0	0	0	0
4004	0	0	0	0	0	0
4005	0	0	0	0	0	0
4006	0	0	0	0	0	0
4007	0	0	0	0	0	0
4008	0	0	0	0	0	0
4009	0	0	0	0	0	0
4010	0	0	0	0	0	0
4011	0	0	0	0	0	0
4012	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 before mating		Species : Rat			
	Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1101	0	0	0	0	0	0
1102	0	0	0	0	0	0
1103	0	0	0	0	0	0
1104	0	0	0	0	0	0
1105	0	0	0	0	0	0
1106	0	0	0	0	0	0
1107	0	0	0	0	0	0
1108	0	0	0	0	0	0
1109	0	0	0	0	0	0
1110	0	0	0	0	0	0
1111	0	0	0	0	0	0
1112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 100 mg/kg

Study No. : R-1273

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2101	0	0	0	0	0	0
2102	0	0	0	0	0	0
2103	0	0	0	0	0	0
2104	0	0	0	0	0	0
2105	0	0	0	0	0	0
2106	0	0	0	0	0	0
2107	0	0	0	0	0	0
2108	0	0	0	0	0	0
2109	0	0	0	0	0	0
2110	0	0	0	0	0	0
2111	0	0	0	0	0	0
2112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 300 mg/kg

Study No. : R-1273

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	1	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3101	0	0	0	0	0	0
3102	0	0	0	0	0	0
3103	0	0	0	0	0	0
3104	0	0	0	0	0	0
3105	0	0	0	0	0	0
3106	0	0	0	0	0	0
3107	0	0	0	0	0	0
3108	0	0	0	0	0	0
3109	0	0	0	0	0	0
3110	0	0	0	0	0	0
3111	0	0	0	0	0	0
3112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

Study No. : R-1273

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
4101	0	0	0	0	0	0	0	0
4102	-1	0	0	0	0	0	0	0
4103	0	0	0	0	0	0	0	0
4104	0	0	0	0	0	0	0	0
4105	0	0	0	0	0	0	0	0
4106	0	0	0	0	0	0	0	0
4107	0	0	0	0	0	0	0	0
4108	0	0	0	0	0	0	0	0
4109	0	0	0	0	0	0	0	0
4110	0	0	0	0	0	0	0	0
4111	0	0	0	0	0	0	0	0
4112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4101	0	0	0	0	0	0
4102	0	0	0	0	0	-1
4103	0	0	0	0	0	0
4104	0	0	0	0	0	0
4105	0	0	0	0	0	0
4106	0	0	0	0	0	0
4107	0	0	0	0	0	0
4108	0	0	0	0	0	0
4109	0	0	0	0	0	0
4110	0	0	0	0	0	0
4111	0	0	0	0	0	0
4112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 before mating		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
1101	0	0	0	0	0
1102	0	0	0	0	0
1103	0	0	0	0	0
1104	0	0	0	0	0
1105	0	0	0	0	0
1106	0	0	0	0	0
1107	0	0	0	0	0
1108	0	0	0	0	0
1109	0	0	0	0	0
1110	0	0	0	0	0
1111	0	0	0	0	0
1112	0	0	0	0	0
n	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 before mating		Species : Rat			
	Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2109	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2101	0	0	0	0	0	0
2102	0	0	0	0	0	0
2103	0	0	0	0	0	0
2104	0	0	0	0	0	0
2105	0	0	0	0	0	0
2106	0	0	0	0	0	0
2107	0	0	0	0	0	0
2108	0	0	0	0	0	0
2109	0	0	0	0	0	0
2110	0	0	0	0	0	0
2111	0	0	0	0	0	0
2112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating
Dose : 4MBE 300 mg/kg

Study No. : R-1273

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3101	0	0	0	0	0	0
3102	0	0	0	0	0	0
3103	0	0	0	0	0	0
3104	0	0	0	0	0	0
3105	0	0	0	0	0	0
3106	0	0	0	0	0	0
3107	0	0	0	0	0	0
3108	0	0	0	0	0	0
3109	0	0	0	0	0	0
3110	0	0	0	0	0	0
3111	0	0	0	0	0	0
3112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

Study No. : R-1273

Animal No.	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
4101	0	0	0	0	0	0	0	0
4102	0	0	0	0	0	0	0	0
4103	0	0	0	0	0	0	0	0
4104	0	0	0	0	0	0	0	0
4105	0	0	0	0	0	0	0	0
4106	0	0	0	0	0	0	0	0
4107	0	0	0	0	0	0	0	0
4108	0	0	0	0	0	0	0	0
4109	0	0	0	0	0	0	0	0
4110	0	0	0	0	0	0	0	0
4111	0	0	0	0	0	0	0	0
4112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4101	0	0	0	0	0	0
4102	0	0	0	0	0	0
4103	0	0	0	0	0	0
4104	0	0	0	0	0	0
4105	0	0	0	0	0	0
4106	0	0	0	0	0	0
4107	0	0	0	0	0	0
4108	0	0	0	0	0	0
4109	0	0	0	0	0	0
4110	0	0	0	0	0	0
4111	0	0	0	0	0	0
4112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	Species : Rat							
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Species : Rat					
	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1101	0	0	0	0	0	0
1102	0	0	0	0	0	0
1103	0	0	0	0	0	0
1104	0	0	0	0	0	0
1105	0	0	0	0	0	0
1106	0	0	0	0	0	0
1107	0	0	0	0	0	0
1108	0	0	0	0	0	0
1109	0	0	0	0	0	0
1110	0	0	0	0	0	0
1111	0	0	0	0	0	0
1112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 gestation		Species : Rat			
	Generation : F0	Sex : Female	Day : 1	Dose : 4MBE 100 mg/kg				
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2101	0	0	0	0	0	0
2102	0	0	0	0	0	0
2103	0	0	0	0	0	0
2104	0	0	0	0	0	0
2105	0	0	0	0	0	0
2106	0	0	0	0	0	0
2107	0	0	0	0	0	0
2108	0	0	0	0	0	0
2110	0	0	0	0	0	0
2111	0	0	0	0	0	0
2112	0	0	0	0	0	0
n	11	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 gestation		Species : Rat				
Generation : F0	Sex : Female	Day : 1	Dose : 4MBE 300 mg/kg					
Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation	
Animal No.								
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling	
Animal No.						
3101	0	0	0	0	0	
3102	0	0	0	0	0	
3103	0	0	0	0	0	
3104	0	0	0	0	0	
3105	0	0	0	0	0	
3106	0	0	0	0	0	
3107	0	0	0	0	0	
3108	0	0	0	0	0	
3109	0	0	0	0	0	
3110	0	0	0	0	0	
3111	0	0	0	0	0	
3112	0	0	0	0	0	
n	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation							
	Generation : F0	Sex : Female	Day : 7	Period : F0 gestation Dose : 4MBE 0 mg/kg	Species : Rat			
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	In-the-hand observation					
	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1101	0	0	0	0	0	0
1102	0	0	0	0	0	0
1103	0	0	0	0	0	0
1104	0	0	0	0	0	0
1105	0	0	0	0	0	0
1106	0	0	0	0	0	0
1107	0	0	0	0	0	0
1108	0	0	0	0	0	0
1109	0	0	0	0	0	0
1110	0	0	0	0	0	0
1111	0	0	0	0	0	0
1112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 gestation		Species : Rat				
Generation : F0	Sex : Female	Day : 7	Dose : 4MBE 100 mg/kg					
Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation	
Animal No.								
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling	
Animal No.						
2101	0	0	0	0	0	
2102	0	0	0	0	0	
2103	0	0	0	0	0	
2104	0	0	0	0	0	
2105	0	0	0	0	0	
2106	0	0	0	0	0	
2107	0	0	0	0	0	
2108	0	0	0	0	0	
2110	0	0	0	0	0	
2111	0	0	0	0	0	
2112	0	0	0	0	0	
n	11	11	11	11	11	

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 gestation		Species : Rat			
	Generation : F0	Sex : Female	Day : 7	Dose : 4MBE 300 mg/kg				
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
3101	0	0	0	0	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 gestation		Species : Rat				
Generation : F0	Sex : Female	Day : 14	Dose : 4MBE 0 mg/kg					
Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation	
Animal No.								
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling	
Animal No.							
1101	0	0	0	0	0	0	
1102	0	0	0	0	0	0	
1103	0	0	0	0	0	0	
1104	0	0	0	0	0	0	
1105	0	0	0	0	0	0	
1106	0	0	0	0	0	0	
1107	0	0	0	0	0	0	
1108	0	0	0	0	0	0	
1109	0	0	0	0	0	0	
1110	0	0	0	0	0	0	
1111	0	0	0	0	0	0	
1112	0	0	0	0	0	0	
n	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 gestation		Species : Rat			
	Generation : F0	Sex : Female	Day : 14	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2101	0	0	0	0	0	0
2102	0	0	0	0	0	0
2103	0	0	0	0	0	0
2104	0	0	0	0	0	0
2105	0	0	0	0	0	0
2106	0	0	0	0	0	0
2107	0	0	0	0	0	0
2108	0	0	0	0	0	0
2110	0	0	0	0	0	0
2111	0	0	0	0	0	0
2112	0	0	0	0	0	0
n	11	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 gestation		Species : Rat				
Generation : F0	Sex : Female	Day : 14	Dose : 4MBE 300 mg/kg					
Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation	
Animal No.								
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling	
Animal No.						
3101	0	0	0	0	0	
3102	0	0	0	0	0	
3103	0	0	0	0	0	
3104	0	0	0	0	0	
3105	0	0	0	0	0	
3106	0	0	0	0	0	
3107	0	0	0	0	0	
3108	0	0	0	0	0	
3109	0	0	0	0	0	
3110	0	0	0	0	0	
3111	0	0	0	0	0	
3112	0	0	0	0	0	
n	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation							
	Generation : F0	Sex : Female	Day : 20	Period : F0 gestation Dose : 4MBE 0 mg/kg	Species : Rat			
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	In-the-hand observation					
	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1101	0	0	0	0	0	0
1102	0	0	0	0	0	0
1103	0	0	0	0	0	0
1104	0	0	0	0	0	0
1105	0	0	0	0	0	0
1106	0	0	0	0	0	0
1107	0	0	0	0	0	0
1108	0	0	0	0	0	0
1109	0	0	0	0	0	0
1110	0	0	0	0	0	0
1111	0	0	0	0	0	0
1112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : F0 gestation		Species : Rat			
	Generation : F0	Sex : Female	Day : 20	Dose : 4MBE 100 mg/kg				
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
2101	0	0	0	0	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	Species : Rat							
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Species : Rat					
	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3101	0	0	0	0	0	0
3102	0	0	0	0	0	0
3103	0	0	0	0	0	0
3104	0	0	0	0	0	0
3105	0	0	0	0	0	0
3106	0	0	0	0	0	0
3107	0	0	0	0	0	0
3108	0	0	0	0	0	0
3109	0	0	0	0	0	0
3110	0	0	0	0	0	0
3111	0	0	0	0	0	0
3112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation

Study No. : R-1273

Animal No.	Species : Rat							
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1101	0	0	0	0	0	0
1102	0	0	0	0	0	0
1103	0	0	0	0	0	0
1104	0	0	0	0	0	0
1105	0	0	0	0	0	0
1106	0	0	0	0	0	0
1107	0	0	0	0	0	0
1108	0	0	0	0	0	0
1109	0	0	0	0	0	0
1110	0	0	0	0	0	0
1111	0	0	0	0	0	0
1112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : F0 lactation		Species : Rat			
	Generation : F0	Sex : Female	Day : 6	Dose : 4MBE 100 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
2101	0	0	0	0	0	0
2102	0	0	0	0	0	0
2103	0	0	0	0	0	0
2104	0	0	0	0	0	0
2105	0	0	0	0	0	0
2106	0	0	0	0	0	0
2107	0	0	0	0	0	0
2108	0	0	0	0	0	0
2110	0	0	0	0	0	0
2111	0	0	0	0	0	0
2112	0	0	0	0	0	0
n	11	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
In-the-hand observation

Study No. : R-1273

Animal No.	Generation : F0	Sex : Female	Day : 6	Period : F0 lactation Dose : 4MBE 300 mg/kg	Species : Rat			
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
3101	0	0	0	0	0	0
3102	0	0	0	0	0	0
3103	0	0	0	0	0	0
3104	0	0	0	0	0	0
3105	0	0	0	0	0	0
3106	0	0	0	0	0	0
3107	0	0	0	0	0	0
3108	0	0	0	0	0	0
3109	0	0	0	0	0	0
3110	0	0	0	0	0	0
3111	0	0	0	0	0	0
3112	0	0	0	0	0	0
n	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : F0 lactation		Species : Rat			
	Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 0 mg/kg	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose				
1101	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
1101	0	0	0	0	0	0	0	0	0	0	0	0
1102	0	0	0	0	0	0	0	0	0	0	0	0
1103	0	0	0	0	0	0	0	0	0	0	0	0
1104	0	0	0	0	0	0	0	0	0	0	0	0
1105	0	0	0	0	0	0	0	0	0	0	0	0
1106	0	0	0	0	0	0	0	0	0	0	0	0
1107	0	0	0	0	0	0	0	0	0	0	0	0
1108	0	0	0	0	0	0	0	0	0	0	0	0
1109	0	0	0	0	0	0	0	0	0	0	0	0
1110	0	0	0	0	0	0	0	0	0	0	0	0
1111	0	0	0	0	0	0	0	0	0	0	0	0
1112	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : F0 lactation		Species : Rat				
Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 100 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
2101	0	0	0	0	0	0	0	0
2102	0	0	0	0	0	0	0	0
2103	0	0	0	0	0	0	0	0
2104	0	0	0	0	0	0	0	0
2105	0	0	0	0	0	0	0	0
2106	0	0	0	0	0	0	0	0
2107	0	0	0	0	0	0	0	0
2108	0	0	0	0	0	0	0	0
2110	0	0	0	0	0	0	0	0
2111	0	0	0	0	0	0	0	0
2112	0	0	0	0	0	0	0	0
n	11	11	11	11	11	11	11	11

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
2101	0	0	0	0	0
2102	0	0	0	0	0
2103	0	0	0	0	0
2104	0	0	0	0	0
2105	0	0	0	0	0
2106	0	0	0	0	0
2107	0	0	0	0	0
2108	0	0	0	0	0
2110	0	0	0	0	0
2111	0	0	0	0	0
2112	0	0	0	0	0
n	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : F0 lactation		Species : Rat			
	Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 300 mg/kg				
	Ease of removal from cage	Fur condition	Skin	Secretions-Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
3101	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12

Animal No.	Piloerection		Pupil size		Salivation		Abnormal respiration		Vocalization		Reactivity to handling	
3101	0	0	0	0	0	0	0	0	0	0	0	0
3102	0	0	0	0	0	0	0	0	0	0	0	0
3103	0	0	0	0	0	0	0	0	0	0	0	0
3104	0	0	0	0	0	0	0	0	0	0	0	0
3105	0	0	0	0	0	0	0	0	0	0	0	0
3106	0	0	0	0	0	0	0	0	0	0	0	0
3107	0	0	0	0	0	0	0	0	0	0	0	0
3108	0	0	0	0	0	0	0	0	0	0	0	0
3109	0	0	0	0	0	0	0	0	0	0	0	0
3110	0	0	0	0	0	0	0	0	0	0	0	0
3111	0	0	0	0	0	0	0	0	0	0	0	0
3112	0	0	0	0	0	0	0	0	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5101	0	0	0	0	0
5102	0	0	0	0	0
5103	0	0	0	0	0
5104	0	0	0	0	0
5105	0	0	0	0	0
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : Administration (non-mating group)		Species : Rat			
	Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes
	Ease of remov- al from cage	Fur condition	Skin					Lacrimation
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6101	0	0	0	0	0	0
6102	0	0	0	0	0	0
6103	0	0	0	0	0	0
6104	0	0	0	0	0	0
6105	0	0	0	0	0	0
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5101	0	0	0	0	0
5102	0	0	0	0	0
5103	0	0	0	0	0
5104	0	0	0	0	0
5105	0	0	0	0	0
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
6101	0	0	0	0	0
6102	0	0	0	0	0
6103	0	0	0	0	0
6104	0	0	0	0	0
6105	0	0	0	0	0
6106	0	0	0	0	0
6107	0	0	0	0	0
6108	0	0	0	0	0
6109	0	0	0	0	0
6110	0	0	0	0	0
n	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 3	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5101	0	0	0	0	0
5102	0	0	0	0	0
5103	0	0	0	0	0
5104	0	0	0	0	0
5105	0	0	0	0	0
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 3	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6101	0	0	0	0	0	0
6102	0	0	0	0	0	0
6103	0	0	0	0	0	0
6104	0	0	0	0	0	0
6105	0	0	0	0	0	0
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5101	0	0	0	0	0
5102	0	0	0	0	0
5103	0	0	0	0	0
5104	0	0	0	0	0
5105	0	0	0	0	0
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6101	0	0	0	0	0	0
6102	0	0	0	0	0	0
6103	0	0	0	0	0	0
6104	0	0	0	0	0	0
6105	0	0	0	0	0	0
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Animal No.	In-the-hand observation		Period : Administration (non-mating group)		Species : Rat			
	Generation : F0	Sex : Female	Week : 5	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes
	Ease of remov- al from cage	Fur condition	Skin					Lacrimation
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
5101	0	0	0	0	0	0
5102	0	0	0	0	0	0
5103	0	0	0	0	0	0
5104	0	0	0	0	0	0
5105	0	0	0	0	0	0
5106	0	0	0	0	0	0
5107	0	0	0	0	0	0
5108	0	0	0	0	0	0
5109	0	0	0	0	0	0
5110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation		Period : Administration (non-mating group)		Species : Rat			
	Generation : F0	Sex : Female	Week : 5	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes
	Ease of remov- al from cage	Fur condition	Skin					Lacrimation
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6101	0	0	0	0	0	0
6102	0	0	0	0	0	0
6103	0	0	0	0	0	0
6104	0	0	0	0	0	0
6105	0	0	0	0	0	0
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
5101	0	0	0	0	0	0	0	0
5102	0	0	0	0	0	0	0	0
5103	0	0	0	0	0	0	0	0
5104	0	0	0	0	0	0	0	0
5105	0	0	0	0	0	0	0	0
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
5101	0	0	0	0	0	0
5102	0	0	0	0	0	0
5103	0	0	0	0	0	0
5104	0	0	0	0	0	0
5105	0	0	0	0	0	0
5106	0	0	0	0	0	0
5107	0	0	0	0	0	0
5108	0	0	0	0	0	0
5109	0	0	0	0	0	0
5110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Appendix 2 - 132

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

In-the-hand observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
6101	0	0	0	0	0	0	0	0
6102	0	0	0	0	0	0	0	0
6103	0	0	0	0	0	0	0	0
6104	0	0	0	0	0	0	0	0
6105	0	0	0	0	0	0	0	0
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	10	10	10	10	10	10	10	10

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6101	0	0	0	0	0	0
6102	0	0	0	0	0	0
6103	0	0	0	0	0	0
6104	0	0	0	0	0	0
6105	0	0	0	0	0	0
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery		Species : Rat				
Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
1008	0	0	0	0	0
1009	0	0	0	0	0
1010	0	0	0	0	0
1011	0	0	0	0	0
1012	0	0	0	0	0
n	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery		Species : Rat				
Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4008	0	0	0	0	0	0
4009	0	0	0	0	0	0
4010	0	0	0	0	0	0
4011	0	0	0	0	0	0
4012	0	0	0	0	0	0
n	5	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery		Species : Rat				
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
1008	0	0	0	0	0	0	0	0
1009	0	0	0	0	0	0	0	0
1010	0	0	0	0	0	0	0	0
1011	0	0	0	0	0	0	0	0
1012	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
1008	0	0	0	0	0	0
1009	0	0	0	0	0	0
1010	0	0	0	0	0	0
1011	0	0	0	0	0	0
1012	0	0	0	0	0	0
n	5	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery		Species : Rat				
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Animal No.	Ease of remov- al from cage	Fur condition	Skin					
4008	0	0	0	0	0	0	0	0
4009	0	0	0	0	0	0	0	0
4010	0	0	0	0	0	0	0	0
4011	0	0	0	0	0	0	0	0
4012	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
4008	0	0	0	0	0	0
4009	0	0	0	0	0	0
4010	0	0	0	0	0	0
4011	0	0	0	0	0	0
4012	0	0	0	0	0	0
n	5	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Animal No.	In-the-hand observation			Period : Recovery (non-mating group)			Species : Rat		
	Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
	Ease of remov- al from cage	Fur condition	Skin						
6106	0	0	0		0	0	0	0	0
6107	0	0	0		0	0	0	0	0
6108	0	0	0		0	0	0	0	0
6109	0	0	0		0	0	0	0	0
6110	0	0	0		0	0	0	0	0
n	5	5	5		5	5	5	5	5

Animal No.	Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
6106	0	0	0	0	0	0
6107	0	0	0	0	0	0
6108	0	0	0	0	0	0
6109	0	0	0	0	0	0
6110	0	0	0	0	0	0
n	5	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of removal from cage	Fur condition	Skin						
Animal No.								
5106	0	0	0	0	0	0	0	0
5107	0	0	0	0	0	0	0	0
5108	0	0	0	0	0	0	0	0
5109	0	0	0	0	0	0	0	0
5110	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
5106	0	0	0	0	0
5107	0	0	0	0	0
5108	0	0	0	0	0
5109	0	0	0	0	0
5110	0	0	0	0	0
n	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

In-the-hand observation		Period : Recovery (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg	Secretions- Eye, Nose	Exophthalmos	Palpebral closure	Mucosal membranes	Lacrimation
Ease of remov- al from cage	Fur condition	Skin						
Animal No.								
6106	0	0	0	0	0	0	0	0
6107	0	0	0	0	0	0	0	0
6108	0	0	0	0	0	0	0	0
6109	0	0	0	0	0	0	0	0
6110	0	0	0	0	0	0	0	0
n	5	5	5	5	5	5	5	5

Piloerection	Pupil size	Salivation	Abnormal respiration	Vocalization	Reactivity to handling
Animal No.					
6106	0	0	0	0	0
6107	0	0	0	0	0
6108	0	0	0	0	0
6109	0	0	0	0	0
6110	0	0	0	0	0
n	5	5	5	5	5

Ease of removal from cage) -1: Atypically docile, 0: Easy, 1: Some resistance/avoidance, 2: Difficult, 3: Very difficult

Fur condition) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Skin) 0: Normal, 1: Slight, 2: Moderate, 3: Severe

Secretions-Eye, Nose) 0: Absent, 1: Present

Exophthalmos) 0: Absent, 1: Present

Palpebral closure) 0: Normal, 1: Slightly closed, 2: Half closed, 3: Completely closed

Mucosal membranes) 0: Normal, 1: Slight, 2: Moderate, 3: Marked

Lacrimation) 0: Absent, 1: Present

Piloerection) 0: Absent, 1: Present

Pupil size) -1: Miosis, 0: Normal, 1: Half opened pupil, 2: Mydriasis

Salivation) 0: None, 1: Slight, 2: Moderate, 3: Marked

Abnormal respiration) 0: None, 1: Slight, 2: Moderate, 3: Severe

Vocalization) 0: None, 1: Soft, 2: Moderate, 3: Loud/aggressive

Reactivity to handling) -1: Atypically docile, 0: Easy, 1: Slightly awkward, 2: Awkward, 3: Very Awkward

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Dose : 4MBE 0 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Species : Rat								
Animal No.								
1001	0	0	0	0	0	N	0	0
1002	0	0	0	0	0	N	0	0
1003	0	0	0	0	0	N	0	0
1004	0	0	0	0	0	N	0	0
1005	0	0	0	0	0	N	0	0
1006	0	0	0	0	0	N	0	0
1007	0	0	0	0	0	N	0	0
1008	0	0	0	0	0	N	0	0
1009	0	0	0	0	0	N	0	0
1010	0	0	0	0	0	N	0	0
1011	0	0	0	0	0	N	0	0
1012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	1	0	
1002	5	0	
1003	2	0	
1004	5	0	
1005	2	0	
1006	7	0	
1007	3	0	
1008	2	0	
1009	2	0	
1010	3	0	
1011	4	0	
1012	0	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Dose : 4MBE 100 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Species : Rat								
Animal No.								
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	0
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	0
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Dose : 4MBE 100 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
2001	3	0
2002	6	0
2003	3	0
2004	2	0
2005	3	0
2006	6	0
2007	2	0
2008	2	0
2009	3	0
2010	3	0
2011	0	0
2012	3	0
n	12	12
Mean	3	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 1 Period : F0 before mating
Dose : 4MBE 300 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
3001	0	0	0	0	0	N	0	1
3002	0	0	0	0	0	N	0	0
3003	0	0	0	0	0	N	0	0
3004	0	0	0	0	0	N	0	0
3005	0	0	0	0	0	N	0	0
3006	0	0	0	0	0	N	0	0
3007	0	0	0	0	0	N	0	0
3008	0	0	0	0	0	N	0	0
3009	0	0	0	0	0	N	0	0
3010	0	0	0	0	0	N	0	0
3011	0	0	0	0	0	N	0	0
3012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Dose : 4MBE 300 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
3001	0	0
3002	1	0
3003	1	1
3004	2	1
3005	4	0
3006	4	0
3007	2	0
3008	2	0
3009	7	0
3010	5	0
3011	0	0
3012	3	0
n	12	12
Mean	3	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 before mating		Dose : 4MBE 1000 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 1							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
4001	0	0	0	0	0	N	0	1	
4002	0	0	0	0	0	N	0	0	
4003	0	0	0	0	0	N	0	0	
4004	0	0	0	0	0	N	0	0	
4005	0	0	0	0	0	N	0	0	
4006	0	0	0	0	0	N	0	0	
4007	0	0	0	0	0	N	0	0	
4008	0	0	0	0	0	N	0	0	
4009	0	0	0	0	0	N	0	0	
4010	0	0	0	0	0	N	0	0	
4011	0	0	0	0	0	N	0	0	
4012	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 1

Dose : 4MBE 1000 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
4001	2	0
4002	2	0
4003	2	0
4004	2	0
4005	1	0
4006	7	0
4007	4	1
4008	3	0
4009	0	0
4010	3	0
4011	1	0
4012	2	0
n	12	12
Mean	2	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 before mating		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 2							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1001	0	0	0	0	0	N	0	0	
1002	0	0	0	0	0	N	0	0	
1003	0	0	0	0	0	N	0	0	
1004	0	0	0	0	0	N	0	0	
1005	0	0	0	0	0	N	0	0	
1006	0	0	0	0	0	N	0	0	
1007	0	0	0	0	0	N	0	0	
1008	0	0	0	0	0	N	0	0	
1009	0	0	0	0	0	N	0	0	
1010	0	0	0	0	0	N	0	0	
1011	0	0	0	0	0	N	0	0	
1012	0	0	0	0	0	N	0	1	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Dose : 4MBE 0 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	0	0	
1002	3	0	
1003	2	0	
1004	3	0	
1005	3	0	
1006	7	0	
1007	0	0	
1008	5	0	
1009	2	0	
1010	6	0	
1011	4	0	
1012	3	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Dose : 4MBE 100 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	0
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	0
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Male

Week : 2

Dose : 4MBE 100 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
2001	2	0
2002	2	0
2003	2	0
2004	1	0
2005	1	0
2006	4	0
2007	5	0
2008	4	0
2009	4	0
2010	2	0
2011	2	0
2012	5	0
n	12	12
Mean	3	0
S.D.	1	0

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Dose : 4MBE 300 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
3001	0	0	0	0	0	N	0	1
3002	0	0	0	0	0	N	0	1
3003	0	0	0	0	0	N	0	0
3004	0	0	0	0	0	N	0	0
3005	0	0	0	0	0	N	0	0
3006	0	0	0	0	0	N	0	0
3007	0	0	0	0	0	N	0	0
3008	0	0	0	0	0	N	0	0
3009	0	0	0	0	0	N	0	0
3010	0	0	0	0	0	N	0	0
3011	0	0	0	0	0	N	0	0
3012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Dose : 4MBE 300 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
3001	1	0
3002	3	0
3003	0	0
3004	1	0
3005	4	0
3006	1	1
3007	1	0
3008	3	0
3009	3	0
3010	1	0
3011	1	0
3012	4	0
n	12	12
Mean	2	0
S.D.	1	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 before mating		Dose : 4MBE 1000 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 2							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
4001	0	0	0	0	0	N	0	0	
4002	0	0	0	0	0	N	0	1	
4003	0	0	0	0	0	N	0	0	
4004	0	0	0	0	0	N	0	0	
4005	0	0	0	0	0	N	0	0	
4006	0	0	0	0	0	N	0	0	
4007	0	0	0	0	0	N	0	0	
4008	0	0	0	0	0	N	0	0	
4009	0	0	0	0	0	N	0	0	
4010	0	0	0	0	0	N	0	0	
4011	0	0	0	0	0	N	0	0	
4012	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 2 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
4001	4	0
4002	2	0
4003	5	0
4004	4	0
4005	1	0
4006	2	0
4007	6	0
4008	2	0
4009	1	1
4010	4	0
4011	1	0
4012	1	0
n	12	12
Mean	3	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 3							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1001	0	0	0	0	0	N	0	0	
1002	0	0	0	0	0	N	0	0	
1003	0	0	0	0	0	N	0	0	
1004	0	0	0	0	0	N	0	0	
1005	0	0	0	0	0	N	0	0	
1006	0	0	0	0	0	N	0	0	
1007	0	0	0	0	0	N	0	0	
1008	0	0	0	0	0	N	0	0	
1009	0	0	0	0	0	N	0	0	
1010	0	0	0	0	0	N	0	0	
1011	0	0	0	0	0	N	0	0	
1012	0	0	0	0	0	N	0	1	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 3 Period : F0 mating
Dose : 4MBE 0 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	1	0	
1002	4	0	
1003	5	0	
1004	1	0	
1005	1	0	
1006	4	0	
1007	2	0	
1008	4	0	
1009	2	0	
1010	5	0	
1011	6	0	
1012	3	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Open field observation							
	Generation : F0	Sex : Male	Week : 3	Period : F0 mating	Dose : 4MBE 100 mg/kg	Species : Rat		
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	0
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	0
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2001	2	0	
2002	3	0	
2003	1	0	
2004	2	0	
2005	3	0	
2006	4	0	
2007	5	0	
2008	3	0	
2009	1	0	
2010	2	0	
2011	0	0	
2012	2	0	
n	12	12	
Mean	2	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 3							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3001	0	0	0	0	0	N	0	1	
3002	0	0	0	0	0	N	0	1	
3003	0	0	0	0	0	N	0	0	
3004	0	0	0	0	0	N	0	0	
3005	0	0	0	0	0	N	0	0	
3006	0	0	0	0	0	N	0	0	
3007	0	0	0	0	0	N	0	0	
3008	0	0	0	0	0	N	0	0	
3009	0	0	0	0	0	N	0	0	
3010	0	0	0	0	0	N	0	0	
3011	0	0	0	0	0	N	0	0	
3012	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3001	3	0	
3002	4	0	
3003	0	0	
3004	1	1	
3005	4	0	
3006	3	0	
3007	2	0	
3008	3	0	
3009	2	0	
3010	3	0	
3011	1	0	
3012	1	0	
n	12	12	
Mean	2	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 3	Dose : 4MBE 1000 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
4001	0	0	0	0	0	N	0	0
4002	0	0	0	0	0	N	0	0
4003	0	0	0	0	0	N	0	0
4004	0	0	0	0	0	N	0	0
4005	0	0	0	0	0	N	0	0
4006	0	0	0	0	0	N	0	0
4007	0	0	0	0	0	N	0	0
4008	0	0	0	0	0	N	0	0
4009	0	0	0	0	0	N	0	0
4010	0	0	0	0	0	N	0	0
4011	0	0	0	0	0	N	0	0
4012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Animal No.	Rearing	Defecation count
4001	1	0
4002	3	0
4003	4	0
4004	4	0
4005	4	0
4006	2	0
4007	5	3
4008	5	0
4009	6	0
4010	4	0
4011	3	0
4012	0	0
n	12	12
Mean	3	0
S.D.	2	1

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 0 mg/kg	Gait	Posture	Grooming	Urination
	Arousal	Convulsion	Abnormal behavior	Stereotypy				
1001	0	0	0	0	0	N	0	1
1002	0	0	0	0	0	N	0	0
1003	0	0	0	0	0	N	0	0
1004	0	0	0	0	0	N	0	0
1005	0	0	0	0	0	N	0	0
1006	0	0	0	0	0	N	0	0
1007	0	0	0	0	0	N	0	0
1008	0	0	0	0	0	N	0	1
1009	0	0	0	0	0	N	0	0
1010	0	0	0	0	0	N	0	0
1011	0	0	0	0	0	N	0	0
1012	0	0	0	0	0	N	0	1
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	0	0	
1002	0	0	
1003	3	0	
1004	3	0	
1005	2	0	
1006	5	0	
1007	2	0	
1008	4	0	
1009	4	0	
1010	6	0	
1011	5	0	
1012	2	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 100 mg/kg	Gait	Posture	Grooming	Urination
	Arousal	Convulsion	Abnormal behavior	Stereotypy				
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	0
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	0
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2001	2	0	
2002	3	0	
2003	4	0	
2004	5	0	
2005	6	0	
2006	5	0	
2007	3	0	
2008	2	0	
2009	2	0	
2010	4	0	
2011	0	0	
2012	2	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 300 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
3001	0	0	0	0	0	N	0	0
3002	0	0	0	0	0	N	0	0
3003	0	0	0	0	0	N	0	0
3004	0	0	0	0	0	N	0	0
3005	0	0	0	0	0	N	0	0
3006	0	0	0	0	0	N	0	0
3007	0	0	0	0	0	N	0	0
3008	0	0	0	0	0	N	0	0
3009	0	0	0	0	0	N	0	0
3010	0	0	0	0	0	N	0	0
3011	0	0	0	0	0	N	0	0
3012	0	0	0	0	0	N	0	1
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3001	3	0	
3002	4	0	
3003	0	0	
3004	3	0	
3005	2	0	
3006	1	0	
3007	1	0	
3008	3	0	
3009	3	0	
3010	5	0	
3011	1	0	
3012	9	1	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 4	Dose : 4MBE 1000 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
4001	0	0	0	0	0	N	0	0
4002	0	0	0	0	0	N	0	0
4003	0	0	0	0	0	N	0	0
4004	0	0	0	0	0	N	0	0
4005	0	0	0	0	0	N	0	0
4006	0	0	0	0	0	N	0	0
4007	0	0	0	0	0	N	0	1
4008	0	0	0	0	0	N	0	0
4009	0	0	0	0	0	N	0	1
4010	0	0	0	0	0	N	0	0
4011	0	0	0	0	0	N	0	1
4012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 mating

Generation : F0

Sex : Male

Week : 4

Dose : 4MBE 1000 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
4001	1	0
4002	3	0
4003	6	0
4004	1	0
4005	1	0
4006	1	0
4007	3	0
4008	5	0
4009	6	1
4010	6	0
4011	2	0
4012	0	0
n	12	12
Mean	3	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 5							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1001	0	0	0	0	0	N	0	0	
1002	0	0	0	0	0	N	0	0	
1003	0	0	0	0	0	N	0	0	
1004	0	0	0	0	0	N	0	0	
1005	0	0	0	0	0	N	0	0	
1006	0	0	0	0	0	N	0	0	
1007	0	0	0	0	0	N	0	1	
1008	0	0	0	0	0	N	0	0	
1009	0	0	0	0	0	N	0	0	
1010	0	0	0	0	0	N	0	0	
1011	0	0	0	0	0	N	0	0	
1012	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 5 Period : F0 mating
Dose : 4MBE 0 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	2	0	
1002	3	0	
1003	2	0	
1004	1	0	
1005	3	0	
1006	6	0	
1007	0	0	
1008	6	0	
1009	4	0	
1010	5	0	
1011	6	0	
1012	4	0	
n	12	12	
Mean	4	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Open field observation							
	Generation : F0	Sex : Male	Week : 5	Period : F0 mating	Dose : 4MBE 100 mg/kg	Species : Rat		
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	1
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	0
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2001	5	0	
2002	2	0	
2003	7	0	
2004	6	0	
2005	8	0	
2006	6	0	
2007	5	0	
2008	3	0	
2009	2	0	
2010	1	0	
2011	0	0	
2012	3	0	
n	12	12	
Mean	4	0	
S.D.	3	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 5							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3001	0	0	0	0	0	N	0	0	
3002	0	0	0	0	0	N	0	0	
3003	0	0	0	0	0	N	0	1	
3004	0	0	0	0	0	N	0	0	
3005	0	0	0	0	0	N	0	0	
3006	0	0	0	0	0	N	0	0	
3007	0	0	0	0	0	N	0	0	
3008	0	0	0	0	0	N	0	0	
3009	0	0	0	0	0	N	0	0	
3010	0	0	0	0	0	N	0	0	
3011	0	0	0	0	0	N	0	0	
3012	0	0	0	0	0	N	0	1	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Male Week : 5 Period : F0 mating
Dose : 4MBE 300 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
3001	1	0
3002	1	0
3003	2	0
3004	5	0
3005	6	0
3006	3	0
3007	1	0
3008	3	0
3009	6	0
3010	2	0
3011	0	0
3012	3	0
n	12	12
Mean	3	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 5	Dose : 4MBE 1000 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
4001	0	0	0	0	0	N	0	0
4002	0	0	0	0	0	N	0	0
4003	0	0	0	0	0	N	0	0
4004	0	0	0	0	0	N	0	0
4005	0	0	0	0	0	N	0	0
4006	0	0	0	0	0	N	0	0
4007	0	0	0	0	0	N	0	0
4008	0	0	0	0	0	N	0	0
4009	0	0	0	0	0	N	0	0
4010	0	0	0	0	0	N	0	0
4011	0	0	0	0	0	N	0	0
4012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Animal No.	Rearing	Defecation count
4001	3	0
4002	3	0
4003	7	0
4004	3	0
4005	3	0
4006	4	0
4007	1	0
4008	6	0
4009	4	0
4010	7	0
4011	5	0
4012	6	0
n	12	12
Mean	4	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Species : Rat							
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
1001	0	0	0	0	0	N	0	0
1002	0	0	0	0	0	N	0	0
1003	0	0	0	0	0	N	0	0
1004	0	0	0	0	0	N	0	0
1005	0	0	0	0	0	N	0	0
1006	0	0	0	0	0	N	0	0
1007	0	0	0	0	0	N	0	0
1008	0	0	0	0	0	N	0	1
1009	0	0	0	0	0	N	0	0
1010	0	0	0	0	0	N	0	0
1011	0	0	0	0	0	N	0	0
1012	0	0	0	0	0	N	0	1
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1001	3	0	
1002	3	0	
1003	2	0	
1004	3	0	
1005	6	0	
1006	4	0	
1007	1	0	
1008	8	0	
1009	7	0	
1010	7	0	
1011	6	0	
1012	6	0	
n	12	12	
Mean	5	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 mating		Species : Rat			
	Generation : F0	Sex : Male	Week : 6	Dose : 4MBE 100 mg/kg	Gait	Posture	Grooming	Urination
	Arousal	Convulsion	Abnormal behavior	Stereotypy				
2001	0	0	0	0	0	N	0	0
2002	0	0	0	0	0	N	0	0
2003	0	0	0	0	0	N	0	0
2004	0	0	0	0	0	N	0	0
2005	0	0	0	0	0	N	0	1
2006	0	0	0	0	0	N	0	0
2007	0	0	0	0	0	N	0	0
2008	0	0	0	0	0	N	0	1
2009	0	0	0	0	0	N	0	0
2010	0	0	0	0	0	N	0	0
2011	0	0	0	0	0	N	0	0
2012	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2001	4	0	
2002	3	0	
2003	5	0	
2004	8	0	
2005	7	0	
2006	3	0	
2007	6	0	
2008	5	0	
2009	2	0	
2010	5	0	
2011	0	0	
2012	7	0	
n	12	12	
Mean	5	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 6							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3001	0	0	0	0	0	N	0	0	0
3002	0	0	0	0	0	N	0	0	0
3003	0	0	0	0	0	N	0	0	0
3004	0	0	0	0	0	N	0	1	1
3005	0	0	0	0	0	N	0	0	0
3006	0	0	0	0	0	N	0	0	0
3007	0	0	0	0	0	N	0	0	0
3008	0	0	0	0	0	N	0	0	0
3009	0	0	0	0	0	N	0	0	0
3010	0	0	0	0	0	N	0	0	0
3011	0	0	0	0	0	N	0	0	0
3012	0	0	0	0	0	N	0	0	0
n	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3001	2	0	
3002	3	0	
3003	1	0	
3004	4	0	
3005	6	0	
3006	6	0	
3007	3	0	
3008	7	0	
3009	3	0	
3010	3	0	
3011	1	0	
3012	6	0	
n	12	12	
Mean	4	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 mating		Dose : 4MBE 1000 mg/kg		Species : Rat			
Generation : F0	Sex : Male	Week : 6							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
4001	0	0	0	0	0	N	0	0	
4002	0	0	0	0	0	N	0	0	
4003	0	0	0	0	0	N	0	0	
4004	0	0	0	0	0	N	0	0	
4005	0	0	0	0	0	N	0	0	
4006	0	0	0	0	0	N	0	0	
4007	0	0	0	0	0	N	0	0	
4008	0	0	0	0	0	N	0	0	
4009	0	0	0	0	0	N	0	0	
4010	0	0	0	0	0	N	0	0	
4011	0	0	0	0	0	N	0	0	
4012	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Animal No.	Rearing	Defecation count
4001	4	0
4002	6	0
4003	3	0
4004	3	0
4005	3	0
4006	7	0
4007	3	0
4008	6	0
4009	6	2
4010	4	0
4011	5	0
4012	5	0
n	12	12
Mean	5	0
S.D.	1	1

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 before mating		Species : Rat				
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
1101	0	0	0	0	N	0	0	
1102	0	0	0	0	N	0	0	
1103	0	0	0	0	N	0	0	
1104	0	0	0	0	N	0	0	
1105	0	0	0	0	N	0	0	
1106	0	0	0	0	N	0	0	
1107	0	0	0	0	N	0	0	
1108	0	0	0	0	N	0	0	
1109	0	0	0	0	N	0	0	
1110	0	0	0	0	N	0	0	
1111	0	0	0	0	N	0	0	
1112	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 0 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
1101	7	0
1102	9	0
1103	9	0
1104	4	0
1105	7	0
1106	3	0
1107	4	0
1108	6	0
1109	3	0
1110	5	0
1111	7	0
1112	8	0
n	12	12
Mean	6	0
S.D.	2	0

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 100 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
2101	0	0	0	0	0	N	0	0
2102	0	0	0	0	0	N	0	0
2103	0	0	0	0	0	N	0	0
2104	0	0	0	0	0	N	0	0
2105	0	0	0	0	0	N	0	0
2106	0	0	0	0	0	N	0	0
2107	0	0	0	0	0	N	0	0
2108	0	0	0	0	0	N	0	0
2109	0	0	0	0	0	N	0	0
2110	0	0	0	0	0	N	0	0
2111	0	0	0	0	0	N	0	0
2112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 1

Dose : 4MBE 100 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
2101	6	0
2102	11	0
2103	9	0
2104	6	0
2105	7	0
2106	2	0
2107	4	0
2108	7	0
2109	4	0
2110	4	0
2111	5	0
2112	8	0
n	12	12
Mean	6	0
S.D.	3	0

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 300 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
3101	0	0	0	0	0	N	0	0
3102	0	0	0	0	0	N	0	0
3103	0	0	0	0	0	N	0	0
3104	0	0	0	0	0	N	0	0
3105	0	0	0	0	0	N	0	0
3106	0	0	0	0	0	N	0	0
3107	0	0	0	0	0	N	0	0
3108	0	0	0	0	0	N	0	0
3109	0	0	0	0	0	N	0	0
3110	0	0	0	0	0	N	0	0
3111	0	0	0	0	0	N	0	0
3112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 1

Dose : 4MBE 300 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
3101	6	0
3102	4	0
3103	8	0
3104	5	0
3105	1	0
3106	4	0
3107	7	0
3108	4	0
3109	6	0
3110	9	0
3111	5	0
3112	2	0
n	12	12
Mean	5	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Species : Rat								
Animal No.								
4101	0	0	0	0	0	N	0	0
4102	0	0	0	0	1	F	0	0
4103	0	0	0	0	0	N	0	0
4104	0	0	0	0	0	N	0	0
4105	0	0	0	0	0	N	0	0
4106	0	0	0	0	0	N	0	0
4107	0	0	0	0	0	N	0	0
4108	0	0	0	0	0	N	0	0
4109	0	0	0	0	0	N	0	0
4110	0	0	0	0	0	N	0	0
4111	0	0	0	0	0	N	0	0
4112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : F0 before mating
Dose : 4MBE 1000 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
4101	3	0
4102	0	0
4103	3	0
4104	4	0
4105	4	0
4106	5	0
4107	4	0
4108	0	0
4109	0	0
4110	1	0
4111	1	0
4112	1	0
n	12	12
Mean	2	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating
Dose : 4MBE 0 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Species : Rat								
Animal No.								
1101	0	0	0	0	0	N	0	0
1102	0	0	0	0	0	N	0	0
1103	0	0	0	0	0	N	0	0
1104	0	0	0	0	0	N	0	0
1105	0	0	0	0	0	N	0	0
1106	0	0	0	0	0	N	0	0
1107	0	0	0	0	0	N	0	0
1108	0	0	0	0	0	N	0	0
1109	0	0	0	0	0	N	0	0
1110	0	0	0	0	0	N	0	0
1111	0	0	0	0	0	N	0	0
1112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating
Dose : 4MBE 0 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
1101	10	0
1102	7	0
1103	14	0
1104	5	0
1105	5	0
1106	5	0
1107	5	0
1108	8	0
1109	4	0
1110	10	0
1111	9	0
1112	7	0
n	12	12
Mean	7	0
S.D.	3	0

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : F0 before mating		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Week : 2							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	0	N	0	0	0
2102	0	0	0	0	0	N	0	0	0
2103	0	0	0	0	0	N	0	0	0
2104	0	0	0	0	0	N	0	0	0
2105	0	0	0	0	0	N	0	0	0
2106	0	0	0	0	0	N	0	0	0
2107	0	0	0	0	0	N	0	0	0
2108	0	0	0	0	0	N	0	0	0
2109	0	0	0	0	0	N	0	0	0
2110	0	0	0	0	0	N	0	0	0
2111	0	0	0	0	0	N	0	0	0
2112	0	0	0	0	0	N	0	0	0
n	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation

Period : F0 before mating

Generation : F0

Sex : Female

Week : 2

Dose : 4MBE 100 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
2101	7	0
2102	14	0
2103	9	0
2104	9	0
2105	8	0
2106	2	0
2107	6	0
2108	8	0
2109	9	0
2110	5	0
2111	6	0
2112	7	0
n	12	12
Mean	8	0
S.D.	3	0

4MBE : Benzenemethanol, 4-methyl-

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
3101	0	0	0	0	0	N	0	0
3102	0	0	0	0	0	N	0	0
3103	0	0	0	0	0	N	0	0
3104	0	0	0	0	0	N	0	0
3105	0	0	0	0	0	N	0	0
3106	0	0	0	0	0	N	0	0
3107	0	0	0	0	0	N	0	0
3108	0	0	0	0	0	N	0	0
3109	0	0	0	0	0	N	0	0
3110	0	0	0	0	0	N	0	0
3111	0	0	0	0	0	N	0	0
3112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : F0 before mating
Dose : 4MBE 300 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	8	0	
3102	6	0	
3103	11	0	
3104	5	0	
3105	2	0	
3106	6	0	
3107	6	0	
3108	7	0	
3109	11	0	
3110	6	0	
3111	5	0	
3112	6	0	
n	12	12	
Mean	7	0	
S.D.	3	0	

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : F0 before mating		Species : Rat			
	Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
4101	0	0	0	0	0	N	0	0
4102	0	0	0	0	0	N	0	0
4103	0	0	0	0	0	N	0	0
4104	0	0	0	0	0	N	0	0
4105	0	0	0	0	0	N	0	0
4106	0	0	0	0	0	N	0	0
4107	0	0	0	0	0	N	0	0
4108	0	0	0	0	0	N	0	0
4109	0	0	0	0	0	N	0	0
4110	0	0	0	0	0	N	0	0
4111	0	0	0	0	0	N	0	0
4112	0	0	0	0	0	N	0	0
n	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation		Period : F0 before mating		Species : Rat
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg	
Animal No.	Rearing	Defecation count		
4101	2	0		
4102	0	0		
4103	3	0		
4104	1	0		
4105	1	0		
4106	0	0		
4107	4	0		
4108	2	0		
4109	1	0		
4110	2	0		
4111	0	0		
4112	0	0		
n	12	12		
Mean	1	0		
S.D.	1	0		

4MBE : Benzenemethanol, 4-methyl-

Maternal reproductive developmental toxicity screening test in rats											
Open field observation				Period : F0 gestation							
Generation : F0	Sex : Female	Day : 1	Dose : 4MBE 0 mg/kg	Species : Rat							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination				
Animal No.											
1101	0	0	0	0	0	N	0	0			
1102	0	0	0	0	0	N	0	0			
1103	0	0	0	0	0	N	0	0			
1104	0	0	0	0	0	N	0	0			
1105	0	0	0	0	0	N	0	0			
1106	0	0	0	0	0	N	0	0			
1107	0	0	0	0	0	N	0	0			
1108	0	0	0	0	0	N	0	0			
1109	0	0	0	0	0	N	0	0			
1110	0	0	0	0	0	N	0	0			
1111	0	0	0	0	0	N	0	0			
1112	0	0	0	0	0	N	0	0			
n	12	12	12	12	12	12	12	12	12		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1101	6	0	
1102	5	0	
1103	8	0	
1104	2	0	
1105	6	0	
1106	4	0	
1107	2	0	
1108	9	0	
1109	5	0	
1110	6	0	
1111	8	0	
1112	11	0	
n	12	12	
Mean	6	0	
S.D.	3	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Species : Rat					
Generation : F0	Sex : Female	Day : 1	Dose : 4MBE 100 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	N	0	0		
2102	0	0	0	0	N	0	0		
2103	0	0	0	0	N	0	0		
2104	0	0	0	0	N	0	0		
2105	0	0	0	0	N	0	0		
2106	0	0	0	0	N	0	0		
2107	0	0	0	0	N	0	0		
2108	0	0	0	0	N	0	0		
2110	0	0	0	0	N	0	0		
2111	0	0	0	0	N	0	0		
2112	0	0	0	0	N	0	0		
n	11	11	11	11	11	11	11		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	5	0	
2102	9	0	
2103	8	0	
2104	3	0	
2105	7	0	
2106	6	0	
2107	6	0	
2108	7	0	
2110	11	0	
2111	5	0	
2112	10	0	
n	11	11	
Mean	7	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Species : Rat					
Generation : F0	Sex : Female	Day : 1	Dose : 4MBE 300 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	N	0	0		
3102	0	0	0	0	N	0	0		
3103	0	0	0	0	N	0	0		
3104	0	0	0	0	N	0	0		
3105	0	0	0	0	N	0	0		
3106	0	0	0	0	N	0	0		
3107	0	0	0	0	N	0	0		
3108	0	0	0	0	N	0	0		
3109	0	0	0	0	N	0	0		
3110	0	0	0	0	N	0	0		
3111	0	0	0	0	N	0	0		
3112	0	0	0	0	N	0	0		
n	12	12	12	12	12	12	12		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	8	0	
3102	8	0	
3103	5	0	
3104	8	0	
3105	4	0	
3106	2	0	
3107	8	0	
3108	7	0	
3109	5	0	
3110	5	0	
3111	5	0	
3112	9	0	
n	12	12	
Mean	6	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 7							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1101	0	0	0	0	0	N	0	0	
1102	0	0	0	0	0	N	0	0	
1103	0	0	0	0	0	N	0	0	
1104	0	0	0	0	0	N	0	0	
1105	0	0	0	0	0	N	0	0	
1106	0	0	0	0	0	N	0	0	
1107	0	0	0	0	0	N	0	0	
1108	0	0	0	0	0	N	0	0	
1109	0	0	0	0	0	N	0	0	
1110	0	0	0	0	0	N	0	0	
1111	0	0	0	0	0	N	0	0	
1112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1101	8	0	
1102	6	0	
1103	8	0	
1104	7	0	
1105	7	0	
1106	8	0	
1107	3	0	
1108	8	0	
1109	5	0	
1110	6	0	
1111	7	0	
1112	8	0	
n	12	12	
Mean	7	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Species : Rat					
Generation : F0	Sex : Female	Day : 7	Dose : 4MBE 100 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	N	0	0		
2102	0	0	0	0	N	0	0		
2103	0	0	0	0	N	0	0		
2104	0	0	0	0	N	0	0		
2105	0	0	0	0	N	0	0		
2106	0	0	0	0	N	0	0		
2107	0	0	0	0	N	0	0		
2108	0	0	0	0	N	0	0		
2110	0	0	0	0	N	0	0		
2111	0	0	0	0	N	0	0		
2112	0	0	0	0	N	0	0		
n	11	11	11	11	11	11	11		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	8	0	
2102	9	0	
2103	8	0	
2104	5	0	
2105	5	0	
2106	8	0	
2107	7	0	
2108	11	0	
2110	9	0	
2111	2	0	
2112	9	0	
n	11	11	
Mean	7	0	
S.D.	3	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 7							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	0	N	0	0	
3102	0	0	0	0	0	N	0	0	
3103	0	0	0	0	0	N	0	0	
3104	0	0	0	0	0	N	0	0	
3105	0	0	0	0	0	N	0	0	
3106	0	0	0	0	0	N	0	0	
3107	0	0	0	0	0	N	0	0	
3108	0	0	0	0	0	N	0	0	
3109	0	0	0	0	0	N	0	0	
3110	0	0	0	0	0	N	0	0	
3111	0	0	0	0	0	N	0	0	
3112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	8	0	
3102	4	0	
3103	6	0	
3104	8	0	
3105	6	0	
3106	4	0	
3107	5	0	
3108	7	0	
3109	8	0	
3110	7	0	
3111	6	0	
3112	7	0	
n	12	12	
Mean	6	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 14							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1101	0	0	0	0	0	N	0	0	
1102	0	0	0	0	0	N	0	0	
1103	0	0	0	0	0	N	0	0	
1104	0	0	0	0	0	N	0	0	
1105	0	0	0	0	0	N	0	0	
1106	0	0	0	0	0	N	0	0	
1107	0	0	0	0	0	N	0	0	
1108	0	0	0	0	0	N	0	0	
1109	0	0	0	0	0	N	0	0	
1110	0	0	0	0	0	N	0	0	
1111	0	0	0	0	0	N	0	0	
1112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Species : Rat

	Rearing	Defecation count
Animal No.		
1101	8	0
1102	6	0
1103	10	0
1104	4	0
1105	6	0
1106	5	0
1107	3	0
1108	6	0
1109	5	0
1110	4	0
1111	4	0
1112	7	0
n	12	12
Mean	6	0
S.D.	2	0

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 14							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	0	N	0	0	
2102	0	0	0	0	0	N	0	0	
2103	0	0	0	0	0	N	0	0	
2104	0	0	0	0	0	N	0	0	
2105	0	0	0	0	0	N	0	0	
2106	0	0	0	0	0	N	0	0	
2107	0	0	0	0	0	N	0	0	
2108	0	0	0	0	0	N	0	0	
2110	0	0	0	0	0	N	0	0	
2111	0	0	0	0	0	N	0	0	
2112	0	0	0	0	0	N	0	0	
n	11	11	11	11	11	11	11	11	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	6	0	
2102	8	0	
2103	6	0	
2104	8	0	
2105	4	0	
2106	5	0	
2107	7	0	
2108	5	0	
2110	9	0	
2111	2	0	
2112	5	0	
n	11	11	
Mean	6	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 14							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	0	N	0	0	
3102	0	0	0	0	0	N	0	0	
3103	0	0	0	0	0	N	0	0	
3104	0	0	0	0	0	N	0	0	
3105	0	0	0	0	0	N	0	1	
3106	0	0	0	0	0	N	0	0	
3107	0	0	0	0	0	N	0	0	
3108	0	0	0	0	0	N	0	0	
3109	0	0	0	0	0	N	0	0	
3110	0	0	0	0	0	N	0	0	
3111	0	0	0	0	0	N	0	0	
3112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	6	0	
3102	5	0	
3103	8	0	
3104	4	0	
3105	6	0	
3106	4	0	
3107	4	0	
3108	6	0	
3109	7	0	
3110	5	0	
3111	8	0	
3112	4	0	
n	12	12	
Mean	6	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 20							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1101	0	0	0	0	0	N	0	0	
1102	0	0	0	0	0	N	0	0	
1103	0	0	0	0	0	N	0	0	
1104	0	0	0	0	0	N	0	0	
1105	0	0	0	0	0	N	0	0	
1106	0	0	0	0	0	N	0	0	
1107	0	0	0	0	0	N	0	0	
1108	0	0	0	0	0	N	0	0	
1109	0	0	0	0	0	N	0	0	
1110	0	0	0	0	0	N	0	0	
1111	0	0	0	0	0	N	0	0	
1112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1101	3	0	
1102	5	0	
1103	5	0	
1104	2	0	
1105	6	0	
1106	3	0	
1107	2	0	
1108	4	0	
1109	5	0	
1110	4	0	
1111	5	0	
1112	5	0	
n	12	12	
Mean	4	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 20							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	0	N	0	0	
2102	0	0	0	0	0	N	0	0	
2103	0	0	0	0	0	N	0	0	
2104	0	0	0	0	0	N	0	0	
2105	0	0	0	0	0	N	0	0	
2106	0	0	0	0	0	N	0	0	
2107	0	0	0	0	0	N	0	0	
2108	0	0	0	0	0	N	0	0	
2110	0	0	0	0	0	N	0	0	
2111	0	0	0	0	0	N	0	0	
2112	0	0	0	0	0	N	0	0	
n	11	11	11	11	11	11	11	11	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	4	0	
2102	6	0	
2103	4	0	
2104	5	0	
2105	2	0	
2106	3	0	
2107	4	0	
2108	5	0	
2110	5	0	
2111	3	0	
2112	5	0	
n	11	11	
Mean	4	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 gestation		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 20							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	0	N	0	0	
3102	0	0	0	0	0	N	0	0	
3103	0	0	0	0	0	N	0	0	
3104	0	0	0	0	0	N	0	0	
3105	0	0	0	0	0	N	0	0	
3106	0	0	0	0	0	N	0	0	
3107	0	0	0	0	0	N	0	0	
3108	0	0	0	0	0	N	0	0	
3109	0	0	0	0	0	N	0	0	
3110	0	0	0	0	0	N	0	0	
3111	0	0	0	0	0	N	0	0	
3112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	6	0	
3102	3	0	
3103	0	0	
3104	1	0	
3105	5	0	
3106	3	0	
3107	1	0	
3108	3	0	
3109	4	0	
3110	6	0	
3111	3	0	
3112	5	0	
n	12	12	
Mean	3	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 6							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1101	0	0	0	0	0	N	0	0	
1102	0	0	0	0	0	N	0	0	
1103	0	0	0	0	0	N	0	0	
1104	0	0	0	0	0	N	0	0	
1105	0	0	0	0	0	N	0	0	
1106	0	0	0	0	0	N	0	0	
1107	0	0	0	0	0	N	0	0	
1108	0	0	0	0	0	N	0	0	
1109	0	0	0	0	0	N	0	0	
1110	0	0	0	0	0	N	0	0	
1111	0	0	0	0	0	N	0	0	
1112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1101	3	0	
1102	6	0	
1103	7	0	
1104	6	0	
1105	6	0	
1106	5	0	
1107	5	0	
1108	6	0	
1109	7	0	
1110	7	0	
1111	6	0	
1112	8	0	
n	12	12	
Mean	6	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 6							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	0	N	0	0	0
2102	0	0	0	0	0	N	0	0	0
2103	0	0	0	0	0	N	0	0	0
2104	0	0	0	0	0	N	0	0	0
2105	0	0	0	0	0	N	0	0	0
2106	0	0	0	0	0	N	0	0	0
2107	0	0	0	0	0	N	0	0	0
2108	0	0	0	0	0	N	0	0	0
2110	0	0	0	0	0	N	0	0	0
2111	0	0	0	0	0	N	0	0	0
2112	0	0	0	0	0	N	0	0	0
n	11	11	11	11	11	11	11	11	11

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	5	0	
2102	5	0	
2103	7	0	
2104	7	0	
2105	3	0	
2106	5	0	
2107	7	0	
2108	6	0	
2110	6	0	
2111	6	0	
2112	6	0	
n	11	11	
Mean	6	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 6							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	0	N	0	0	0
3102	0	0	0	0	0	N	0	0	0
3103	0	0	0	0	0	N	0	0	0
3104	0	0	0	0	0	N	0	0	0
3105	0	0	0	0	0	N	0	1	1
3106	0	0	0	0	0	N	0	0	0
3107	0	0	0	0	0	N	0	0	0
3108	0	0	0	0	0	N	0	0	0
3109	0	0	0	0	0	N	0	0	0
3110	0	0	0	0	0	N	0	0	0
3111	0	0	0	0	0	N	0	0	0
3112	0	0	0	0	0	N	0	0	0
n	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	7	0	
3102	6	0	
3103	3	0	
3104	5	0	
3105	5	0	
3106	3	0	
3107	5	0	
3108	6	0	
3109	4	0	
3110	6	0	
3111	6	0	
3112	8	0	
n	12	12	
Mean	5	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 0 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 13							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1101	0	0	0	0	0	N	0	0	
1102	0	0	0	0	0	N	0	0	
1103	0	0	0	0	0	N	0	0	
1104	0	0	0	0	0	N	0	0	
1105	0	0	0	0	0	N	0	0	
1106	0	0	0	0	0	N	0	0	
1107	0	0	0	0	0	N	0	0	
1108	0	0	0	0	0	N	0	0	
1109	0	0	0	0	0	N	0	0	
1110	0	0	0	0	0	N	0	0	
1111	0	0	0	0	0	N	0	0	
1112	0	0	0	0	0	N	0	0	
n	12	12	12	12	12	12	12	12	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1101	5	0	
1102	6	0	
1103	12	0	
1104	9	0	
1105	5	0	
1106	4	0	
1107	5	0	
1108	7	0	
1109	6	0	
1110	3	0	
1111	5	0	
1112	7	0	
n	12	12	
Mean	6	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 100 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 13							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
2101	0	0	0	0	0	N	0	0	
2102	0	0	0	0	0	N	0	0	
2103	0	0	0	0	0	N	0	0	
2104	0	0	0	0	0	N	0	0	
2105	0	0	0	0	0	N	0	0	
2106	0	0	0	0	0	N	0	0	
2107	0	0	0	0	0	N	0	0	
2108	0	0	0	0	0	N	0	0	
2110	0	0	0	0	0	N	0	0	
2111	0	0	0	0	0	N	0	0	
2112	0	0	0	0	0	N	0	0	
n	11	11	11	11	11	11	11	11	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
2101	7	0	
2102	6	0	
2103	12	0	
2104	6	0	
2105	5	0	
2106	5	0	
2107	8	0	
2108	5	0	
2110	6	0	
2111	3	0	
2112	7	0	
n	11	11	
Mean	6	0	
S.D.	2	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : F0 lactation		Dose : 4MBE 300 mg/kg		Species : Rat			
Generation : F0	Sex : Female	Day : 13							
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
3101	0	0	0	0	0	N	0	0	0
3102	0	0	0	0	0	N	0	0	0
3103	0	0	0	0	0	N	0	0	0
3104	0	0	0	0	0	N	0	0	0
3105	0	0	0	0	0	N	0	0	0
3106	0	0	0	0	0	N	0	0	0
3107	0	0	0	0	0	N	0	0	0
3108	0	0	0	0	0	N	0	0	0
3109	0	0	0	0	0	N	0	0	0
3110	0	0	0	0	0	N	0	0	0
3111	0	0	0	0	0	N	0	0	0
3112	0	0	0	0	0	N	0	0	0
n	12	12	12	12	12	12	12	12	12

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
3101	8	0	
3102	4	0	
3103	7	0	
3104	5	0	
3105	7	0	
3106	6	0	
3107	4	0	
3108	5	0	
3109	7	0	
3110	5	0	
3111	6	0	
3112	6	0	
n	12	12	
Mean	6	0	
S.D.	1	0	

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
5101	0	0	0	0	N	0	0	
5102	0	0	0	0	N	0	0	
5103	0	0	0	0	N	0	0	
5104	0	0	0	0	N	0	0	
5105	0	0	0	0	N	0	0	
5106	0	0	0	0	N	0	0	
5107	0	0	0	0	N	0	0	
5108	0	0	0	0	N	0	0	
5109	0	0	0	0	N	0	0	
5110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg	Species : Rat
Animal No.	Rearing	Defecation count		
5101	6	0		
5102	4	0		
5103	4	0		
5104	8	0		
5105	11	0		
5106	8	0		
5107	4	0		
5108	8	0		
5109	8	0		
5110	4	0		
n	10	10		
Mean	7	0		
S.D.	2	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	0	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Administration (non-mating group)
Dose : 4MBE 1000 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
6101	6	0	
6102	1	0	
6103	3	0	
6104	5	0	
6105	2	0	
6106	6	0	
6107	1	0	
6108	3	0	
6109	7	0	
6110	3	0	
n	10	10	
Mean	4	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat					
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
5101	0	0	0	0	0	N	0	0	
5102	0	0	0	0	0	N	0	0	
5103	0	0	0	0	0	N	0	0	
5104	0	0	0	0	0	N	0	0	
5105	0	0	0	0	0	N	0	0	
5106	0	0	0	0	0	N	0	0	
5107	0	0	0	0	0	N	0	0	
5108	0	0	0	0	0	N	0	0	
5109	0	0	0	0	0	N	0	0	
5110	0	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)		Species : Rat
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg		
Rearing		Defecation count			
Animal No.					
5101	5	0			
5102	7	0			
5103	7	0			
5104	9	0			
5105	11	0			
5106	8	0			
5107	4	0			
5108	6	0			
5109	4	0			
5110	6	0			
n	10	10			
Mean	7	0			
S.D.	2	0			

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	0	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Administration (non-mating group)
Dose : 4MBE 1000 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
6101	3	0
6102	6	0
6103	1	0
6104	3	0
6105	1	0
6106	3	0
6107	1	0
6108	6	0
6109	5	0
6110	4	0
n	10	10
Mean	3	0
S.D.	2	0

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 3	Dose : 4MBE 0 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
5101	0	0	0	0	N	0	0	
5102	0	0	0	0	N	0	0	
5103	0	0	0	0	N	0	0	
5104	0	0	0	0	N	0	0	
5105	0	0	0	0	N	0	0	
5106	0	0	0	0	N	0	0	
5107	0	0	0	0	N	0	0	
5108	0	0	0	0	N	0	0	
5109	0	0	0	0	N	0	0	
5110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 3	Dose : 4MBE 0 mg/kg	Species : Rat
Animal No.	Rearing	Defecation count		
5101	9	0		
5102	10	0		
5103	6	0		
5104	9	0		
5105	12	0		
5106	10	0		
5107	5	0		
5108	9	0		
5109	5	0		
5110	10	0		
n	10	10		
Mean	9	0		
S.D.	2	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 3	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	0	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 3 Period : Administration (non-mating group)
Dose : 4MBE 1000 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
6101	5	0	
6102	7	0	
6103	6	0	
6104	5	0	
6105	5	0	
6106	7	0	
6107	6	0	
6108	8	0	
6109	3	0	
6110	4	0	
n	10	10	
Mean	6	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 0 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
5101	0	0	0	0	N	0	0	
5102	0	0	0	0	N	0	0	
5103	0	0	0	0	N	0	0	
5104	0	0	0	0	N	0	0	
5105	0	0	0	0	N	0	0	
5106	0	0	0	0	N	0	0	
5107	0	0	0	0	N	0	0	
5108	0	0	0	0	N	0	0	
5109	0	0	0	0	N	0	0	
5110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 0 mg/kg	Species : Rat
Animal No.	Rearing	Defecation count		
5101	4	0		
5102	8	0		
5103	6	0		
5104	5	0		
5105	9	0		
5106	8	0		
5107	8	0		
5108	7	0		
5109	6	0		
5110	6	0		
n	10	10		
Mean	7	0		
S.D.	2	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 4	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	0	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 4 Period : Administration (non-mating group)
Dose : 4MBE 1000 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
6101	6	0	
6102	3	0	
6103	5	0	
6104	7	0	
6105	6	0	
6106	6	0	
6107	6	0	
6108	5	0	
6109	9	0	
6110	7	0	
n	10	10	
Mean	6	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
Animal No.								
5101	0	0	0	0	0	N	0	0
5102	0	0	0	0	0	N	0	0
5103	0	0	0	0	0	N	0	0
5104	0	0	0	0	0	N	0	0
5105	0	0	0	0	0	N	0	0
5106	0	0	0	0	0	N	0	0
5107	0	0	0	0	0	N	0	0
5108	0	0	0	0	0	N	0	0
5109	0	0	0	0	0	N	0	0
5110	0	0	0	0	0	N	0	0
n	10	10	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 5 Period : Administration (non-mating group)
Dose : 4MBE 0 mg/kg

Species : Rat

	Rearing	Defecation count
Animal No.		
5101	6	0
5102	10	0
5103	5	0
5104	7	0
5105	8	0
5106	9	0
5107	5	0
5108	8	0
5109	7	0
5110	3	0
n	10	10
Mean	7	0
S.D.	2	0

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 5	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	0	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 5	Dose : 4MBE 1000 mg/kg	Species : Rat
Animal No.	Rearing	Defecation count		
6101	6	0		
6102	4	0		
6103	5	0		
6104	6	0		
6105	8	0		
6106	5	0		
6107	3	0		
6108	6	0		
6109	6	0		
6110	4	0		
n	10	10		
Mean	5	0		
S.D.	1	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation			Period : Administration (non-mating group)				Species : Rat		
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg						
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.									
5101	0	0	0	0	0	N	0	0	
5102	0	0	0	0	0	N	0	0	
5103	0	0	0	0	0	N	0	0	
5104	0	0	0	0	0	N	0	0	
5105	0	0	0	0	0	N	0	0	
5106	0	0	0	0	0	N	0	0	
5107	0	0	0	0	0	N	0	0	
5108	0	0	0	0	0	N	0	0	
5109	0	0	0	0	0	N	0	0	
5110	0	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	10	10

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg	Species : Rat
Animal No.	Rearing	Defecation count		
5101	5	0		
5102	6	0		
5103	11	0		
5104	6	0		
5105	14	0		
5106	10	0		
5107	8	0		
5108	10	0		
5109	8	0		
5110	10	0		
n	10	10		
Mean	9	0		
S.D.	3	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Administration (non-mating group)		Species : Rat				
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg					
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination	
Animal No.								
6101	0	0	0	0	N	0	0	
6102	0	0	0	0	N	0	0	
6103	0	0	0	0	N	0	0	
6104	0	0	0	0	N	0	0	
6105	0	0	0	0	N	0	0	
6106	0	0	0	0	N	0	0	
6107	0	0	0	0	N	0	0	
6108	0	0	0	0	N	0	0	
6109	0	0	0	0	N	0	1	
6110	0	0	0	0	N	0	0	
n	10	10	10	10	10	10	10	

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation			Period : Administration (non-mating group)	
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg	
	Rearing	Defecation count	Species : Rat	
Animal No.				
6101	5	0		
6102	5	0		
6103	5	0		
6104	3	0		
6105	4	0		
6106	7	0		
6107	4	0		
6108	7	0		
6109	5	0		
6110	6	0		
n	10	10		
Mean	5	0		
S.D.	1	0		

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Recovery		Species : Rat					
Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 0 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1008	0	0	0	0	N	0	1		
1009	0	0	0	0	N	0	0		
1010	0	0	0	0	N	0	0		
1011	0	0	0	0	N	0	0		
1012	0	0	0	0	N	0	0		
n	5	5	5	5	5	5	5		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1008	4	0	
1009	5	0	
1010	6	0	
1011	5	0	
1012	3	0	
n	5	5	
Mean	5	0	
S.D.	1	0	

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Open field observation		Period : Recovery		Species : Rat			
	Generation : F0	Sex : Male	Week : 1	Dose : 4MBE 1000 mg/kg	Arousal	Convulsion	Abnormal behavior	Urination
4008	0	0	0	0	0	0	N	0
4009	0	0	0	0	0	0	N	0
4010	0	0	0	0	0	0	N	0
4011	0	0	0	0	0	0	N	0
4012	0	0	0	0	0	0	N	0
n	5	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation	Generation : F0	Sex : Male	Week : 1	Period : Recovery	Dose : 4MBE 1000 mg/kg	Species : Rat
	Rearing	Defecation count				
Animal No.						
4008	5	0				
4009	3	0				
4010	6	0				
4011	4	0				
4012	8	0				
n	5	5				
Mean	5	0				
S.D.	2	0				
4MBE :Benzenemethanol, 4-methyl-						

Open field observation		Period : Recovery		Species : Rat					
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
1008	0	0	0	0	N	0	1		
1009	0	0	0	0	N	0	0		
1010	0	0	0	0	N	0	1		
1011	0	0	0	0	N	0	0		
1012	0	0	0	0	N	0	0		
n	5	5	5	5	5	5	5		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
1008	6	0	
1009	4	0	
1010	6	0	
1011	7	0	
1012	7	0	
n	5	5	
Mean	6	0	
S.D.	1	0	
4MBE :Benzenemethanol, 4-methyl-			

Animal No.	Open field observation		Period : Recovery		Species : Rat			
	Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 1000 mg/kg				
	Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination
4008	0	0	0	0	0	N	0	1
4009	0	0	0	0	0	N	0	0
4010	0	0	0	0	0	N	0	0
4011	0	0	0	0	0	N	0	0
4012	0	0	0	0	0	N	0	0
n	5	5	5	5	5	5	5	5

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Open field observation	Generation : F0	Sex : Male	Week : 2	Period : Recovery	Dose : 4MBE 1000 mg/kg	Species : Rat
	Rearing	Defecation count				
Animal No.						
4008	6	0				
4009	4	0				
4010	9	0				
4011	8	0				
4012	4	1				
n	5	5				
Mean	6	0				
S.D.	2	0				

4MBE : Benzenemethanol, 4-methyl-

Open field observation		Period : Recovery (non-mating group)		Species : Rat					
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 0 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
5106	0	0	0	0	N	0	0		
5107	0	0	0	0	N	0	0		
5108	0	0	0	0	N	0	0		
5109	0	0	0	0	N	0	0		
5110	0	0	0	0	N	0	0		
n	5	5	5	5	5	5	5		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 1 Period : Recovery (non-mating group)
Dose : 4MBE 0 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
5106	10	0	
5107	7	0	
5108	10	0	
5109	7	0	
5110	10	0	
n	5	5	
Mean	9	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Recovery (non-mating group)		Species : Rat					
Generation : F0	Sex : Female	Week : 1	Dose : 4MBE 1000 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
6106	0	0	0	0	N	0	0		
6107	0	0	0	0	N	0	0		
6108	0	0	0	0	N	0	0		
6109	0	0	0	0	N	0	0		
6110	0	0	0	0	N	0	0		
n	5	5	5	5	5	5	5		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
6106	8	0	
6107	5	0	
6108	7	0	
6109	7	0	
6110	7	0	
n	5	5	
Mean	7	0	
S.D.	1	0	

4MBE :Benzenemethanol, 4-methyl-

Open field observation		Period : Recovery (non-mating group)		Species : Rat					
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg						
Arousal	Convulsion	Abnormal behavior	Stereotypy	Gait	Posture	Grooming	Urination		
Animal No.									
5106	0	0	0	0	N	0	0		
5107	0	0	0	0	N	0	0		
5108	0	0	0	0	N	0	0		
5109	0	0	0	0	N	0	0		
5110	0	0	0	0	N	0	0		
n	5	5	5	5	5	5	5		

4MBE :Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

	Rearing	Defecation count	Species : Rat
Animal No.			
5106	12	0	
5107	8	0	
5108	10	0	
5109	7	0	
5110	9	0	
n	5	5	
Mean	9	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Open field observation				Period : Recovery (non-mating group)				Species : Rat			
Generation : F0		Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg							
Arousal		Convulsion	Abnormal behavior	Stereotypy		Gait	Posture	Grooming		Urination	
Animal No.											
6106		0	0	0		0	N	0		0	
6107		0	0	0		0	N	0		0	
6108		0	0	0		0	N	0		0	
6109		0	0	0		0	N	0		0	
6110		0	0	0		0	N	0		0	
n		5	5	5		5	5	5		5	

4MBE : Benzenemethanol, 4-methyl-

Arousal) -2: Unconscious/semi-conscious, -1: Reduced awareness, 0: Normal, 1: Increased alertness, 2: Markedly alert

Convulsion) 0: None, 1: Minor, 2: Moderate, 3: Severe

Abnormal behavior) 0: None, 1: Minor, 2: Moderate, 3: Severe

Stereotypy) 0: None, 1: Minor, 2: Moderate, 3: Severe

Gait) U: No/minimal location, 0: Normal, 1: Slight, 2: Moderate, 3: Markedly

Posture) N: Normal, F: Flattened, H: Hunched

Grooming) 0: None, 1: Occasional bouts (up to four), 2: Numerous (more than four)

Urination) 0: None, 1: Small amount, 2: Moderate amount, 3: Large/excessive amount

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Open field observation
Generation : F0 Sex : Female Week : 2 Period : Recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

	Rearing	Defecation count	Species : Rat
Animal No.			
6106	9	0	
6107	3	0	
6108	6	0	
6109	7	0	
6110	9	0	
n	5	5	
Mean	7	0	
S.D.	2	0	

4MBE :Benzenemethanol, 4-methyl-

Manipulative test		Sex : Male		Week : 6	Period : F0 mating Dose : 4MBE 0 mg/kg	Species : Rat
Generation : F0	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
1008	0	0	0	0	P	
1009	0	0	0	0	P	
1010	0	0	0	0	P	
1011	0	0	0	0	P	
1012	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right- ing reflex-1	Aerial right- ing reflex-2	Aerial right- ing reflex-3	Aerial right- ing reflex-total
1008	0	0	0	0
1009	0	0	0	0
1010	0	0	0	0
1011	0	0	0	0
1012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Sex : Male		Week : 6	Period : F0 mating Dose : 4MBE 100 mg/kg	Species : Rat
Generation : F0	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
2008	0	0	0	0	P	
2009	0	0	0	0	P	
2010	0	0	0	0	P	
2011	0	0	0	0	P	
2012	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right- ing reflex-1	Aerial right- ing reflex-2	Aerial right- ing reflex-3	Aerial right- ing reflex-total
2008	0	0	0	0
2009	0	0	0	0
2010	0	0	0	0
2011	0	0	0	0
2012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Sex : Male		Week : 6	Period : F0 mating Dose : 4MBE 300 mg/kg	Species : Rat
Generation : F0	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
3008	0	0	0	0	P	
3009	0	0	0	0	P	
3010	0	0	0	0	P	
3011	0	0	0	0	P	
3012	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right- ing reflex-1	Aerial right- ing reflex-2	Aerial right- ing reflex-3	Aerial right- ing reflex-total
3008	0	0	0	0
3009	0	0	0	0
3010	0	0	0	0
3011	0	0	0	0
3012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Sex : Male		Week : 6	Period : F0 mating Dose : 4MBE 1000 mg/kg	Species : Rat
Generation : F0	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
4008	0	0	0	0	P	
4009	0	0	0	0	P	
4010	0	0	0	0	P	
4011	0	0	0	0	P	
4012	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right- ing reflex-1	Aerial right- ing reflex-2	Aerial right- ing reflex-3	Aerial right- ing reflex-total
4008	0	0	0	0
4009	0	0	0	0
4010	0	0	0	0
4011	0	0	0	0
4012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : F0 lactation		Species : Rat	
Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 0 mg/kg		
	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex
Animal No.					
1102	0	0	0	0	P
1103	0	0	0	0	P
1104	0	0	0	0	P
1105	0	0	0	0	P
1106	0	0	0	0	P
n	5	5	5	5	5

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
1102	0	0	0	0
1103	0	0	0	0
1104	0	0	0	0
1105	0	0	0	0
1106	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : F0 lactation		Species : Rat	
Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 100 mg/kg		
	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex
Animal No.					
2101	0	0	0	0	P
2103	0	0	0	0	P
2104	0	0	0	0	P
2105	0	0	0	0	P
2112	0	0	0	0	P
n	5	5	5	5	5

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
2101	0	0	0	0
2103	0	0	0	0
2104	0	0	0	0
2105	0	0	0	0
2112	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : F0 lactation		Species : Rat	
Generation : F0	Sex : Female	Day : 13	Dose : 4MBE 300 mg/kg		
	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex
Animal No.					
3102	0	0	0	0	P
3103	0	0	0	0	P
3105	0	0	0	0	P
3107	0	0	0	0	P
3108	0	0	0	0	P
n	5	5	5	5	5

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
3102	0	0	0	0
3103	0	0	0	0
3105	0	0	0	0
3107	0	0	0	0
3108	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test			Period : Administration (non-mating group)		
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg	Species : Rat	
	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex
Animal No.					
5106	0	0	0	0	P
5107	0	0	0	0	P
5108	0	0	0	0	P
5109	0	0	0	0	P
5110	0	0	0	0	P
n	5	5	5	5	5

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
5106	0	0	0	0
5107	0	0	0	0
5108	0	0	0	0
5109	0	0	0	0
5110	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test			Period : Administration (non-mating group)			Species : Rat
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg			
	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
6106	0	0	0	0	P	
6107	0	0	0	0	P	
6108	0	0	0	0	P	
6109	0	0	0	0	P	
6110	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
6106	0	0	0	0
6107	0	0	0	0
6108	0	0	0	0
6109	0	0	0	0
6110	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Sex : Male		Week : 2	Period : Recovery Dose : 4MBE 0 mg/kg	Species : Rat
Generation : F0	Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.						
1008	0	0	0	0	P	
1009	0	0	0	0	P	
1010	0	0	0	0	P	
1011	0	0	0	0	P	
1012	0	0	0	0	P	
n	5	5	5	5	5	

Animal No.	Aerial right- ing reflex-1	Aerial right- ing reflex-2	Aerial right- ing reflex-3	Aerial right- ing reflex-total
1008	0	0	0	0
1009	0	0	0	0
1010	0	0	0	0
1011	0	0	0	0
1012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : Recovery		Species : Rat	
Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 1000 mg/kg		
Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.					
4008	0	0	0	0	P
4009	0	0	0	0	P
4010	0	0	0	0	P
4011	0	0	0	0	P
4012	0	0	0	0	P
n	5	5	5	5	

Animal No.	Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total
4008	0	0	0	0
4009	0	0	0	0
4010	0	0	0	0
4011	0	0	0	0
4012	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : Recovery (non-mating group)		Species : Rat	
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg		
Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.					
5106	0	0	0	0	P
5107	0	0	0	0	P
5108	0	0	0	0	P
5109	0	0	0	0	P
5110	0	0	0	0	P
n	5	5	5	5	

Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total	
Animal No.				
5106	0	0	0	0
5107	0	0	0	0
5108	0	0	0	0
5109	0	0	0	0
5110	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Manipulative test		Period : Recovery (non-mating group)		Species : Rat	
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg		
Auditory response	Approach response	Touch response	Tail pinch response	Pupillary reflex	
Animal No.					
6106	0	0	0	0	P
6107	0	0	0	0	P
6108	0	0	0	0	P
6109	0	0	0	0	P
6110	0	0	0	0	P
n	5	5	5	5	

Aerial right-ing reflex-1	Aerial right-ing reflex-2	Aerial right-ing reflex-3	Aerial right-ing reflex-total	
Animal No.				
6106	0	0	0	0
6107	0	0	0	0
6108	0	0	0	0
6109	0	0	0	0
6110	0	0	0	0
n	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Auditory response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Approach response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Touch response) -1: No reaction/ignores, 0: Normal, 1: Abnormality fearful/aggressive reaction

Tail pinch response) -2: None, -1: Weak, 0: Normal, 1: Exaggerate

Pupillary reflex) P: Pass, both, F: Failed, neither, L: Left pupil responds, R: Right pupil responds

Aerial righting reflex-1 to -3) 0: Normal, 1: Failure, 2:None

Aerial righting reflex-total) Total score of 3 times

Grip strength		Sex : Male		Week : 6		Period : F0 mating Dose : 4MBE 0 mg/kg		Species : Rat	
Generation : F0									
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g			
1008	1723	1962	1843	1054	914	984			
1009	1272	1201	1237	748	897	823			
1010	2028	1932	1980	781	869	825			
1011	1651	1799	1725	619	690	655			
1012	1285	1011	1148	682	690	686			
n	5	5	5	5	5	5			
Mean	1592	1581	1587	777	812	795			
S.D.	319	443	372	167	113	131			

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Sex : Male		Week : 6		Period : F0 mating Dose : 4MBE 100 mg/kg		Species : Rat	
Generation : F0									
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g			
2008	1866	1944	1905	927	806	867			
2009	1640	1642	1641	851	724	788			
2010	1738	1704	1721	813	746	780			
2011	1690	1711	1701	945	885	915			
2012	1524	1434	1479	594	730	662			
n	5	5	5	5	5	5			
Mean	1692	1687	1689	826	778	802			
S.D.	126	182	153	141	68	97			

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Animal No.	Grip strength of fore limb-1		Grip strength of fore limb-2		Grip strength of hind limb-1		Grip strength of hind limb-2		Grip strength of hind limb-mean		Species : Rat
	g	g	g	g	g	g	g	g	g	g	
3008	1386	1301	1344	729	733	731					
3009	1137	1320	1229	656	673	665					
3010	1450	1671	1561	676	799	738					
3011	1624	1592	1608	638	695	667					
3012	1708	1790	1749	623	568	596					
n	5	5	5	5	5	5					
Mean	1461	1535	1498	664	694	679					
S.D.	223	217	209	41	85	58					

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : F0 mating		Species : Rat		
Generation : F0		Sex : Male	Week : 6	Dose : 4MBE 1000 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
4008	1701	1815	1758	690	726	708
4009	1134	1121	1128	547	643	595
4010	1750	1811	1781	919	890	905
4011	1626	1419	1523	639	698	669
4012	1476	1420	1448	604	631	618
n	5	5	5	5	5	5
Mean	1537	1517	1528	680	718	699
S.D.	248	296	266	143	104	123

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : F0 lactation		Species : Rat		
Generation : F0		Sex : Female	Day : 13	Dose : 4MBE 0 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
1102	1018	1240	1129	597	646	622
1103	1047	1110	1079	766	642	704
1104	1358	1126	1242	540	564	552
1105	1365	1362	1364	611	658	635
1106	1259	1285	1272	641	727	684
n	5	5	5	5	5	5
Mean	1209	1225	1217	631	647	639
S.D.	167	107	114	84	58	59

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : F0 lactation		Species : Rat		
Generation : F0		Sex : Female	Day : 13	Dose : 4MBE 100 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
2101	1267	1146	1207	661	680	671
2103	976	1040	1008	640	699	670
2104	1239	1344	1292	782	704	743
2105	1196	1122	1159	785	781	783
2112	1019	977	998	617	628	623
n	5	5	5	5	5	5
Mean	1139	1126	1133	697	698	698
S.D.	133	139	128	80	55	64

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : F0 lactation		Species : Rat		
Generation : F0		Sex : Female	Day : 13	Dose : 4MBE 300 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
3102	1199	1034	1117	778	747	763
3103	1235	1304	1270	596	521	559
3105	975	1038	1007	710	637	674
3107	1228	1178	1203	622	550	586
3108	1215	1172	1194	588	554	571
n	5	5	5	5	5	5
Mean	1170	1145	1158	659	602	631
S.D.	110	113	100	82	92	87

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : Administration (non-mating group)		Species : Rat		
Generation : F0		Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
5106	1118	1172	1145	735	707	721
5107	1086	998	1042	451	681	566
5108	1077	982	1030	590	505	548
5109	1034	1206	1120	795	791	793
5110	1299	1293	1296	568	557	563
n	5	5	5	5	5	5
Mean	1123	1130	1127	628	648	638
S.D.	103	135	107	138	116	112

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : Administration (non-mating group)		Species : Rat		
Generation : F0	Sex : Female	Week : 6	Dose : 4MBE 1000 mg/kg			
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
6106	1150	1123	1137	503	547	525
6107	1131	995	1063	538	524	531
6108	1366	1238	1302	566	635	601
6109	1043	1064	1054	664	472	568
6110	1267	1038	1153	753	717	735
n	5	5	5	5	5	5
Mean	1191	1092	1142	605	579	592
S.D.	126	94	100	102	97	86

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Animal No.	Grip strength		Period : Recovery		Species : Rat	
	Generation : F0	Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg		
	Grip strength of fore limb-1	Grip strength of fore limb-2	Grip strength of fore limb-mean	Grip strength of hind limb-1	Grip strength of hind limb-2	Grip strength of hind limb-mean
	g	g	g	g	g	g
1008	1812	1784	1798	974	843	909
1009	1570	1742	1656	810	933	872
1010	1875	1847	1861	906	944	925
1011	1752	1755	1754	621	624	623
1012	1420	1474	1447	734	767	751
n	5	5	5	5	5	5
Mean	1686	1720	1703	809	822	816
S.D.	187	144	162	139	132	128

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : Recovery		Species : Rat		
Generation : F0		Sex : Male	Week : 2	Dose : 4MBE 1000 mg/kg		
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
4008	1630	1662	1646	759	749	754
4009	1548	1455	1502	771	695	733
4010	1627	1552	1590	820	882	851
4011	1541	1476	1509	847	834	841
4012	1528	1320	1424	921	952	937
n	5	5	5	5	5	5
Mean	1575	1493	1534	824	822	823
S.D.	50	126	86	65	103	82

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : Recovery (non-mating group)		Species : Rat		
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 0 mg/kg			
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
5106	1281	1128	1205	793	673	733
5107	1209	1239	1224	511	619	565
5108	926	1013	970	637	616	627
5109	1075	1116	1096	731	672	702
5110	1475	1370	1423	596	581	589
n	5	5	5	5	5	5
Mean	1193	1173	1184	654	632	643
S.D.	208	136	168	111	40	72

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Grip strength		Period : Recovery (non-mating group)		Species : Rat		
Generation : F0	Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg			
Animal No.	Grip strength of fore limb-1 g	Grip strength of fore limb-2 g	Grip strength of fore limb-mean g	Grip strength of hind limb-1 g	Grip strength of hind limb-2 g	Grip strength of hind limb-mean g
6106	1002	1076	1039	606	551	579
6107	1197	1136	1167	726	765	746
6108	1231	1136	1184	700	718	709
6109	1013	966	990	772	741	757
6110	998	1016	1007	742	764	753
n	5	5	5	5	5	5
Mean	1088	1066	1077	709	708	709
S.D.	116	75	91	63	90	75

4MBE : Benzenemethanol, 4-methyl-

Grip strength of fore/hind limb-mean) mean value of 2 times

Motor activity		Sex : Male		Week : 6		Period : F0 mating Dose : 4MBE 0 mg/kg		Species : Rat	
Generation : F0		0'-10'		10'-20'		20'-30'		30'-40'	
		40'-50'		50'-60'		Total(0'-60')			
Animal No.	Count	Count	Count	Count	Count	Count	Count	Count	Count
1008	418	331	306	198	12	17	1282		
1009	409	237	47	14	8	29	744		
1010	393	282	212	219	52	34	1192		
1011	460	366	217	276	90	39	1448		
1012	364	94	235	37	24	9	763		
n	5	5	5	5	5	5	5		
Mean	409	262	203	149	37	26	1086		
S.D.	35	106	95	116	34	12	317		

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Motor activity Generation : F0	Sex : Male	Week : 6	Period : F0 mating Dose : 4MBE 100 mg/kg		Species : Rat	
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
	Count	Count	Count	Count	Count	Count	Count
2008	408	455	291	176	69	29	1428
2009	431	266	282	56	7	29	1071
2010	412	334	328	219	129	200	1622
2011	476	317	381	80	110	8	1372
2012	422	268	231	75	0	54	1050
n	5	5	5	5	5	5	5
Mean	430	328	303	121	63	64	1309
S.D.	27	77	56	72	59	78	245

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Motor activity Generation : F0	Sex : Male	Week : 6	Period : F0 mating Dose : 4MBE 300 mg/kg	Species : Rat		
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
3008	496	426	308	70	39	2	1341
3009	406	239	87	25	19	114	890
3010	420	55	1	0	261	26	763
3011	428	336	292	93	3	34	1186
3012	414	311	286	250	226	290	1777
n	5	5	5	5	5	5	5
Mean	433	273	195	88	110	93	1191
S.D.	36	139	141	98	124	118	400

4MBE :Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in				Period : F0 mating			Species : Rat
Motor activity	Sex : Male	Week : 6	Dose : 4MBE 1000 mg/kg				
Generation : F0	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	
Animal No.	Count	Count	Count	Count	Count	Count	Total(0'-60')
4008	425	388	192	398	325	93	1821
4009	361	61	220	106	166	6	920
4010	499	224	334	197	120	326	1700
4011	311	410	383	223	53	3	1383
4012	313	259	263	1	0	99	935
n	5	5	5	5	5	5	5
Mean	382	268	278	185	133	105	1352
S.D.	80	141	79	148	125	132	419

4MBE :Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in							
Motor activity	Sex : Female		Period : F0 lactation		Species : Rat		
Generation : F0		Day : 13	Dose : 4MBE 0 mg/kg				
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Animal No.	Count	Count	Count	Count	Count	Count	Count
1102	342	368	382	233	248	142	1715
1103	475	312	245	246	29	229	1536
1104	431	148	268	227	14	32	1120
1105	389	318	249	187	83	179	1405
1106	418	47	47	7	72	122	713
n	5	5	5	5	5	5	5
Mean	411	239	238	180	89	141	1298
S.D.	49	135	121	99	93	73	392

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Motor activity Generation : F0	Sex : Female	Day : 13	Period : F0 lactation Dose : 4MBE 100 mg/kg	Species : Rat		
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
2101	353	49	7	7	15	35	466
2103	441	293	220	170	15	256	1395
2104	341	344	236	293	254	135	1603
2105	418	260	339	359	342	315	2033
2112	421	403	353	318	324	281	2100
n	5	5	5	5	5	5	5
Mean	395	270	231	229	190	204	1519
S.D.	45	135	139	143	163	116	658

4MBE :Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in							
Motor activity		Sex : Female		Day : 13		Period : F0 lactation	
Generation : F0				Dose : 4MBE 300 mg/kg		Species : Rat	
0'-10'		10'-20'		20'-30'		30'-40'	
40'-50'		50'-60'		Total(0'-60')			
Animal No.	Count	Count	Count	Count	Count	Count	Count
3102	307	231	13	71	236	8	866
3103	419	335	243	220	229	235	1681
3105	370	21	12	99	192	32	726
3107	430	342	285	258	269	288	1872
3108	375	105	233	256	285	185	1439
n	5	5	5	5	5	5	5
Mean	380	207	157	181	242	150	1317
S.D.	49	142	134	89	36	124	502

4MBE :Benzenemethanol, 4-methyl-

Maternal reproduction/developmental toxicity screening test in rats				Period : Administration (non-mating group)			
Motor activity		Sex : Female	Week : 6	Dose : 4MBE 0 mg/kg			Species : Rat
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Animal No.	Count	Count	Count	Count	Count	Count	Count
5106	422	302	243	292	311	191	1761
5107	440	278	234	12	115	13	1092
5108	504	427	313	326	285	302	2157
5109	364	268	250	261	234	322	1699
5110	385	307	294	245	138	83	1452
n	5	5	5	5	5	5	5
Mean	423	316	267	227	217	182	1632
S.D.	54	64	35	124	87	135	394

4MBE :Benzenemethanol, 4-methyl-

Motor activity		Sex : Female		Week : 6		Period : Administration (non-mating group)		Species : Rat	
Generation : F0		Dose : 4MBE 1000 mg/kg		Total(0'-60')					
Animal No.	Count	Count	Count	Count	Count	Count	Count	Count	Count
6106	360	22	141	60	131	182	896		
6107	259	23	44	29	37	98	490		
6108	140	3	187	125	32	148	635		
6109	393	109	345	99	164	172	1282		
6110	282	214	115	24	215	10	860		
n	5	5	5	5	5	5	5		
Mean	287	74	166	67	116	122	833		
S.D.	99	88	112	44	80	71	301		

4MBE :Benzenemethanol, 4-methyl-

Maternal reproduction/developmental toxicity screening test in rats				Period : Recovery			
Motor activity		Sex : Male	Week : 2	Dose : 4MBE 0 mg/kg		Species : Rat	
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Animal No.	Count	Count	Count	Count	Count	Count	Count
1008	466	370	338	309	115	74	1672
1009	387	311	129	179	278	44	1328
1010	382	304	194	25	82	16	1003
1011	441	364	258	296	128	4	1491
1012	432	422	368	233	123	90	1668
n	5	5	5	5	5	5	5
Mean	422	354	257	208	145	46	1432
S.D.	36	48	99	115	76	37	279

4MBE :Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in							
Motor activity		Sex : Male		Week : 2		Period : Recovery	
Generation : F0				Dose : 4MBE 1000 mg/kg		Species : Rat	
0'-10'		10'-20'		20'-30'		30'-40'	
						40'-50'	
						50'-60'	
						Total(0'-60')	
Animal No.	Count	Count	Count	Count	Count	Count	Count
4008	386	369	304	315	268	114	1756
4009	486	349	155	259	418	314	1981
4010	404	384	353	316	277	218	1952
4011	470	429	384	382	242	34	1941
4012	455	250	227	350	35	100	1417
n	5	5	5	5	5	5	5
Mean	440	356	285	324	248	156	1809
S.D.	43	66	94	46	137	110	237

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Motor activity	Sex : Female	Week : 2	Period : Recovery (non-mating group)			Species : Rat
	Generation : F0			Dose : 4MBE 0 mg/kg			Total(0'-60')
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	
	Count	Count	Count	Count	Count	Count	Count
5106	388	308	269	257	199	4	1425
5107	381	173	150	230	101	4	1039
5108	341	303	251	399	264	205	1763
5109	369	334	261	252	248	245	1709
5110	308	242	249	265	274	147	1485
n	5	5	5	5	5	5	5
Mean	357	272	236	281	217	121	1484
S.D.	33	65	49	67	71	112	287

4MBE :Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in				Period : Recovery (non-mating group)			
Motor activity		Sex : Female	Week : 2	Dose : 4MBE 1000 mg/kg			Species : Rat
	0'-10'	10'-20'	20'-30'	30'-40'	40'-50'	50'-60'	Total(0'-60')
Animal No.	Count	Count	Count	Count	Count	Count	Count
6106	365	345	340	266	314	251	1881
6107	296	250	77	86	76	87	872
6108	414	333	119	273	5	0	1144
6109	435	370	176	316	238	259	1794
6110	385	264	313	204	217	72	1455
n	5	5	5	5	5	5	5
Mean	379	312	205	229	170	134	1429
S.D.	54	53	117	89	126	115	427

4MBE :Benzenemethanol, 4-methyl-

Body weight

Period : F0 before mating Day 1-15, F0 mating Day 15-43

Sex : Male

Dose : 4MBE 0 mg/kg

Unit : g

Species : Rat

Animal No.	/Day							Body weight gain
	1	8	15	22	29	36	42	
1001	419	454	483	502	535	550	567	148
1002	405	440	472	499	525	551	565	160
1003	387	426	453	484	495	517	519	132
1004	363	386	409	434	460	479	484	121
1005	407	431	454	487	514	537	552	145
1006	400	437	465	494	531	564	576	176
1007	442	474	503	521	552	573	594	152
1008	384	404	424	433	454	478	485	101
1009	418	455	484	513	544	561	573	155
1010	393	428	466	481	510	543	548	155
1011	391	421	454	475	502	530	537	146
1012	415	453	481	494	513	530	540	125
n	12	12	12	12	12	12	12	12
Mean	402	434	462	485	511	534	545	143
S.D.	21	24	26	27	30	31	35	20

4MBE : Benzenemethanol, 4-methyl-

With the reproduction/ developmental toxicity screening test in rats								Unit : g	Species : Rat
Body weight									
Sex : Male									
Period : F0 before mating Day 1-15, F0 mating Day 15-43									
Dose : 4MBE 100 mg/kg								Body weight gain	
Animal No.	/Day	1	8	15	22	29	36		42
2001		385	413	431	449	470	484	490	105
2002		425	462	498	511	536	575	593	168
2003		403	437	475	492	522	544	551	148
2004		391	432	455	478	497	511	527	136
2005		382	414	436	460	484	502	513	131
2006		434	469	493	511	534	552	563	129
2007		395	419	447	471	499	518	534	139
2008		420	463	495	519	551	587	595	175
2009		393	416	434	452	473	493	502	109
2010		394	431	445	461	490	515	527	133
2011		426	455	485	506	529	555	565	139
2012		417	440	467	491	514	526	533	116
n		12	12	12	12	12	12	12	12
Mean		405	438	463	483	508	530	541	136
S.D.		18	20	25	25	27	32	33	21
4MBE :Benzenemethanol, 4-methyl-									

4MBE :Benzenemethanol, 4-methyl-

Body weight

Period : F0 before mating Day 1-15, F0 mating Day 15-43

Sex : Male

Dose : 4MBE 300 mg/kg

Unit : g

Species : Rat

Animal No.	/Day							Body weight gain
	1	8	15	22	29	36	42	
3001	388	416	444	460	490	511	531	143
3002	381	417	438	453	477	509	521	140
3003	404	445	476	500	525	555	578	174
3004	405	428	455	478	498	525	543	138
3005	430	476	514	552	586	615	632	202
3006	396	427	448	462	479	496	508	112
3007	433	466	492	505	536	560	585	152
3008	377	405	429	448	463	487	489	112
3009	421	448	488	512	547	574	574	153
3010	383	414	440	446	464	488	492	109
3011	411	457	491	516	537	567	579	168
3012	395	419	447	463	488	510	515	120
n	12	12	12	12	12	12	12	12
Mean	402	435	464	483	508	533	546	144
S.D.	19	23	27	34	38	40	44	28

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Body weight							Unit : g	Species : Rat
	/Day	1	8	15	22	29	36		
4001		395	407	440	457	479	509	510	115
4002		381	415	439	452	466	486	484	103
4003		390	411	430	438	456	471	486	96
4004		396	409	435	444	463	485	497	101
4005		389	395	413	433	450	470	480	91
4006		389	408	433	455	481	512	514	125
4007		406	438	454	454	476	495	499	93
4008		391	413	448	459	474	500	490	99
4009		438	464	496	519	526	561	569	131
4010		416	439	466	479	493	514	524	108
4011		403	393	404	423	447	464	472	69
4012		428	436	446	446	459	476	466	38
n		12	12	12	12	12	12	12	12
Mean		402	419	442	455	473	495	499	97
S.D.		17	21	24	25	22	27	28	25

4MBE :Benzenemethanol, 4-methyl-

Appendix 3 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : F0 before mating Day 1-15
Dose : 4MBE 0 mg/kg

Study No. : R-1273

	/Day			Body weight	Unit : g	Species : Rat
Animal No.	1	8	15	gain		
1101	232	251	264	32		
1102	236	260	262	26		
1103	255	282	291	36		
1104	232	240	245	13		
1105	251	268	289	38		
1106	230	231	241	11		
1107	234	240	239	5		
1108	228	242	246	18		
1109	251	257	274	23		
1110	241	268	274	33		
1111	259	265	269	10		
1112	226	219	210	-16		
n	12	12	12	12		
Mean	240	252	259	19		
S.D.	11	18	23	16		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : F0 before mating Day 1-15
 Dose : 4MBE 100 mg/kg

	/Day			Body weight	Unit : g	Species : Rat
Animal No.	1	8	15	gain		
2101	243	258	278	35		
2102	243	258	262	19		
2103	239	258	271	32		
2104	233	240	255	22		
2105	235	249	260	25		
2106	231	235	240	9		
2107	243	247	253	10		
2108	247	259	268	21		
2109	258	260	264	6		
2110	254	261	267	13		
2111	257	281	295	38		
2112	229	228	242	13		
n	12	12	12	12		
Mean	243	253	263	20		
S.D.	10	14	15	11		

4MBE : Benzenemethanol, 4-methyl-

Appendix 3 - 7

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : F0 before mating Day 1-15
Dose : 4MBE 300 mg/kg

Study No. : R-1273

	/Day			Body weight	Unit : g	Species : Rat
Animal No.	1	8	15	gain		
3101	226	241	254	28		
3102	236	253	270	34		
3103	236	261	279	43		
3104	233	248	261	28		
3105	261	263	288	27		
3106	255	268	275	20		
3107	236	254	271	35		
3108	230	240	260	30		
3109	232	251	269	37		
3110	237	248	259	22		
3111	256	284	295	39		
3112	221	229	239	18		
n	12	12	12	12		
Mean	238	253	268	30		
S.D.	12	14	15	8		

4MBE : Benzenemethanol, 4-methyl-

Appendix 3 - 8

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : F0 before mating Day 1-15
Dose : 4MBE 1000 mg/kg

Study No. : R-1273

	/Day			Body weight	Unit : g	Species : Rat
Animal No.	1	8	15	gain		
4101	252	277	296	44		
4102	217	238	257	40		
4103	243	251	266	23		
4104	224	261	257	33		
4105	230	260	272	42		
4106	254	282	297	43		
4107	239	265	287	48		
4108	244	270	279	35		
4109	237	270	304	67		
4110	240	275	277	37		
4111	223	255	267	44		
4112	255	282	319	64		
n	12	12	12	12		
Mean	238	266	282	43		
S.D.	13	13	19	12		

4MBE : Benzenemethanol, 4-methyl-

Reproduction / developmental toxicity screening test					Period : F0 gestation Day 0-25	Unit : g	Species : Rat
	Body weight Sex : Female /Day				Dose : 4MBE 0 mg/kg		
Animal No.	0	7	14	20	Body weight gain		
1101	274	310	345	417	143		
1102	270	312	355	433	163		
1103	300	337	366	455	155		
1104	241	281	320	410	169		
1105	298	330	378	458	160		
1106	248	293	330	415	167		
1107	238	283	331	417	179		
1108	259	293	326	412	153		
1109	277	313	356	433	156		
1110	282	337	377	462	180		
1111	279	335	383	486	207		
1112	235	270	310	394	159		
n	12	12	12	12	12		
Mean	267	308	348	433	166		
S.D.	22	24	25	27	17		

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Body weight				Body weight gain
	/Day				
	0	7	14	20	
2101	283	324	371	472	189
2102	315	333	363	435	120
2103	270	297	324	413	143
2104	260	302	339	430	170
2105	266	312	364	452	186
2106	246	285	317	401	155
2107	273	314	360	454	181
2108	271	307	336	400	129
2110	282	310	349	424	142
2111	308	340	381	483	175
2112	246	286	324	403	157
n	11	11	11	11	11
Mean	275	310	348	433	159
S.D.	22	18	21	29	23

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Body weight				Body weight gain	Unit : g	Species : Rat
	/Day						
	0	7	14	20			
3101	260	289	339	426	166		
3102	275	304	339	424	149		
3103	291	327	372	463	172		
3104	273	312	360	449	176		
3105	288	328	365	439	151		
3106	282	314	366	451	169		
3107	280	315	357	440	160		
3108	249	289	320	390	141		
3109	275	315	351	446	171		
3110	322	347	385	473	151		
3111	298	341	374	460	162		
3112	253	302	351	442	189		
n	12	12	12	12	12		
Mean	279	315	357	442	163		
S.D.	20	18	18	22	14		

4MBE :Benzenemethanol, 4-methyl-

Appendix 3 - 12

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : F0 lactation Day 0-14
 Dose : 4MBE 0 mg/kg

Study No. : R-1273

Animal No.	/Day				Body weight gain	Unit : g	Species : Rat
	0	4	7	13			
1101	310	343	342	363	53		
1102	335	341	352	367	32		
1103	342	367	367	389	47		
1104	281	309	304	331	50		
1105	363	358	357	373	10		
1106	336	333	334	358	22		
1107	301	310	318	350	49		
1108	293	331	336	360	67		
1109	337	348	352	380	43		
1110	356	368	359	381	25		
1111	355	382	371	399	44		
1112	243	299	300	320	77		
n	12	12	12	12	12		
Mean	321	341	341	364	43		
S.D.	36	26	23	23	19		

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Body weight				Body weight gain
	/Day	0	4	7	13
2101		364	345	356	381
2102		345	373	360	372
2103		323	325	332	353
2104		316	328	329	341
2105		354	379	368	384
2106		317	320	325	350
2107		338	356	358	370
2108		335	327	337	342
2110		364	337	346	348
2111		340	378	377	388
2112		311	316	317	330
n		11	11	11	11
Mean		337	344	346	360
S.D.		19	24	19	20

Unit : g

Species : Rat

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : F0 lactation Day 0-14
 Dose : 4MBE 300 mg/kg

Animal No.	/Day				Body weight gain	Unit : g	Species : Rat
	0	4	7	13			
3101	318	316	323	352	34		
3102	307	328	335	345	38		
3103	372	363	384	393	21		
3104	359	375	371	392	33		
3105	334	346	359	376	42		
3106	380	369	356	364	-16		
3107	348	345	348	362	14		
3108	300	317	324	329	29		
3109	334	346	343	348	14		
3110	353	346	348	367	14		
3111	341	357	361	378	37		
3112	316	345	345	384	68		
n	12	12	12	12	12		
Mean	339	346	350	366	27		
S.D.	25	19	18	20	20		

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Period : Administration (non-mating group)							Body weight gain	Unit : g	Species : Rat
	/Day	1	8	15	22	29	36	42		
5101		249	264	273	276	291	301	293	44	
5102		233	245	266	285	302	314	336	103	
5103		250	263	286	295	307	325	330	80	
5104		230	253	269	275	295	311	308	78	
5105		238	260	276	281	280	296	308	70	
5106		240	254	265	289	303	303	306	66	
5107		243	259	268	287	297	299	296	53	
5108		236	248	258	264	278	293	278	42	
5109		242	254	260	270	287	298	301	59	
5110		251	268	275	291	302	300	306	55	
n		10	10	10	10	10	10	10	10	
Mean		241	257	270	281	294	304	306	65	
S.D.		7	7	8	10	10	10	17	19	

4MBE :Benzenemethanol, 4-methyl-

Main: Reproduction/developmental toxicity screening test-Rat									
	Body weight	Period : Administration (non-mating group)							
	Sex : Female	Dose : 4MBE 1000 mg/kg						Unit : g	Species : Rat
	/Day							Body weight	
Animal No.	1	8	15	22	29	36	42	gain	
6101	242	266	292	292	287	315	307	65	
6102	235	268	306	301	312	342	355	120	
6103	249	265	269	288	293	309	307	58	
6104	248	273	287	303	313	323	334	86	
6105	230	242	267	257	272	282	282	52	
6106	238	254	270	268	273	281	272	34	
6107	252	261	274	284	291	289	301	49	
6108	238	256	269	278	278	294	296	58	
6109	233	254	261	263	276	288	293	60	
6110	243	254	269	274	279	292	296	53	
n	10	10	10	10	10	10	10	10	
Mean	241	259	276	281	287	302	304	64	
S.D.	7	9	14	16	15	20	24	24	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Male
Period : Recovery Day 1-15
Dose : 4MBE 0 mg/kg

Animal No.	/Day			Body weight gain	Unit : g	Species : Rat
	1	8	14			
1008	490	507	517	27		
1009	579	592	598	19		
1010	554	575	579	25		
1011	542	561	575	33		
1012	546	559	572	26		
n	5	5	5	5		
Mean	542	559	568	26		
S.D.	33	32	30	5		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Male
Period : Recovery Day 1-15
Dose : 4MBE 1000 mg/kg

Animal No.	/Day			Body weight gain	Unit : g	Species : Rat
	1	8	14			
4008	493	499	508	15		
4009	575	604	622	47		
4010	528	539	558	30		
4011	477	483	500	23		
4012	469	499	523	54		
n	5	5	5	5		
Mean	508	525	542	34		
S.D.	44	49	50	16		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Body weight
 Sex : Female
 Period : Recovery Day 1-15 (non-mating group)
 Dose : 4MBE 0 mg/kg

Animal No.	/Day			Body weight gain	Unit : g	Species : Rat
	1	8	14			
5106	303	315	318	15		
5107	298	308	310	12		
5108	289	294	302	13		
5109	305	316	331	26		
5110	299	310	316	17		
n	5	5	5	5		
Mean	299	309	315	17		
S.D.	6	9	11	6		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight
Sex : Female
Period : Recovery Day 1-15 (non-mating group)
Dose : 4MBE 1000 mg/kg

Unit : g Species : Rat

Animal No.	/Day			Body weight gain
	1	8	14	
6106	275	288	292	17
6107	299	297	294	-5
6108	299	287	294	-5
6109	300	283	292	-8
6110	296	291	296	0
n	5	5	5	5
Mean	294	289	294	0
S.D.	11	5	2	10

4MBE : Benzenemethanol, 4-methyl-

Appendix 4 - 1

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 before mating Day 1-15
Dose : 4MBE 0 mg/kg

Study No. : R-1273

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
1001	27	25	25	77		
1002	26	29	27	82		
1003	23	30	25	78		
1004	25	21	24	70		
1005	25	25	22	72		
1006	28	29	27	84		
1007	29	30	28	87		
1008	22	20	21	63		
1009	27	27	27	81		
1010	25	24	27	76		
1011	28	24	24	76		
1012	30	27	29	86		
n	12	12	12	12		
Mean	26	26	26	78		
S.D.	2	3	2	7		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Male
 Period : F0 before mating Day 1-15
 Dose : 4MBE 100 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
2001	24	23	23	70		
2002	27	26	29	82		
2003	24	30	29	83		
2004	24	28	23	75		
2005	23	26	24	73		
2006	27	27	27	81		
2007	24	23	22	69		
2008	23	29	27	79		
2009	24	24	21	69		
2010	23	24	22	69		
2011	29	25	28	82		
2012	25	26	29	80		
n	12	12	12	12		
Mean	25	26	25	76		
S.D.	2	2	3	6		

4MBE : Benzenemethanol, 4-methyl-

Appendix 4 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 before mating Day 1-15
Dose : 4MBE 300 mg/kg

Study No. : R-1273

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
3001	25	25	27	77		
3002	24	25	24	73		
3003	24	29	26	79		
3004	21	25	26	72		
3005	28	30	32	90		
3006	26	25	24	75		
3007	25	27	27	79		
3008	23	23	21	67		
3009	28	26	28	82		
3010	21	24	23	68		
3011	29	28	27	84		
3012	24	24	25	73		
n	12	12	12	12		
Mean	25	26	26	77		
S.D.	3	2	3	7		

4MBE : Benzenemethanol, 4-methyl-

Appendix 4 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 before mating Day 1-15
Dose : 4MBE 1000 mg/kg

Study No. : R-1273

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
4001	22	26	28	76		
4002	21	24	26	71		
4003	18	24	24	66		
4004	20	24	23	67		
4005	19	22	24	65		
4006	17	25	31	73		
4007	22	27	27	76		
4008	20	25	29	74		
4009	32	34	31	97		
4010	25	25	25	75		
4011	24	14	26	64		
4012	25	21	29	75		
n	12	12	12	12		
Mean	22	24	27	73		
S.D.	4	5	3	9		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 mating Day 15-43
Dose : 4MBE 0 mg/kg

	Unit : g			Species : Rat
	/Day			
Animal No.	30	36	42	
1001	27	24	24	
1002	27	27	28	
1003	26	25	23	
1004	25	26	25	
1005	25	27	26	
1006	27	31	27	
1007	27	27	29	
1008	24	22	23	
1009	23	23	28	
1010	24	28	29	
1011	24	28	27	
1012	26	23	26	
n	12	12	12	
Mean	25	26	26	
S.D.	1	3	2	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 mating Day 15-43
Dose : 4MBE 100 mg/kg

	Unit : g			Species : Rat
	/Day			
Animal No.	30	36	42	
2001	19	23	23	
2002	26	30	31	
2003	21	27	26	
2004	23	25	25	
2005	24	25	25	
2006	26	28	28	
2007	25	25	28	
2008	25	32	28	
2009	25	25	27	
2010	22	25	28	
2011	26	27	29	
2012	24	22	26	
n	12	12	12	
Mean	24	26	27	
S.D.	2	3	2	

4MBE : Benzenemethanol, 4-methyl-

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 mating Day 15-43
Dose : 4MBE 300 mg/kg

Study No. : R-1273

	Unit : g			Species : Rat
Animal No.	/Day			
	30	36	42	
3001	25	27	27	
3002	24	29	29	
3003	26	30	32	
3004	23	26	29	
3005	30	31	36	
3006	20	24	27	
3007	27	27	33	
3008	20	23	21	
3009	25	32	30	
3010	22	25	25	
3011	28	26	33	
3012	22	28	25	
n	12	12	12	
Mean	24	27	29	
S.D.	3	3	4	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : F0 mating Day 15-43
Dose : 4MBE 1000 mg/kg

	Unit : g			Species : Rat
	/Day			
Animal No.	30	36	42	
4001	25	27	27	
4002	27	27	27	
4003	24	26	25	
4004	19	26	23	
4005	25	27	25	
4006	25	30	28	
4007	22	28	27	
4008	26	31	28	
4009	26	34	32	
4010	31	28	30	
4011	25	22	30	
4012	25	27	29	
n	12	12	12	
Mean	25	28	28	
S.D.	3	3	3	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption Period : F0 before mating Day 1-15
 Sex : Female Dose : 4MBE 0 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
1101	17	19	17	53		
1102	15	21	16	52		
1103	14	21	17	52		
1104	8	19	20	47		
1105	15	17	18	50		
1106	18	14	17	49		
1107	13	15	14	42		
1108	17	18	14	49		
1109	21	18	21	60		
1110	21	20	19	60		
1111	13	19	15	47		
1112	14	12	8	34		
n	12	12	12	12		
Mean	16	18	16	50		
S.D.	4	3	3	7		

4MBE : Benzenemethanol, 4-methyl-

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : F0 before mating Day 1-15
Dose : 4MBE 100 mg/kg

Study No. : R-1273

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
2101	17	18	18	53		
2102	14	19	19	52		
2103	18	18	18	54		
2104	17	16	20	53		
2105	18	19	20	57		
2106	13	16	12	41		
2107	17	16	15	48		
2108	11	19	17	47		
2109	15	16	13	44		
2110	16	19	13	48		
2111	16	22	21	59		
2112	19	12	16	47		
n	12	12	12	12		
Mean	16	18	17	50		
S.D.	2	3	3	5		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : F0 before mating Day 1-15
 Dose : 4MBE 300 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
3101	13	19	19	51		
3102	17	17	22	56		
3103	17	20	19	56		
3104	16	17	19	52		
3105	13	13	19	45		
3106	12	23	19	54		
3107	15	18	17	50		
3108	11	16	20	47		
3109	15	19	20	54		
3110	16	19	18	53		
3111	17	22	21	60		
3112	18	18	19	55		
n	12	12	12	12		
Mean	15	18	19	53		
S.D.	2	3	1	4		

4MBE : Benzenemethanol, 4-methyl-

Appendix 4 - 12

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : F0 before mating Day 1-15
Dose : 4MBE 1000 mg/kg

Study No. : R-1273

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
4101	17	17	19	53		
4102	11	14	21	46		
4103	16	18	21	55		
4104	12	19	15	46		
4105	14	17	18	49		
4106	15	18	22	55		
4107	12	20	20	52		
4108	15	18	21	54		
4109	16	17	22	55		
4110	18	21	21	60		
4111	10	17	18	45		
4112	17	21	28	66		
n	12	12	12	12		
Mean	14	18	21	53		
S.D.	3	2	3	6		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption Period : F0 gestation Day 0-25
 Sex : Female Dose : 4MBE 0 mg/kg

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	1	7	14	20			
1101	18	25	24	25	92		
1102	20	24	21	25	90		
1103	24	23	16	23	86		
1104	22	20	19	23	84		
1105	23	22	25	28	98		
1106	21	23	19	23	86		
1107	15	21	20	23	79		
1108	21	23	22	22	88		
1109	21	23	24	27	95		
1110	27	25	27	25	104		
1111	21	27	28	26	102		
1112	16	21	22	23	82		
n	12	12	12	12	12		
Mean	21	23	22	24	91		
S.D.	3	2	4	2	8		

4MBE : Benzenemethanol, 4-methyl-

Appendix 4 - 14

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : F0 gestation Day 0-25
Dose : 4MBE 100 mg/kg

Study No. : R-1273

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	1	7	14	20			
2101	20	22	25	28	95		
2102	13	22	22	24	81		
2103	20	17	20	24	81		
2104	21	21	21	24	87		
2105	20	24	30	31	105		
2106	18	22	22	23	85		
2107	22	22	25	31	100		
2108	16	23	21	22	82		
2110	17	20	25	27	89		
2111	21	22	24	26	93		
2112	20	21	18	23	82		
n	11	11	11	11	11		
Mean	19	21	23	26	89		
S.D.	3	2	3	3	8		

4MBE :Benzenemethanol, 4-methyl-

Appendix 4 - 15

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : F0 gestation Day 0-25
 Dose : 4MBE 300 mg/kg

Study No. : R-1273

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	1	7	14	20			
3101	18	23	26	23	90		
3102	20	22	24	20	86		
3103	22	21	26	26	95		
3104	16	25	27	28	96		
3105	21	21	24	26	92		
3106	12	26	31	31	100		
3107	20	22	20	23	85		
3108	17	19	20	21	77		
3109	23	24	26	30	103		
3110	17	22	24	24	87		
3111	22	24	24	26	96		
3112	22	23	23	27	95		
n	12	12	12	12	12		
Mean	19	23	25	25	92		
S.D.	3	2	3	3	7		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : F0 lactation Day 0-14
 Dose : 4MBE 0 mg/kg

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	2	4	7	13			
1101	35	48	45	51	179		
1102	28	40	48	67	183		
1103	27	45	44	64	180		
1104	36	47	39	69	191		
1105	31	37	42	65	175		
1106	24	43	37	60	164		
1107	34	39	44	69	186		
1108	28	52	44	62	186		
1109	32	43	45	59	179		
1110	40	50	44	68	202		
1111	40	52	44	71	207		
1112	25	39	37	53	154		
n	12	12	12	12	12		
Mean	32	45	43	63	182		
S.D.	5	5	3	6	15		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : F0 lactation Day 0-14
 Dose : 4MBE 100 mg/kg

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	2	4	7	13			
2101	23	33	43	61	160		
2102	34	45	47	61	187		
2103	25	40	46	62	173		
2104	32	43	39	67	181		
2105	39	48	51	77	215		
2106	25	35	40	63	163		
2107	33	50	52	65	200		
2108	19	28	43	56	146		
2110	21	31	38	55	145		
2111	37	50	49	61	197		
2112	30	36	35	49	150		
n	11	11	11	11	11		
Mean	29	40	44	62	174		
S.D.	7	8	6	7	24		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : F0 lactation Day 0-14
 Dose : 4MBE 300 mg/kg

Animal No.	/Day				Total food consumption	Unit : g	Species : Rat
	2	4	7	13			
3101	23	45	44	71	183		
3102	31	45	49	61	186		
3103	24	49	51	68	192		
3104	39	44	46	62	191		
3105	31	43	49	59	182		
3106	21	36	39	56	152		
3107	24	41	46	59	170		
3108	31	43	47	54	175		
3109	30	43	44	59	176		
3110	23	38	44	58	163		
3111	34	45	49	66	194		
3112	34	51	44	65	194		
n	12	12	12	12	12		
Mean	29	44	46	62	180		
S.D.	6	4	3	5	13		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : Administration Day 1-15(non-mating group)
 Dose : 4MBE 0 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	15			
5101	12	21	20	53		
5102	17	16	19	52		
5103	15	19	23	57		
5104	14	21	20	55		
5105	18	23	21	62		
5106	16	16	17	49		
5107	14	17	14	45		
5108	13	16	18	47		
5109	15	18	22	55		
5110	17	18	19	54		
n	10	10	10	10		
Mean	15	19	19	53		
S.D.	2	2	3	5		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Administration Day 1-15(non-mating group)
Dose : 4MBE 1000 mg/kg

Unit : g Species : Rat

Animal No.	/Day			Total food consumption
	2	8	15	
6101	19	20	23	62
6102	17	23	26	66
6103	16	18	20	54
6104	17	21	18	56
6105	13	19	23	55
6106	20	13	18	51
6107	17	17	20	54
6108	15	19	19	53
6109	18	18	19	55
6110	16	16	19	51
n	10	10	10	10
Mean	17	18	21	56
S.D.	2	3	3	5

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Administration Day 15-43(non-mating group)
Dose : 4MBE 0 mg/kg

Animal No.	/Day			Unit : g	Species : Rat
	30	36	42		
5101	11	21	11		
5102	22	18	24		
5103	20	22	20		
5104	13	23	15		
5105	16	23	21		
5106	18	16	20		
5107	14	14	15		
5108	14	18	14		
5109	21	22	23		
5110	18	18	21		
n	10	10	10		
Mean	17	20	18		
S.D.	4	3	4		

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Administration Day 15-43(non-mating group)
Dose : 4MBE 1000 mg/kg

	Unit : g			Species : Rat
Animal No.	/Day			
	30	36	42	
6101	19	21	16	
6102	21	27	22	
6103	20	22	19	
6104	20	22	22	
6105	12	19	19	
6106	13	16	15	
6107	16	15	19	
6108	15	19	18	
6109	17	20	22	
6110	19	20	18	
n	10	10	10	
Mean	17	20	19	
S.D.	3	3	2	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Male
 Period : Recovery Day 1-15
 Dose : 4MBE 0 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	14			
1008	21	26	23	70		
1009	25	27	24	76		
1010	24	27	25	76		
1011	23	27	29	79		
1012	28	25	27	80		
n	5	5	5	5		
Mean	24	26	26	76		
S.D.	3	1	2	4		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Male
Period : Recovery Day 1-15
Dose : 4MBE 1000 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	14			
4008	22	21	24	67		
4009	29	30	36	95		
4010	29	29	32	90		
4011	27	23	24	74		
4012	27	26	28	81		
n	5	5	5	5		
Mean	27	26	29	81		
S.D.	3	4	5	11		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Food consumption
 Sex : Female
 Period : Recovery Day 1-15 (non-mating group)
 Dose : 4MBE 0 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	14			
5106	16	20	17	53		
5107	15	17	15	47		
5108	15	16	18	49		
5109	20	24	26	70		
5110	20	21	21	62		
n	5	5	5	5		
Mean	17	20	19	56		
S.D.	3	3	4	10		

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Food consumption
Sex : Female
Period : Recovery Day 1-15 (non-mating group)
Dose : 4MBE 1000 mg/kg

Animal No.	/Day			Total food consumption	Unit : g	Species : Rat
	2	8	14			
6106	17	19	20	56		
6107	11	17	15	43		
6108	17	13	17	47		
6109	19	13	19	51		
6110	17	18	17	52		
n	5	5	5	5		
Mean	16	16	18	50		
S.D.	3	3	2	5		

4MBE :Benzenemethanol, 4-methyl-

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
1008	>=9.0	1+	1+	-	-	-	+/-	Y	
1009	8.5	+/-	+/-	-	+/-	-	+/-	Y	
1010	8.0	-	-	-	-	-	+/-	Y	
1011	8.0	+/-	-	-	+/-	-	+/-	Y	
1012	>=9.0	+/-	+/-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-: 15 , 1+: 30 , 2+: 100 , 3+: >=300 mg/dL

Ketones) -: Negative , +/-: 5 , 1+: 15 , 2+: 40 , 3+: 80 mg/dL

Glucose) -: Negative , 1+: 100 , 2+: 250 , 3+: 500 , 4+: >=1000 mg/dL

Occult Blood) -: Negative , +/-: 0.015 , 1+: 0.062 , 2+: 0.135 , 3+: 0.405 mg/dL

Bilirubin) -: Negative , 1+: 0.8 , 2+: 1.6 , 3+: 3.2 mg/dL

Urobilinogen) +/-: 0.1 - 1.0 , 1+: 2.0 , 2+: 4.0 , 3+: >=8.0 Ehrlich U/dL

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
2008	7.0	+/-	+/-	-	-	-	+/-	Y	
2009	7.5	+/-	+/-	-	+/-	-	+/-	Y	
2010	8.0	-	1+	-	+/-	-	+/-	Y	
2011	8.5	+/-	-	-	+/-	-	+/-	Y	
2012	7.5	+/-	1+	-	+/-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL

Ketones) -: Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Glucose) -: Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL

Occult Blood) -: Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL

Bilirubin) -: Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
3008	8.5	+/-	-	-	-	-	+/-	Y	
3009	7.0	1+	-	-	-	-	+/-	Y	
3010	7.5	+/-	+/-	-	-	-	+/-	Y	
3011	8.0	+/-	-	-	-	-	+/-	Y	
3012	7.0	-	-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-: 15 , 1+: 30 , 2+: 100 , 3+: >=300 mg/dL

Ketones) -: Negative , +/-: 5 , 1+: 15 , 2+: 40 , 3+: 80 mg/dL

Glucose) -: Negative , 1+: 100 , 2+: 250 , 3+: 500 , 4+: >=1000 mg/dL

Occult Blood) -: Negative , +/-: 0.015 , 1+: 0.062 , 2+: 0.135 , 3+: 0.405 mg/dL

Bilirubin) -: Negative , 1+: 0.8 , 2+: 1.6 , 3+: 3.2 mg/dL

Urobilinogen) +/-: 0.1 - 1.0 , 1+: 2.0 , 2+: 4.0 , 3+: >=8.0 Ehrlich U/dL

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
4008	7.5	-	-	-	-	-	+/-	Y	
4009	7.5	-	-	-	-	-	+/-	Y	
4010	8.0	+/-	-	-	+/-	-	+/-	Y	
4011	5.5	1+	+/-	-	-	-	+/-	Y	
4012	7.5	-	-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-: 15 , 1+: 30 , 2+: 100 , 3+: >=300 mg/dL

Ketones) -: Negative , +/-: 5 , 1+: 15 , 2+: 40 , 3+: 80 mg/dL

Glucose) -: Negative , 1+: 100 , 2+: 250 , 3+: 500 , 4+: >=1000 mg/dL

Occult Blood) -: Negative , +/-: 0.015 , 1+: 0.062 , 2+: 0.135 , 3+: 0.405 mg/dL

Bilirubin) -: Negative , 1+: 0.8 , 2+: 1.6 , 3+: 3.2 mg/dL

Urobilinogen) +/-: 0.1 - 1.0 , 1+: 2.0 , 2+: 4.0 , 3+: >=8.0 Ehrlich U/dL

Reproduction/developmental toxicity screening test in rats								
Urinalysis	Stage : Week 6 of administration (non-mating group)							Species : Rat
	Sex : Female	Dose : 4MBE 0 mg/kg						
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color
Animal No.								
5106	8.5	-	-	-	-	-	+/-	Y
5107	8.5	-	-	-	-	-	+/-	Y
5108	8.5	-	-	-	-	-	+/-	Y
5109	>=9.0	-	-	-	-	-	+/-	Y
5110	8.5	-	-	-	-	-	+/-	Y
n	5	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -:Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL

Ketones) -:Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Glucose) -:Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL

Occult Blood) -:Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL

Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Animal No.	Reproduction/developmental toxicity screening test in male rats								Species : Rat
	Urinalysis	Stage : Week 6 of administration (non-mating group)							
	Sex : Female	Dose : 4MBE 1000 mg/kg							
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
6106	6.5	-	-	-	-	-	+/-	Y	
6107	7.5	-	-	-	-	-	+/-	Y	
6108	7.5	-	-	-	-	-	+/-	Y	
6109	6.5	-	-	-	-	-	+/-	Y	
6110	6.5	-	-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE :Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -:Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL

Ketones) -:Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Glucose) -:Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL

Occult Blood) -:Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL

Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
1008	-	-	+/-	-	-	-	-
1009	-	-	+/-	-	-	-	-
1010	-	-	+/-	-	-	-	-
1011	-	-	+/-	-	-	-	-
1012	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Urinalysis

Stage : Week 6 of administration

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
2008	-	-	+/-	-	-	-	-
2009	-	-	+/-	-	-	-	-
2010	-	-	+/-	-	-	-	-
2011	-	-	+/-	-	-	-	-
2012	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Urinalysis

Stage : Week 6 of administration

Sex : Male

Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
3008	-	-	+/-	-	-	-	-
3009	-	-	+/-	-	-	-	-
3010	-	-	+/-	-	-	+/-	-
3011	-	-	+/-	-	-	-	-
3012	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Urinalysis

Stage : Week 6 of administration

Sex : Male

Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
4008	-	-	+/-	-	-	-	-
4009	-	-	+/-	-	-	-	-
4010	-	-	+/-	-	-	-	-
4011	-	-	+/-	-	-	-	-
4012	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Urinalysis

Stage : Week 6 of administration (non-mating group)

Sex : Female

Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
5106	-	-	+/-	-	-	-	-
5107	-	-	+/-	-	-	-	-
5108	-	-	+/-	-	-	-	-
5109	-	-	+/-	-	-	-	-
5110	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Urinalysis

Stage : Week 6 of administration (non-mating group)

Sex : Female

Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
6106	-	-	+/-	-	-	-	-
6107	-	-	+/-	-	-	-	-
6108	-	-	+/-	-	-	-	-
6109	-	-	+/-	-	-	-	-
6110	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 6 of administration
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
1008	34	11.5	2156	1.6	3.9	2.4
1009	35	17.4	1914	2.8	5.1	3.5
1010	47	24.7	1638	2.8	6.6	3.7
1011	42	21.7	1402	2.3	4.4	2.9
1012	41	16.8	1896	2.1	4.7	2.9
n	5	5	5	5	5	5
Mean	40	18.4	1801	2.3	4.9	3.1
S.D.	5	5.0	289	0.5	1.0	0.5

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Male
 Stage : Week 6 of administration
 Dose : 4MBE 100 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
2008	42	16.2	2106	2.5	5.3	3.2
2009	41	15.2	2222	2.2	5.1	3.3
2010	38	11.3	1944	1.8	3.0	2.1
2011	40	10.7	2190	1.8	3.6	2.5
2012	44	15.5	1866	2.3	4.0	3.0
n	5	5	5	5	5	5
Mean	41	13.8	2066	2.1	4.2	2.8
S.D.	2	2.6	155	0.3	1.0	0.5

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 6 of administration
Dose : 4MBE 300 mg/kg

							Species : Rat
Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	
3008	31	14.4	2062	2.0	4.1	2.7	
3009	46	16.9	2234	2.0	5.1	3.1	
3010	33	10.1	1976	1.4	2.7	1.7	
3011	43	26.3	1506	2.5	5.7	3.7	
3012	43	20.0	1866	2.1	4.9	3.5	
n	5	5	5	5	5	5	
Mean	39	17.5	1929	2.0	4.5	2.9	
S.D.	7	6.1	272	0.4	1.2	0.8	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Male
 Stage : Week 6 of administration
 Dose : 4MBE 1000 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	Species : Rat
4008	45	23.7	1800	2.4	5.3	3.1	
4009	60	31.8	1686	3.1	7.2	4.3	
4010	72	42.7	1138	2.9	6.2	3.8	
4011	45	19.1	1974	2.3	5.1	3.3	
4012	63	34.4	1262	2.1	5.6	2.9	
n	5	5	5	5	5	5	
Mean	57	30.3	1572	2.6	5.9	3.5	
S.D.	12	9.2	357	0.4	0.8	0.6	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Female
 Stage : Week 6 of administration (non-mating group)
 Dose : 4MBE 0 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	Species : Rat
5106	33	10.7	1684	1.1	2.9	1.6	
5107	36	15.5	1000	1.1	2.5	1.8	
5108	26	5.1	2588	0.9	1.9	1.1	
5109	27	6.2	2424	1.2	2.2	1.4	
5110	48	21.2	1020	1.7	3.1	2.2	
n	5	5	5	5	5	5	
Mean	34	11.7	1743	1.2	2.5	1.6	
S.D.	9	6.7	751	0.3	0.5	0.4	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Female
 Stage : Week 6 of administration (non-mating group)
 Dose : 4MBE 1000 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	Species : Rat
6106	49	23.8	1162	1.5	3.7	2.0	
6107	41	22.1	1386	1.5	3.7	2.1	
6108	48	23.2	1234	1.9	3.9	2.6	
6109	45	14.7	1556	1.2	3.0	1.7	
6110	56	29.7	1016	1.9	3.7	2.5	
n	5	5	5	5	5	5	
Mean	48	22.7	1271	1.6	3.6	2.2	
S.D.	6	5.4	208	0.3	0.3	0.4	

4MBE : Benzenemethanol, 4-methyl-

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
1008	8.5	1+	1+	-	-	-	+/-	Y	
1009	8.5	-	1+	-	+/-	-	+/-	Y	
1010	8.0	+/-	+/-	-	-	-	+/-	Y	
1011	8.5	-	-	-	+/-	-	+/-	Y	
1012	7.0	2+	1+	-	-	1+	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-: 15 , 1+: 30 , 2+: 100 , 3+: >=300 mg/dL

Ketones) -: Negative , +/-: 5 , 1+: 15 , 2+: 40 , 3+: 80 mg/dL

Glucose) -: Negative , 1+: 100 , 2+: 250 , 3+: 500 , 4+: >=1000 mg/dL

Occult Blood) -: Negative , +/-: 0.015 , 1+: 0.062 , 2+: 0.135 , 3+: 0.405 mg/dL

Bilirubin) -: Negative , 1+: 0.8 , 2+: 1.6 , 3+: 3.2 mg/dL

Urobilinogen) +/-: 0.1 - 1.0 , 1+: 2.0 , 2+: 4.0 , 3+: >=8.0 Ehrlich U/dL

Animal No.	Urinalysis								Species : Rat
	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	
4008	8.5	1+	1+	-	-	-	+/-	Y	
4009	8.5	+/-	1+	-	-	-	+/-	Y	
4010	8.5	-	-	-	+/-	-	+/-	Y	
4011	8.5	-	1+	-	-	-	+/-	Y	
4012	>=9.0	1+	1+	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL

Ketones) -: Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Glucose) -: Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL

Occult Blood) -: Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL

Bilirubin) -: Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Female
Stage : Week 2 of recovery (non-mating group)
Dose : 4MBE 0 mg/kg

	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	Species : Rat
Animal No.									
5106	6.5	-	+/-	-	-	-	+/-	Y	
5107	7.5	-	-	-	-	-	+/-	Y	
5108	8.5	1+	1+	-	-	1+	+/-	Y	
5109	8.5	-	-	-	-	-	+/-	Y	
5110	6.5	-	-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE : Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -: Negative , +/-: 15 , 1+: 30 , 2+: 100 , 3+: >=300 mg/dL

Ketones) -: Negative , +/-: 5 , 1+: 15 , 2+: 40 , 3+: 80 mg/dL

Glucose) -: Negative , 1+: 100 , 2+: 250 , 3+: 500 , 4+: >=1000 mg/dL

Occult Blood) -: Negative , +/-: 0.015 , 1+: 0.062 , 2+: 0.135 , 3+: 0.405 mg/dL

Bilirubin) -: Negative , 1+: 0.8 , 2+: 1.6 , 3+: 3.2 mg/dL

Urobilinogen) +/-: 0.1 - 1.0 , 1+: 2.0 , 2+: 4.0 , 3+: >=8.0 Ehrlich U/dL

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis Stage : Week 2 of recovery (non-mating group)
Sex : Female Dose : 4MBE 1000 mg/kg

	pH	Protein	Ketones	Glucose	Occult Blood	Bilirubin	Urobilinogen	Color	Species : Rat
Animal No.									
6106	8.5	-	-	-	-	-	+/-	Y	
6107	6.0	+/-	+/-	-	-	-	+/-	Y	
6108	8.5	+/-	1+	-	-	1+	+/-	Y	
6109	8.5	-	+/-	-	-	-	+/-	Y	
6110	8.5	+/-	+/-	-	-	-	+/-	Y	
n	5	5	5	5	5	5	5	5	

4MBE :Benzenemethanol, 4-methyl-

Color LY: Light Yellow Y: Yellow DY: Dark Yellow BR: Brown RE: Red RB: Reddish brown WH: White BL: Blue CL: Colorless OT: Other

Protein) -:Negative , +/-:15 , 1+:30 , 2+:100 , 3+:>=300 mg/dL

Ketones) -:Negative , +/-:5 , 1+:15 , 2+:40 , 3+:80 mg/dL

Glucose) -:Negative , 1+:100 , 2+:250 , 3+:500 , 4+:>=1000 mg/dL

Occult Blood) -:Negative , +/-:0.015 , 1+:0.062 , 2+:0.135 , 3+:0.405 mg/dL

Bilirubin) -:Negative , 1+:0.8 , 2+:1.6 , 3+:3.2 mg/dL

Urobilinogen) +/-:0.1 - 1.0 , 1+:2.0 , 2+:4.0 , 3+:>=8.0 Ehrlich U/dL

Urinalysis

Stage : Week 2 of recovery

Sex : Male

Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
1008	-	-	+/-	-	-	-	-
1009	-	-	+/-	-	-	+/-	-
1010	-	-	+/-	-	-	+/-	-
1011	-	-	+/-	-	-	-	-
1012	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Animal No.	Urinalysis							Species : Rat
	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate	
4008	-	-	+/-	-	-	-	-	
4009	-	-	+/-	-	-	-	-	
4010	-	-	+/-	-	-	-	-	
4011	-	-	+/-	-	-	+/-	-	
4012	-	-	+/-	-	-	-	-	
n	5	5	5	5	5	5	5	

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Species : Rat

Animal No.	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate
5106	-	-	+/-	-	-	-	-
5107	-	-	+/-	-	-	-	-
5108	-	-	+/-	-	-	-	-
5109	-	-	+/-	-	-	+/-	-
5110	-	-	+/-	-	-	-	-
n	5	5	5	5	5	5	5

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Female
Stage : Week 2 of recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

	RBC	WBC	Squamous epithelial cells	Small round epithelial cells	Cast	Crystal phosphate salts	Crystal calcium oxalate	Species : Rat
Animal No.								
6106	-	-	+/-	-	-	-	-	
6107	-	-	+/-	-	-	-	-	
6108	-	-	+/-	-	-	-	-	
6109	-	-	+/-	-	-	-	-	
6110	-	-	+/-	-	-	-	+/-	
n	5	5	5	5	5	5	5	

4MBE :Benzenemethanol, 4-methyl-

RBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

WBC) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Squamous epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Small round epithelial cells) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Cast) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal phosphate salts) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Crystal calcium oxalate) -:Negative , +/-:Slight , 1+:Mild , 2+:Moderate , 3+:Severe

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 2 of recovery
Dose : 4MBE 0 mg/kg

Animal No.	Water	Urine	Osmotic	U-Na	U-K	U-Cl	Species : Rat
	consumption mL/24h	volume mL/24h	pressure mOsm/kg	mmol/24h	mmol/24h	mmol/24h	
1008	31	5.6	2670	1.0	2.4	1.3	
1009	38	14.6	2256	2.6	5.1	3.2	
1010	46	16.2	1252	2.0	2.9	2.2	
1011	51	26.8	1628	3.9	6.3	4.7	
1012	44	11.1	1978	1.5	3.4	2.0	
n	5	5	5	5	5	5	
Mean	42	14.9	1957	2.2	4.0	2.7	
S.D.	8	7.8	549	1.1	1.6	1.3	

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Urinalysis
Sex : Male
Stage : Week 2 of recovery
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h
4008	30	9.8	1916	1.4	3.0	1.9
4009	43	12.1	1850	1.5	3.7	2.5
4010	53	29.3	1346	2.9	6.4	4.2
4011	53	14.5	1634	1.5	3.9	2.3
4012	55	19.0	1308	1.7	3.8	2.8
n	5	5	5	5	5	5
Mean	47	16.9	1611	1.8	4.2	2.7
S.D.	10	7.7	280	0.6	1.3	0.9

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Female
 Stage : Week 2 of recovery (non-mating group)
 Dose : 4MBE 0 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	Species : Rat
5106	43	5.4	1600	0.8	1.2	0.8	
5107	37	5.9	1542	0.6	1.4	0.8	
5108	27	4.9	2852	1.1	2.1	1.6	
5109	36	4.3	2358	0.8	1.4	1.1	
5110	53	15.6	1172	1.2	2.5	1.4	
n	5	5	5	5	5	5	
Mean	39	7.2	1905	0.9	1.7	1.1	
S.D.	10	4.7	683	0.2	0.6	0.4	

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Urinalysis
 Sex : Female
 Stage : Week 2 of recovery (non-mating group)
 Dose : 4MBE 1000 mg/kg

Animal No.	Water consumption mL/24h	Urine volume mL/24h	Osmotic pressure mOsm/kg	U-Na mmol/24h	U-K mmol/24h	U-Cl mmol/24h	Species : Rat
6106	35	10.1	1846	1.6	2.9	2.1	
6107	28	4.5	2374	0.7	1.7	1.1	
6108	32	6.0	2028	0.9	1.9	1.3	
6109	32	7.8	1526	0.8	1.8	1.1	
6110	41	10.5	1352	1.1	2.1	1.4	
n	5	5	5	5	5	5	
Mean	34	7.8	1825	1.0	2.1	1.4	
S.D.	5	2.6	405	0.4	0.5	0.4	

4MBE : Benzenemethanol, 4-methyl-

Hematology and Coagulation tests

Stage : End of administration

Sex : Male

Dose : 4MBE 0 mg/kg

Species : Rat

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL	10 ² /μL
1001	864	15.0	44.6	51.6	17.4	33.7	12.4	167.0	86.0	97.6	67.6
1002	899	16.3	48.3	53.7	18.2	33.8	12.5	236.8	114.8	81.4	61.7
1003	833	15.4	45.7	54.9	18.5	33.7	12.5	182.8	112.3	83.0	60.4
1004	859	15.5	45.4	52.9	18.0	34.1	12.5	167.5	108.1	66.8	50.6
1005	874	15.7	46.4	53.1	17.9	33.7	13.8	220.2	108.2	121.8	94.5
n	5	5	5	5	5	5	5	5	5	5	5
Mean	866	15.6	46.1	53.2	18.0	33.8	12.7	194.9	105.9	90.1	67.0
S.D.	24	0.5	1.4	1.2	0.4	0.2	0.6	31.9	11.5	20.8	16.6

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
1001	24.4	1.1	0.3	2.6	1.6	13.4	18.7	245
1002	13.5	1.7	0.2	2.8	1.5	12.5	16.7	275
1003	19.0	1.4	0.2	1.5	0.6	12.3	17.5	254
1004	13.6	0.9	0.2	1.2	0.4	14.6	27.8	291
1005	19.4	1.0	0.4	4.1	2.4	13.6	18.5	329
n	5	5	5	5	5	5	5	5
Mean	18.0	1.2	0.3	2.4	1.3	13.3	19.8	279
S.D.	4.6	0.3	0.1	1.2	0.8	0.9	4.5	33

4MBE : Benzenemethanol, 4-methyl-

Hematology and Coagulation tests

Stage : End of administration

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
2001	859	15.1	44.6	51.9	17.5	33.8	11.9	165.7	95.5	68.9	51.9
2002	826	14.9	44.6	54.0	18.0	33.4	13.9	247.2	135.2	137.1	103.6
2003	872	16.0	46.8	53.7	18.3	34.2	11.4	168.8	102.4	98.0	64.0
2004	798	15.0	42.9	53.8	18.8	34.9	13.3	180.2	114.0	97.4	77.9
2005	881	16.7	49.0	55.7	18.9	34.0	12.0	216.5	116.3	59.3	46.0
n	5	5	5	5	5	5	5	5	5	5	5
Mean	847	15.5	45.6	53.8	18.3	34.1	12.5	195.7	112.7	92.1	68.7
S.D.	35	0.8	2.4	1.3	0.6	0.6	1.1	35.2	15.2	30.4	23.0

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
2001	13.5	0.9	0.1	1.6	0.9	14.3	18.9	252
2002	26.7	1.4	0.4	4.1	1.0	12.6	16.5	322
2003	28.4	1.0	0.2	2.6	1.9	13.1	15.9	282
2004	13.7	1.7	0.1	2.6	1.4	12.7	18.6	269
2005	9.8	0.6	0.1	1.9	1.0	13.5	16.6	301
n	5	5	5	5	5	5	5	5
Mean	18.4	1.1	0.2	2.6	1.2	13.2	17.3	285
S.D.	8.5	0.4	0.1	1.0	0.4	0.7	1.4	27

4MBE : Benzenemethanol, 4-methyl-

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
3001	842	15.2	45.0	53.4	18.0	33.7	13.6	249.4	87.1	108.3	87.4
3002	876	15.7	47.1	53.8	17.9	33.4	12.2	168.2	102.0	70.7	55.5
3003	867	14.7	44.3	51.1	17.0	33.3	12.6	202.5	119.0	96.5	78.4
3004	870	15.5	45.7	52.6	17.9	34.0	13.0	204.6	119.2	59.3	45.4
3005	798	14.9	41.7	52.2	18.6	35.7	13.4	208.1	91.3	98.3	67.2
n	5	5	5	5	5	5	5	5	5	5	5
Mean	851	15.2	44.8	52.6	17.9	34.0	13.0	206.6	103.7	86.6	66.8
S.D.	32	0.4	2.0	1.1	0.6	1.0	0.6	28.9	15.1	20.6	16.9

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
3001	15.5	2.3	0.2	2.1	0.7	12.2	15.2	266
3002	10.1	1.4	0.1	2.6	1.0	12.9	18.9	257
3003	14.1	0.9	0.1	2.3	0.7	13.2	16.8	260
3004	11.5	0.5	0.1	1.4	0.4	13.7	19.8	294
3005	23.6	2.0	0.1	3.5	1.8	13.5	16.1	288
n	5	5	5	5	5	5	5	5
Mean	15.0	1.4	0.1	2.4	0.9	13.1	17.4	273
S.D.	5.3	0.7	0.0	0.8	0.5	0.6	1.9	17

4MBE : Benzenemethanol, 4-methyl-

Hematology and Coagulation tests

Stage : End of administration

Sex : Male

Dose : 4MBE 1000 mg/kg

Species : Rat

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ² /μL	10 ² /μL
4001	793	14.4	43.0	54.2	18.1	33.5	14.2	236.2	106.7	87.5	62.4
4002	795	14.3	42.8	53.8	18.0	33.5	12.8	217.8	114.1	116.7	77.7
4003	812	14.6	42.7	52.6	18.0	34.2	14.2	280.0	85.2	72.0	46.6
4004	849	14.8	44.0	51.8	17.4	33.6	15.1	248.5	96.3	55.2	37.7
4005	732	14.6	42.2	57.6	20.0	34.6	14.0	313.3	101.6	91.7	68.9
n	5	5	5	5	5	5	5	5	5	5	5
Mean	796	14.5	42.9	54.0	18.3	33.9	14.1	259.2	100.8	84.6	58.7
S.D.	42	0.2	0.7	2.2	1.0	0.5	0.8	37.8	10.9	23.0	16.3

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
4001	21.1	0.1	0.1	2.6	1.2	12.5	14.7	252
4002	33.3	0.6	0.2	3.4	1.5	13.3	19.0	292
4003	22.4	0.3	0.1	2.2	0.5	12.8	16.6	311
4004	15.0	0.6	0.1	1.7	0.2	13.8	17.7	241
4005	19.6	0.5	0.1	2.1	0.4	14.6	16.3	291
n	5	5	5	5	5	5	5	5
Mean	22.3	0.4	0.1	2.4	0.8	13.4	16.9	277
S.D.	6.8	0.2	0.0	0.6	0.6	0.8	1.6	30

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 0 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
1102	799	15.9	45.6	57.0	19.8	34.8	13.6	233.8	129.0	82.4	34.1
1103	785	14.9	43.0	54.7	19.0	34.8	13.8	192.3	132.8	119.1	50.7
1104	727	14.9	44.3	61.0	20.6	33.7	14.6	340.0	107.7	111.5	61.6
1105	746	15.2	43.5	58.3	20.3	34.9	13.1	190.9	134.6	99.1	54.4
1106	775	15.1	43.9	56.6	19.5	34.4	12.8	233.5	127.0	98.2	58.4
n	5	5	5	5	5	5	5	5	5	5	5
Mean	766	15.2	44.1	57.5	19.8	34.5	13.6	238.1	126.2	102.1	51.8
S.D.	29	0.4	1.0	2.3	0.6	0.5	0.7	60.7	10.8	14.1	10.7

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
1102	45.6	0.6	0.1	1.6	0.4	12.1	15.5	583
1103	64.1	1.1	0.2	2.0	0.9	13.0	17.4	431
1104	42.8	0.9	0.2	4.8	1.2	13.4	13.9	313
1105	39.6	0.6	0.1	3.5	1.0	13.7	14.9	376
1106	34.0	0.9	0.1	4.0	0.8	13.1	16.8	358
n	5	5	5	5	5	5	5	5
Mean	45.2	0.8	0.1	3.2	0.9	13.1	15.7	412
S.D.	11.4	0.2	0.1	1.3	0.3	0.6	1.4	104

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 100 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
2101	759	14.5	42.3	55.7	19.1	34.4	13.5	221.8	103.2	132.6	65.6
2103	865	16.0	46.9	54.2	18.6	34.2	14.8	254.7	103.5	87.1	47.4
2104	754	14.9	43.2	57.3	19.8	34.5	13.4	209.0	125.8	90.4	33.5
2105	769	14.7	42.1	54.7	19.2	35.0	12.8	151.2	98.5	117.3	44.3
2112	731	15.0	43.7	59.7	20.6	34.4	13.1	237.7	112.7	92.0	52.3
n	5	5	5	5	5	5	5	5	5	5	5
Mean	776	15.0	43.6	56.3	19.5	34.5	13.5	214.9	108.7	103.9	48.6
S.D.	52	0.6	1.9	2.2	0.8	0.3	0.8	39.5	10.8	20.1	11.7

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
2101	59.7	1.0	0.2	4.6	1.3	13.0	15.2	396
2103	37.8	0.5	0.1	0.9	0.3	12.7	16.2	623
2104	50.0	1.2	0.1	4.2	1.4	12.4	13.6	388
2105	64.5	1.3	0.2	5.1	1.9	13.8	19.8	526
2112	33.5	1.0	0.2	3.4	1.6	13.5	16.0	458
n	5	5	5	5	5	5	5	5
Mean	49.1	1.0	0.2	3.6	1.3	13.1	16.2	478
S.D.	13.4	0.3	0.1	1.7	0.6	0.6	2.3	98

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 300 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
3102	770	14.4	42.3	55.0	18.8	34.1	14.0	220.1	112.2	98.0	60.6
3103	776	15.1	44.2	56.9	19.4	34.1	14.3	255.0	129.6	165.9	83.1
3105	786	15.7	45.1	57.3	19.9	34.7	13.3	256.9	119.9	99.9	45.1
3107	719	14.1	40.9	56.9	19.6	34.5	12.9	235.7	135.6	105.4	43.5
3108	792	15.1	44.1	55.7	19.1	34.2	14.2	174.5	147.0	65.1	22.0
n	5	5	5	5	5	5	5	5	5	5	5
Mean	769	14.9	43.3	56.4	19.4	34.3	13.7	228.4	128.9	106.9	50.9
S.D.	29	0.6	1.7	1.0	0.4	0.3	0.6	33.7	13.5	36.6	22.7

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
3102	33.7	0.6	0.1	1.9	1.0	12.3	13.9	451
3103	70.1	1.0	0.4	7.8	3.4	13.5	17.9	482
3105	52.1	0.7	0.1	1.3	0.6	12.6	17.3	500
3107	53.8	2.4	0.1	3.9	1.8	13.1	14.9	528
3108	40.3	0.5	0.1	1.6	0.5	13.4	16.0	431
n	5	5	5	5	5	5	5	5
Mean	50.0	1.0	0.2	3.3	1.5	13.0	16.0	478
S.D.	14.0	0.8	0.1	2.7	1.2	0.5	1.7	39

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of administration (non-mating group)
Dose : 4MBE 0 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
5101	827	15.9	46.3	56.0	19.2	34.3	11.7	207.1	119.0	80.4	67.8
5102	801	15.1	43.2	53.9	18.9	35.0	11.9	169.2	103.3	47.6	34.3
5103	779	14.6	42.3	54.3	18.8	34.6	12.0	142.5	113.2	49.3	35.8
5104	815	14.7	43.0	52.7	18.1	34.3	11.6	131.5	117.7	65.2	50.9
5105	845	15.0	43.9	51.9	17.7	34.2	12.5	188.2	116.6	73.6	59.6
n	5	5	5	5	5	5	5	5	5	5	5
Mean	813	15.1	43.7	53.8	18.5	34.5	11.9	167.7	114.0	63.2	49.7
S.D.	25	0.5	1.5	1.6	0.6	0.3	0.4	31.3	6.3	14.5	14.6

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
5101	9.6	1.3	0.1	1.0	0.6	12.7	13.7	213
5102	9.2	0.9	0.0	2.4	0.7	13.2	15.3	176
5103	9.8	1.4	0.1	1.5	0.7	13.0	14.0	183
5104	11.4	0.9	0.1	1.6	0.4	12.2	13.1	195
5105	10.0	1.5	0.2	1.8	0.4	12.8	12.7	207
n	5	5	5	5	5	5	5	5
Mean	10.0	1.2	0.1	1.7	0.6	12.8	13.8	195
S.D.	0.8	0.3	0.1	0.5	0.2	0.4	1.0	16

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of administration (non-mating group)
Dose : 4MBE 1000 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
6101	788	14.6	42.3	53.6	18.5	34.6	11.7	168.3	96.6	135.8	111.1
6102	772	14.0	41.1	53.2	18.2	34.1	12.7	261.4	104.8	98.4	89.8
6103	789	15.8	45.9	58.2	20.1	34.5	12.4	202.0	73.3	61.0	46.2
6104	789	15.1	43.7	55.4	19.1	34.5	11.7	204.8	75.7	58.0	45.4
6105	779	14.2	41.0	52.7	18.2	34.6	12.2	160.0	98.7	72.9	61.6
n	5	5	5	5	5	5	5	5	5	5	5
Mean	783	14.7	42.8	54.6	18.8	34.5	12.1	199.3	89.8	85.2	70.8
S.D.	8	0.7	2.0	2.2	0.8	0.2	0.4	40.0	14.3	32.4	28.8

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
6101	20.4	0.2	0.3	1.8	1.9	13.3	16.3	217
6102	5.0	1.0	0.1	1.7	0.7	13.2	14.0	217
6103	11.2	0.9	0.1	2.3	0.3	12.5	13.3	205
6104	9.7	1.3	0.1	1.2	0.3	14.2	15.9	228
6105	8.3	0.7	0.1	1.9	0.4	13.7	12.8	213
n	5	5	5	5	5	5	5	5
Mean	10.9	0.8	0.1	1.8	0.7	13.4	14.5	216
S.D.	5.8	0.4	0.1	0.4	0.7	0.6	1.6	8

4MBE : Benzenemethanol, 4-methyl-

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
1008	910	16.1	46.6	51.2	17.7	34.5	12.9	202.1	109.7	76.8	58.4
1009	849	15.8	44.4	52.3	18.6	35.6	13.6	190.7	106.0	91.7	70.1
1010	843	15.5	46.4	55.0	18.4	33.5	12.2	148.4	97.5	63.3	49.7
1011	817	14.2	42.7	52.2	17.4	33.3	15.1	326.6	68.9	106.7	73.8
1012	819	14.8	43.2	52.7	18.0	34.2	14.3	218.1	107.9	79.8	51.7
n	5	5	5	5	5	5	5	5	5	5	5
Mean	848	15.3	44.7	52.7	18.0	34.2	13.6	217.2	98.0	83.7	60.7
S.D.	38	0.8	1.8	1.4	0.5	0.9	1.1	66.4	16.9	16.4	10.8

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
1008	14.2	1.0	0.1	2.6	0.4	14.0	19.2	299
1009	16.8	1.3	0.2	2.7	0.6	13.7	19.9	252
1010	10.3	1.0	0.1	1.9	0.3	13.4	20.2	263
1011	25.8	1.9	0.2	3.6	1.4	13.1	17.6	318
1012	21.7	1.6	0.1	3.1	1.6	14.2	19.2	306
n	5	5	5	5	5	5	5	5
Mean	17.8	1.4	0.1	2.8	0.9	13.7	19.2	288
S.D.	6.1	0.4	0.1	0.6	0.6	0.4	1.0	29

4MBE : Benzenemethanol, 4-methyl-

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
4008	910	15.9	47.2	51.9	17.4	33.6	13.6	174.9	97.9	60.4	48.4
4009	849	15.2	44.8	52.8	17.9	33.9	15.5	274.1	123.9	84.7	62.2
4010	810	15.2	45.0	55.6	18.8	33.9	13.7	199.1	90.0	64.0	42.0
4011	776	14.5	42.2	54.3	18.7	34.4	13.6	174.2	113.3	72.6	55.7
4012	815	15.3	45.7	56.1	18.8	33.6	13.5	191.6	94.4	103.0	86.2
n	5	5	5	5	5	5	5	5	5	5	5
Mean	832	15.2	45.0	54.1	18.3	33.9	14.0	202.8	103.9	76.9	58.9
S.D.	51	0.5	1.8	1.8	0.6	0.3	0.9	41.3	14.2	17.3	17.0

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
4008	9.3	0.9	0.1	1.1	0.6	13.5	17.9	236
4009	18.0	1.1	0.1	1.9	1.4	13.3	17.2	304
4010	18.3	1.6	0.1	1.4	0.6	13.2	16.5	323
4011	11.8	0.7	0.1	2.4	1.9	13.9	16.0	266
4012	12.5	1.8	0.2	1.2	1.0	14.7	21.0	267
n	5	5	5	5	5	5	5	5
Mean	14.0	1.2	0.1	1.6	1.1	13.7	17.7	279
S.D.	4.0	0.5	0.0	0.5	0.6	0.6	2.0	34

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of recovery (non-mating group)
Dose : 4MBE 0 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
5106	781	15.5	43.4	55.5	19.8	35.6	12.0	150.7	100.7	74.6	60.9
5107	837	15.5	45.3	54.1	18.5	34.2	12.0	154.1	128.5	114.7	97.6
5108	843	15.3	44.9	53.3	18.1	34.0	12.2	186.2	98.6	66.4	55.6
5109	784	15.3	44.1	56.3	19.5	34.6	12.8	192.8	83.0	36.8	29.7
5110	770	14.8	43.4	56.4	19.3	34.2	12.4	171.9	114.0	38.2	28.5
n	5	5	5	5	5	5	5	5	5	5	5
Mean	803	15.3	44.2	55.1	19.0	34.5	12.3	171.1	105.0	66.1	54.5
S.D.	34	0.3	0.9	1.4	0.7	0.6	0.3	18.7	17.2	31.9	28.2

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
5106	10.7	0.8	0.1	1.1	1.0	13.9	15.6	191
5107	12.6	1.1	0.3	2.5	0.6	13.6	15.9	207
5108	7.7	0.5	0.1	1.6	0.8	14.5	14.2	191
5109	4.7	0.9	0.1	1.0	0.4	14.7	14.6	210
5110	7.0	0.9	0.0	1.3	0.5	13.8	14.6	186
n	5	5	5	5	5	5	5	5
Mean	8.5	0.8	0.1	1.5	0.7	14.1	15.0	197
S.D.	3.1	0.2	0.1	0.6	0.2	0.5	0.7	11

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Hematology and Coagulation tests
Sex : Female
Stage : End of recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

	RBC	HGB	HCT	MCV	MCH	MCHC	RDW	#RETIC	PLT	WBC	#LYMP
Animal No.	10 ⁴ /μL	g/dL	%	fL	pg	g/dL	%	10 ⁹ /L	10 ⁴ /μL	10 ³ /μL	10 ² /μL
6106	771	14.3	41.3	53.6	18.6	34.6	12.9	196.0	135.2	78.8	58.0
6107	781	14.5	41.8	53.5	18.5	34.6	12.0	112.7	100.7	63.5	56.3
6108	787	14.5	41.4	52.6	18.4	35.0	12.4	132.8	116.6	41.9	34.5
6109	763	14.8	42.6	55.8	19.4	34.7	12.3	179.1	123.7	44.3	35.1
6110	784	14.8	43.0	54.9	18.8	34.3	12.2	171.9	117.7	50.2	39.1
n	5	5	5	5	5	5	5	5	5	5	5
Mean	777	14.6	42.0	54.1	18.7	34.6	12.4	158.5	118.8	55.7	44.6
S.D.	10	0.2	0.7	1.3	0.4	0.3	0.3	34.5	12.5	15.4	11.6

	#NEUT	#EOS	#BASO	#MONO	#LUC	PT	APTT	FIB
Animal No.	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	10 ² /μL	s	s	mg/dL
6106	17.8	0.6	0.1	1.8	0.5	13.5	13.6	232
6107	5.1	0.7	0.1	1.1	0.3	13.7	16.6	198
6108	5.4	0.7	0.1	0.8	0.5	14.1	14.5	261
6109	7.5	1.0	0.0	0.5	0.2	13.8	16.0	232
6110	8.9	0.9	0.1	0.9	0.3	14.8	16.4	229
n	5	5	5	5	5	5	5	5
Mean	8.9	0.8	0.1	1.0	0.4	14.0	15.4	230
S.D.	5.2	0.2	0.0	0.5	0.1	0.5	1.3	22

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of administration
Dose : 4MBE 0 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
1001	62	29	508	0	26.1	65	34	100	0.1	140	12
1002	62	44	302	0	18.0	71	86	116	0.1	141	15
1003	58	30	465	0	14.1	67	42	94	0.1	137	14
1004	56	31	376	0	7.8	40	27	70	0.1	160	17
1005	62	35	345	0	28.5	68	112	113	0.1	186	18
n	5	5	5	5	5	5	5	5	5	5	5
Mean	60	34	399	0	18.9	62	60	99	0.1	153	15
S.D.	3	6	85	0	8.5	13	37	18	0.0	21	2

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
1001	0.26	144	3.6	105	10.4	5.4	6.8	3.4
1002	0.22	145	4.0	104	10.8	6.7	6.4	3.2
1003	0.27	146	3.7	106	10.5	5.4	6.2	3.1
1004	0.25	145	4.0	107	10.1	6.1	6.2	3.2
1005	0.24	143	4.0	103	10.4	5.9	6.5	3.3
n	5	5	5	5	5	5	5	5
Mean	0.25	145	3.9	105	10.4	5.9	6.4	3.2
S.D.	0.02	1	0.2	2	0.3	0.5	0.2	0.1

4MBE :Benzenemethanol, 4-methyl-

Blood chemistry

Stage : End of administration

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
2001	69	37	430	0	48.1	44	27	73	0.1	149	27
2002	52	37	415	0	49.2	80	71	119	0.1	143	16
2003	60	37	284	0	21.2	66	37	101	0.1	148	15
2004	57	27	453	0	34.8	77	51	118	0.1	156	14
2005	55	34	319	0	10.9	67	62	99	0.1	138	14
n	5	5	5	5	5	5	5	5	5	5	5
Mean	59	34	380	0	32.8	67	50	102	0.1	147	17
S.D.	7	4	74	0	16.7	14	18	19	0.0	7	6

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
2001	0.37	144	4.1	107	10.2	6.2	6.3	3.1
2002	0.26	143	4.3	103	11.1	6.0	6.7	3.3
2003	0.23	145	3.5	104	10.1	5.7	6.0	3.2
2004	0.22	145	3.6	104	10.7	6.1	6.3	3.3
2005	0.24	144	3.9	105	10.6	6.1	6.4	3.1
n	5	5	5	5	5	5	5	5
Mean	0.26	144	3.9	105	10.5	6.0	6.3	3.2
S.D.	0.06	1	0.3	2	0.4	0.2	0.3	0.1

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of administration
Dose : 4MBE 300 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
3001	55	45	390	0	100.4	67	31	100	0.1	153	22
3002	57	32	303	0	18.0	51	65	92	0.1	198	19
3003	61	43	434	0	43.7	60	97	104	0.1	160	14
3004	73	44	498	0	22.9	70	62	109	0.1	157	17
3005	68	31	308	0	37.9	91	100	133	0.1	162	20
n	5	5	5	5	5	5	5	5	5	5	5
Mean	63	39	387	0	44.6	68	71	108	0.1	166	18
S.D.	8	7	83	0	32.9	15	28	16	0.0	18	3

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
3001	0.30	144	4.1	104	10.5	5.6	6.1	3.2
3002	0.25	143	4.0	104	10.0	6.4	6.1	3.2
3003	0.28	143	4.3	107	10.6	6.2	6.4	3.2
3004	0.23	145	3.9	104	10.6	6.0	6.6	3.3
3005	0.26	145	3.7	103	11.0	6.0	6.5	3.3
n	5	5	5	5	5	5	5	5
Mean	0.26	144	4.0	104	10.5	6.0	6.3	3.2
S.D.	0.03	1	0.2	2	0.4	0.3	0.2	0.1

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of administration
Dose : 4MBE 1000 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
4001	72	38	569	0	43.9	54	54	107	0.1	173	17
4002	64	33	773	0	65.8	48	35	102	0.1	189	20
4003	83	41	676	1	28.2	58	66	103	0.1	155	20
4004	64	49	586	0	8.4	40	36	73	0.1	136	19
4005	86	64	603	0	30.4	60	39	102	0.1	147	12
n	5	5	5	5	5	5	5	5	5	5	5
Mean	74	45	641	0	35.3	52	46	97	0.1	160	18
S.D.	10	12	84	0	21.2	8	14	14	0.0	21	3

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
4001	0.37	142	3.9	106	10.1	5.6	5.9	3.2
4002	0.30	141	4.3	104	10.4	5.6	6.7	3.6
4003	0.33	143	3.8	104	10.3	5.7	6.4	3.2
4004	0.33	145	3.9	108	9.7	6.1	5.4	3.1
4005	0.26	144	4.0	106	10.1	6.5	6.1	3.3
n	5	5	5	5	5	5	5	5
Mean	0.32	143	4.0	106	10.1	5.9	6.1	3.3
S.D.	0.04	2	0.2	2	0.3	0.4	0.5	0.2

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 0 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
1102	191	88	337	0	60.3	104	158	198	0.0	128	32
1103	220	125	489	1	46.7	91	70	166	0.1	150	22
1104	100	62	516	0	39.0	94	213	180	0.1	146	29
1105	96	62	319	0	25.8	75	48	157	0.1	117	25
1106	76	52	469	0	94.4	75	66	157	0.1	132	20
n	5	5	5	5	5	5	5	5	5	5	5
Mean	137	78	426	0	53.2	88	111	172	0.1	135	26
S.D.	64	30	91	0	26.2	13	71	18	0.0	13	5

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
1102	0.37	138	3.5	98	11.6	11.3	7.2	3.6
1103	0.36	141	3.5	100	10.7	9.5	6.9	3.6
1104	0.31	140	3.4	99	10.7	9.2	5.7	3.1
1105	0.36	142	3.5	103	10.4	8.3	6.3	3.5
1106	0.29	141	3.2	100	10.6	8.6	6.8	3.6
n	5	5	5	5	5	5	5	5
Mean	0.34	140	3.4	100	10.8	9.4	6.6	3.5
S.D.	0.04	2	0.1	2	0.5	1.2	0.6	0.2

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 100 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
2101	106	73	658	0	25.9	80	74	158	0.1	127	26
2103	285	155	413	1	80.2	106	151	207	0.1	123	34
2104	108	62	296	0	19.7	89	187	200	0.1	118	28
2105	103	73	274	1	38.9	118	271	255	0.1	126	23
2112	116	62	325	0	32.1	103	96	192	0.1	120	31
n	5	5	5	5	5	5	5	5	5	5	5
Mean	144	85	393	0	39.4	99	156	202	0.1	123	28
S.D.	79	40	157	1	23.9	15	78	35	0.0	4	4

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
2101	0.39	138	2.9	98	10.7	10.1	6.3	3.2
2103	0.45	135	4.1	98	11.4	10.0	7.1	3.6
2104	0.39	138	3.8	98	11.2	11.7	6.8	3.6
2105	0.34	141	3.2	100	11.6	8.1	7.3	3.8
2112	0.41	140	3.7	102	11.1	10.0	6.3	3.3
n	5	5	5	5	5	5	5	5
Mean	0.40	138	3.5	99	11.2	10.0	6.8	3.5
S.D.	0.04	2	0.5	2	0.3	1.3	0.5	0.2

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 300 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
3102	135	80	521	1	72.8	60	180	155	0.1	114	41
3103	83	74	590	0	43.0	106	131	198	0.1	166	39
3105	160	103	454	0	75.3	115	130	227	0.1	124	63
3107	119	75	403	0	10.4	85	50	164	0.0	128	26
3108	138	61	316	1	15.1	107	87	196	0.0	118	29
n	5	5	5	5	5	5	5	5	5	5	5
Mean	127	79	457	0	43.3	95	116	188	0.1	130	40
S.D.	29	15	106	1	30.7	22	49	29	0.1	21	15

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
3102	0.45	140	3.5	100	11.3	9.6	6.8	3.7
3103	0.45	141	3.4	97	10.8	10.4	6.1	3.0
3105	0.59	136	4.3	99	11.5	11.1	6.7	3.3
3107	0.37	140	3.2	100	10.7	9.3	6.5	3.1
3108	0.44	141	3.5	105	11.1	7.5	6.9	3.5
n	5	5	5	5	5	5	5	5
Mean	0.46	140	3.6	100	11.1	9.6	6.6	3.3
S.D.	0.08	2	0.4	3	0.3	1.4	0.3	0.3

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Blood chemistry
 Sex : Female
 Stage : End of administration (non-mating group)
 Dose : 4MBE 0 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
5101	51	28	130	0	15.8	72	47	139	0.1	103	13
5102	50	25	224	1	10.8	57	23	128	0.1	161	17
5103	58	34	204	1	11.7	67	25	126	0.1	125	20
5104	52	36	134	0	22.3	98	44	185	0.1	166	14
5105	67	45	178	0	18.7	61	16	121	0.1	131	27
n	5	5	5	5	5	5	5	5	5	5	5
Mean	56	34	174	0	15.9	71	31	140	0.1	137	18
S.D.	7	8	42	1	4.8	16	14	26	0.0	26	6

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
5101	0.34	143	3.6	106	10.3	4.1	6.5	3.5
5102	0.28	141	3.7	106	10.3	3.4	7.0	3.9
5103	0.33	141	3.6	105	10.5	4.0	6.7	3.6
5104	0.27	141	3.7	104	10.7	3.4	7.2	4.2
5105	0.38	143	3.4	105	10.5	3.9	6.8	3.7
n	5	5	5	5	5	5	5	5
Mean	0.32	142	3.6	105	10.5	3.8	6.8	3.8
S.D.	0.05	1	0.1	1	0.2	0.3	0.3	0.3

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
 with the reproduction/ developmental toxicity screening test in rats
 Blood chemistry
 Sex : Female
 Stage : End of administration (non-mating group)
 Dose : 4MBE 1000 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
6101	65	58	226	1	31.4	66	46	135	0.0	153	19
6102	58	47	461	1	126.1	91	44	164	0.1	161	18
6103	68	43	355	1	41.5	80	28	149	0.1	137	18
6104	64	39	323	0	24.5	74	36	147	0.1	158	19
6105	63	33	359	0	78.0	61	23	127	0.1	146	16
n	5	5	5	5	5	5	5	5	5	5	5
Mean	64	44	345	1	60.3	74	35	144	0.1	151	18
S.D.	4	9	84	1	42.2	12	10	14	0.0	10	1

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
6101	0.32	141	3.6	107	9.8	4.6	5.9	3.3
6102	0.30	137	4.7	106	10.0	4.4	6.0	3.3
6103	0.37	139	3.0	106	9.9	4.1	6.4	3.4
6104	0.36	140	3.4	112	9.8	3.4	6.2	3.4
6105	0.35	142	3.3	111	10.0	4.3	6.6	3.7
n	5	5	5	5	5	5	5	5
Mean	0.34	140	3.6	108	9.9	4.2	6.2	3.4
S.D.	0.03	2	0.7	3	0.1	0.5	0.3	0.2

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Male
Stage : End of recovery
Dose : 4MBE 0 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
1008	59	27	333	0	80.5	75	47	109	0.1	146	19
1009	59	31	247	0	24.4	50	58	86	0.1	161	19
1010	48	24	205	0	12.7	70	58	108	0.0	153	18
1011	60	39	213	0	8.4	47	88	94	0.1	175	17
1012	65	34	297	0	11.0	76	39	111	0.1	145	19
n	5	5	5	5	5	5	5	5	5	5	5
Mean	58	31	259	0	27.4	64	58	102	0.1	156	18
S.D.	6	6	55	0	30.3	14	19	11	0.0	12	1

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
1008	0.34	141	3.9	104	10.0	5.7	6.2	3.2
1009	0.32	143	3.7	104	10.3	5.3	6.3	3.2
1010	0.33	144	4.0	106	10.1	4.8	6.3	3.2
1011	0.27	143	3.9	107	10.1	5.3	6.0	3.1
1012	0.27	143	4.1	105	10.3	5.3	6.5	3.3
n	5	5	5	5	5	5	5	5
Mean	0.31	143	3.9	105	10.2	5.3	6.3	3.2
S.D.	0.03	1	0.1	1	0.1	0.3	0.2	0.1

4MBE :Benzenemethanol, 4-methyl-

Blood chemistry

Stage : End of recovery

Sex : Male

Dose : 4MBE 1000 mg/kg

Species : Rat

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
4008	56	28	464	0	21.7	54	19	80	0.1	110	17
4009	55	31	383	0	49.2	62	59	106	0.1	127	18
4010	57	36	420	0	21.8	64	51	109	0.1	153	14
4011	63	27	288	0	13.7	60	43	91	0.1	117	15
4012	65	33	341	0	28.5	62	32	91	0.1	131	18
n	5	5	5	5	5	5	5	5	5	5	5
Mean	59	31	379	0	27.0	60	41	95	0.1	128	16
S.D.	4	4	68	0	13.5	4	16	12	0.0	16	2

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
4008	0.29	145	3.9	106	10.5	6.0	6.3	3.2
4009	0.31	143	3.5	106	10.5	6.2	6.3	3.3
4010	0.28	143	3.7	107	10.6	6.0	6.6	3.3
4011	0.26	144	3.6	106	10.2	5.6	6.3	3.2
4012	0.28	144	4.0	107	10.5	6.4	6.3	3.2
n	5	5	5	5	5	5	5	5
Mean	0.28	144	3.7	106	10.5	6.0	6.4	3.2
S.D.	0.02	1	0.2	1	0.2	0.3	0.1	0.1

4MBE : Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of recovery (non-mating group)
Dose : 4MBE 0 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
5106	66	33	192	0	26.9	62	22	126	0.2	124	17
5107	51	31	182	0	29.1	74	45	152	0.1	126	20
5108	49	30	127	0	23.0	59	34	128	0.1	146	17
5109	57	28	191	0	11.0	59	14	115	0.1	163	16
5110	53	25	134	0	11.3	65	20	126	0.1	141	19
n	5	5	5	5	5	5	5	5	5	5	5
Mean	55	29	165	0	20.3	64	27	129	0.1	140	18
S.D.	7	3	32	0	8.6	6	12	14	0.0	16	2

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
5106	0.33	141	3.5	105	10.5	4.7	6.8	3.9
5107	0.32	140	3.7	105	11.1	3.9	7.7	4.2
5108	0.36	143	3.7	109	10.1	3.2	6.8	3.7
5109	0.30	143	3.5	105	10.3	4.1	6.4	3.5
5110	0.36	142	3.5	107	10.6	3.5	6.6	3.5
n	5	5	5	5	5	5	5	5
Mean	0.33	142	3.6	106	10.5	3.9	6.9	3.8
S.D.	0.03	1	0.1	2	0.4	0.6	0.5	0.3

4MBE :Benzenemethanol, 4-methyl-

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Blood chemistry
Sex : Female
Stage : End of recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

	AST	ALT	ALP	γ-GTP	T-BA	T-CHO	TG	PL	T-BIL	GLU	BUN
Animal No.	IU/L	IU/L	IU/L	IU/L	μmol/L	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL	mg/dL
6106	52	28	182	0	28.7	88	45	162	0.1	122	21
6107	48	24	230	0	26.7	80	23	148	0.1	128	20
6108	58	32	134	0	14.2	79	24	137	0.1	145	18
6109	55	21	199	0	10.0	68	11	117	0.1	131	19
6110	47	25	190	0	90.5	75	67	159	0.1	141	19
n	5	5	5	5	5	5	5	5	5	5	5
Mean	52	26	187	0	34.0	78	34	145	0.1	133	19
S.D.	5	4	35	0	32.6	7	22	18	0.0	9	1

	CRNN	Na	K	Cl	Ca	P	TP	ALB
Animal No.	mg/dL	mmol/L	mmol/L	mmol/L	mg/dL	mg/dL	g/dL	g/dL
6106	0.35	141	3.3	104	10.4	4.5	6.3	3.2
6107	0.29	142	3.4	106	10.6	5.1	6.8	3.8
6108	0.40	142	3.5	106	10.6	4.1	6.5	3.4
6109	0.37	143	3.8	107	10.4	4.5	6.6	3.6
6110	0.34	142	3.5	107	11.0	5.7	6.6	3.7
n	5	5	5	5	5	5	5	5
Mean	0.35	142	3.5	106	10.6	4.8	6.6	3.5
S.D.	0.04	1	0.2	1	0.2	0.6	0.2	0.2

4MBE :Benzenemethanol, 4-methyl-

Organ weight
Sex : MaleStage : End of administration
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
1001	539	2.07	0.38	25.4	4.7	231	43	1.51	0.28
1002	540	2.09	0.39	23.2	4.3	407	75	1.36	0.25
1003	500	2.26	0.45	23.5	4.7	317	63	1.44	0.29
1004	461	2.22	0.48	26.8	5.8	368	80	1.22	0.26
1005	529	2.21	0.42	33.8	6.4	370	70	1.52	0.29
1006	556	2.19	0.39	23.5	4.2	277	50	1.53	0.28
1007	571	2.23	0.39	21.8	3.8	233	41	1.62	0.28
n	7	7	7	7	7	7	7	7	7
Mean	528	2.18	0.41	25.4	4.8	315	60	1.46	0.28
S.D.	37	0.07	0.04	4.0	0.9	70	16	0.13	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
1001	15.26	2.83	0.92	0.17	3.62	0.67	56	10.4	3.58	0.66
1002	14.76	2.73	0.74	0.14	3.85	0.71	61	11.3	3.07	0.57
1003	13.17	2.63	0.92	0.18	3.48	0.70	60	12.0	3.31	0.66
1004	10.86	2.36	0.67	0.15	2.84	0.62	58	12.6	2.91	0.63
1005	14.09	2.66	0.72	0.14	3.10	0.59	73	13.8	3.31	0.63
1006	14.87	2.67	0.89	0.16	3.81	0.69	75	13.5	3.01	0.54
1007	16.18	2.83	0.65	0.11	4.02	0.70	60	10.5	4.07	0.71
n	7	7	7	7	7	7	7	7	7	7
Mean	14.17	2.67	0.79	0.15	3.53	0.67	63	12.0	3.32	0.63
S.D.	1.73	0.16	0.12	0.02	0.43	0.05	8	1.4	0.40	0.06

Animal No.	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
1001	1263	234	1.00	0.19	1.49	0.28	1.39	0.26	96.6	17.9
1002	1231	228	1.17	0.22	1.50	0.28	1.00	0.19	118.8	22.0
1003	1161	232	1.11	0.22	1.71	0.34	1.59	0.32	149.2	29.8
1004	1261	274	1.11	0.24	1.47	0.32	1.67	0.36	131.7	28.6
1005	1419	268	1.38	0.26	1.68	0.32	1.50	0.28	132.5	25.0
1006	1208	217	1.16	0.21	1.96	0.35	1.29	0.23	127.0	22.8
1007	1515	265	1.31	0.23	1.68	0.29	1.52	0.27	154.4	27.0
n	7	7	7	7	7	7	7	7	7	7
Mean	1294	245	1.18	0.22	1.64	0.31	1.42	0.27	130.0	24.7
S.D.	126	23	0.13	0.02	0.17	0.03	0.22	0.06	19.2	4.2

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Organ weight

Stage : End of administration

Sex : Male

Dose : 4MBE 0 mg/kg

Species : Rat

Glans penis

Animal No.	AB mg	RE mg/100g
1001	98.5	18.3
1002	124.3	23.0
1003	108.8	21.8
1004	101.1	21.9
1005	127.5	24.1
1006	123.8	22.3
1007	120.5	21.1
n	7	7
Mean	114.9	21.8
S.D.	11.9	1.8

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight				Stage : End of administration				Species : Rat			
Sex : Male				Dose : 4MBE 100 mg/kg							
Animal No.	Body weight g	Brain		Thyroid-RL		Thymus		Heart			
		AB	RE	AB	RE	AB	RE	AB	RE		
		g	g/100g	mg	mg/100g	mg	mg/100g	g	g/100g		
2001	472	2.23	0.47	20.1	4.3	217	46	1.39	0.29		
2002	573	2.08	0.36	24.0	4.2	379	66	1.76	0.31		
2003	537	2.18	0.41	25.9	4.8	487	91	1.55	0.29		
2004	507	2.11	0.42	25.7	5.1	466	92	1.41	0.28		
2005	494	2.06	0.42	26.1	5.3	232	47	1.48	0.30		
2006	537	2.19	0.41	23.0	4.3	248	46	1.56	0.29		
2007	502	2.28	0.45	21.0	4.2	325	65	1.53	0.30		
2008	574	2.09	0.36	30.1	5.2	504	88	1.55	0.27		
2009	480	2.22	0.46	21.4	4.5	372	78	1.34	0.28		
2010	508	2.14	0.42	26.2	5.2	290	57	1.47	0.29		
2011	535	2.21	0.41	19.4	3.6	505	94	1.50	0.28		
2012	513	2.35	0.46	22.6	4.4	346	67	1.76	0.34		
n	12	12	12	12	12	12	12	12	12		
Mean	519	2.18	0.42	23.8	4.6	364	70	1.53	0.29		
S.D.	33	0.09	0.04	3.1	0.5	107	19	0.13	0.02		

Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL		
Animal No.	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
2001	10.87	2.30	0.70	0.15	3.07	0.65	54	11.4	3.58	0.76
2002	15.75	2.75	0.93	0.16	3.72	0.65	63	11.0	3.44	0.60
2003	13.17	2.45	0.87	0.16	3.69	0.69	77	14.3	4.20	0.78
2004	13.91	2.74	0.75	0.15	3.75	0.74	56	11.0	3.23	0.64
2005	13.37	2.71	0.66	0.13	3.49	0.71	63	12.8	3.64	0.74
2006	14.44	2.69	0.80	0.15	3.43	0.64	82	15.3	3.45	0.64
2007	12.57	2.50	0.87	0.17	3.23	0.64	59	11.8	3.28	0.65
2008	15.05	2.62	0.87	0.15	3.43	0.60	58	10.1	3.42	0.60
2009	11.13	2.32	0.76	0.16	3.54	0.74	64	13.3	3.42	0.71
2010	12.01	2.36	0.79	0.16	3.55	0.70	70	13.8	3.63	0.71
2011	13.22	2.47	0.98	0.18	3.10	0.58	89	16.6	3.59	0.67
2012	12.64	2.46	0.68	0.13	3.73	0.73	58	11.3	3.65	0.71
n	12	12	12	12	12	12	12	12	12	12
Mean	13.18	2.53	0.81	0.15	3.48	0.67	66	12.7	3.54	0.68
S.D.	1.47	0.17	0.10	0.01	0.24	0.05	11	2.0	0.25	0.06

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : MaleStage : End of administration
Dose : 4MBE 100 mg/kg

Species : Rat

	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
Animal No.	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
2001	1208	256	1.26	0.27	1.75	0.37	1.47	0.31	98.6	20.9
2002	1254	219	1.25	0.22	1.19	0.21	1.60	0.28	136.5	23.8
2003	1459	272	1.28	0.24	1.63	0.30	1.31	0.24	132.7	24.7
2004	1248	246	1.09	0.21	1.59	0.31	1.35	0.27	106.8	21.1
2005	1333	270	1.33	0.27	1.77	0.36	1.68	0.34	85.9	17.4
2006	1281	239	1.28	0.24	2.38	0.44	1.41	0.26	89.6	16.7
2007	1241	247	1.37	0.27	1.55	0.31	1.66	0.33	114.0	22.7
2008	1299	226	1.29	0.22	1.59	0.28	1.59	0.28	104.0	18.1
2009	1385	289	1.39	0.29	1.71	0.36	1.47	0.31	149.7	31.2
2010	1408	277	1.09	0.21	1.49	0.29	1.48	0.29	191.0	37.6
2011	1406	263	1.07	0.20	1.20	0.22	1.40	0.26	97.4	18.2
2012	1301	254	1.12	0.22	1.67	0.33	1.24	0.24	101.5	19.8
n	12	12	12	12	12	12	12	12	12	12
Mean	1319	255	1.24	0.24	1.63	0.32	1.47	0.28	117.3	22.7
S.D.	79	21	0.11	0.03	0.30	0.06	0.14	0.03	30.4	6.2

Glans penis

Animal No.	AB mg	RE mg/100g
2001	100.1	21.2
2002	114.1	19.9
2003	129.3	24.1
2004	100.8	19.9
2005	109.3	22.1
2006	167.6	31.2
2007	107.9	21.5
2008	122.6	21.4
2009	141.2	29.4
2010	113.3	22.3
2011	108.5	20.3
2012	109.1	21.3
n	12	12
Mean	118.7	22.9
S.D.	19.4	3.7

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Organ weight
Sex : MaleStage : End of administration
Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
3001	509	2.18	0.43	21.0	4.1	531	104	1.40	0.28
3002	494	1.94	0.39	23.8	4.8	304	62	1.60	0.32
3003	553	2.15	0.39	23.8	4.3	249	45	1.59	0.29
3004	513	2.22	0.43	23.1	4.5	324	63	1.38	0.27
3005	607	2.17	0.36	18.8	3.1	315	52	1.67	0.28
3006	487	2.08	0.43	18.0	3.7	233	48	1.32	0.27
3007	557	2.14	0.38	18.9	3.4	291	52	1.58	0.28
3008	472	2.12	0.45	24.7	5.2	487	103	1.25	0.26
3009	555	2.09	0.38	21.4	3.9	282	51	1.56	0.28
3010	466	2.13	0.46	25.5	5.5	275	59	1.48	0.32
3011	556	2.04	0.37	27.2	4.9	350	63	1.50	0.27
3012	508	2.23	0.44	22.1	4.4	231	45	1.39	0.27
n	12	12	12	12	12	12	12	12	12
Mean	523	2.12	0.41	22.4	4.3	323	62	1.48	0.28
S.D.	42	0.08	0.03	2.9	0.7	95	20	0.13	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
3001	12.97	2.55	0.90	0.18	3.14	0.62	56	11.0	3.31	0.65
3002	13.58	2.75	0.51	0.10	3.46	0.70	72	14.6	3.70	0.75
3003	15.25	2.76	0.94	0.17	3.74	0.68	50	9.0	3.23	0.58
3004	12.79	2.49	0.59	0.12	3.63	0.71	71	13.8	3.62	0.71
3005	17.10	2.82	1.04	0.17	3.86	0.64	65	10.7	3.01	0.50
3006	12.94	2.66	0.67	0.14	3.16	0.65	65	13.3	3.92	0.80
3007	15.44	2.77	0.72	0.13	3.88	0.70	63	11.3	3.59	0.64
3008	12.43	2.63	0.80	0.17	3.17	0.67	60	12.7	3.44	0.73
3009	16.54	2.98	0.91	0.16	3.95	0.71	65	11.7	3.54	0.64
3010	11.01	2.36	0.74	0.16	2.88	0.62	59	12.7	3.55	0.76
3011	15.51	2.79	0.76	0.14	3.53	0.63	63	11.3	3.27	0.59
3012	12.98	2.56	0.76	0.15	3.25	0.64	57	11.2	3.79	0.75
n	12	12	12	12	12	12	12	12	12	12
Mean	14.05	2.68	0.78	0.15	3.47	0.66	62	11.9	3.50	0.68
S.D.	1.86	0.17	0.15	0.02	0.35	0.04	6	1.5	0.26	0.09

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : MaleStage : End of administration
Dose : 4MBE 300 mg/kg

Species : Rat

	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
Animal No.	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
3001	1362	268	1.40	0.28	1.65	0.32	1.53	0.30	121.3	23.8
3002	1225	248	1.21	0.24	1.33	0.27	1.22	0.25	85.4	17.3
3003	1300	235	1.38	0.25	1.78	0.32	1.80	0.33	113.8	20.6
3004	1294	252	1.73	0.34	1.55	0.30	1.64	0.32	108.4	21.1
3005	1241	204	1.29	0.21	1.56	0.26	1.41	0.23	114.3	18.8
3006	1367	281	1.33	0.27	1.42	0.29	1.47	0.30	112.2	23.0
3007	1407	253	1.46	0.26	2.40	0.43	1.54	0.28	136.5	24.5
3008	1429	303	1.06	0.22	1.45	0.31	1.43	0.30	124.9	26.5
3009	1412	254	1.52	0.27	2.05	0.37	1.43	0.26	122.3	22.0
3010	1252	269	1.28	0.27	1.58	0.34	1.54	0.33	152.7	32.8
3011	1282	231	1.00	0.18	1.56	0.28	1.60	0.29	102.8	18.5
3012	1672	329	1.29	0.25	1.95	0.38	1.66	0.33	141.2	27.8
n	12	12	12	12	12	12	12	12	12	12
Mean	1354	261	1.33	0.25	1.69	0.32	1.52	0.29	119.7	23.1
S.D.	122	33	0.20	0.04	0.31	0.05	0.15	0.03	18.0	4.4

Glans penis

Animal No.	AB mg	RE mg/100g
3001	104.5	20.5
3002	93.9	19.0
3003	123.8	22.4
3004	108.6	21.2
3005	110.5	18.2
3006	87.4	17.9
3007	148.7	26.7
3008	98.4	20.8
3009	142.8	25.7
3010	100.7	21.6
3011	111.8	20.1
3012	115.8	22.8
n	12	12
Mean	112.2	21.4
S.D.	18.5	2.7

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Organ weight
Sex : MaleStage : End of administration
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
4001	487	2.11	0.43	25.6	5.3	248	51	1.36	0.28
4002	460	2.12	0.46	18.9	4.1	247	54	1.42	0.31
4003	450	2.21	0.49	24.6	5.5	445	99	1.51	0.34
4004	476	2.18	0.46	21.2	4.5	200	42	1.31	0.28
4005	460	2.14	0.47	20.4	4.4	228	50	1.43	0.31
4006	484	2.20	0.45	20.6	4.3	415	86	1.39	0.29
4007	470	2.23	0.47	17.8	3.8	458	97	1.26	0.27
n	7	7	7	7	7	7	7	7	7
Mean	470	2.17	0.46	21.3	4.6	320	68	1.38	0.30
S.D.	14	0.05	0.02	2.8	0.6	113	25	0.08	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
4001	13.82	2.84	0.57	0.12	3.13	0.64	54	11.1	3.14	0.64
4002	14.42	3.13	0.80	0.17	3.34	0.73	68	14.8	3.44	0.75
4003	12.71	2.82	0.76	0.17	3.15	0.70	51	11.3	3.09	0.69
4004	13.46	2.83	0.51	0.11	3.57	0.75	59	12.4	3.32	0.70
4005	13.22	2.87	0.69	0.15	3.42	0.74	58	12.6	3.37	0.73
4006	14.09	2.91	0.91	0.19	3.51	0.73	66	13.6	3.27	0.68
4007	14.15	3.01	0.74	0.16	2.90	0.62	62	13.2	3.47	0.74
n	7	7	7	7	7	7	7	7	7	7
Mean	13.70	2.92	0.71	0.15	3.29	0.70	60	12.7	3.30	0.70
S.D.	0.60	0.11	0.14	0.03	0.24	0.05	6	1.3	0.14	0.04

Animal No.	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
4001	1251	257	0.95	0.20	1.44	0.30	1.02	0.21	107.0	22.0
4002	1700	370	1.24	0.27	1.71	0.37	1.62	0.35	135.8	29.5
4003	1330	296	1.06	0.24	1.45	0.32	0.79	0.18	80.6	17.9
4004	1310	275	1.18	0.25	1.22	0.26	1.40	0.29	107.5	22.6
4005	1176	256	1.36	0.30	1.34	0.29	1.45	0.32	129.0	28.0
4006	1096	226	1.26	0.26	1.76	0.36	1.64	0.34	157.7	32.6
4007	1091	232	0.99	0.21	1.23	0.26	1.23	0.26	95.8	20.4
n	7	7	7	7	7	7	7	7	7	7
Mean	1279	273	1.15	0.25	1.45	0.31	1.31	0.28	116.2	24.7
S.D.	209	49	0.15	0.03	0.21	0.04	0.31	0.07	26.2	5.4

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Organ weight

Stage : End of administration

Sex : Male

Dose : 4MBE 1000 mg/kg

Species : Rat

Glans penis		
Animal No.	AB mg	RE mg/100g
4001	104.2	21.4
4002	97.9	21.3
4003	110.0	24.4
4004	89.1	18.7
4005	95.8	20.8
4006	97.8	20.2
4007	111.2	23.7
n	7	7
Mean	100.9	21.5
S.D.	8.0	2.0

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of lactation (F0 dams)
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
1101	345	2.10	0.61	12.9	3.7	241	70	1.21	0.35
1102	341	2.06	0.60	15.4	4.5	268	79	1.14	0.33
1103	357	1.89	0.53	14.3	4.0	197	55	1.17	0.33
1104	308	1.94	0.63	14.0	4.5	187	61	1.04	0.34
1105	346	2.19	0.63	18.9	5.5	317	92	1.15	0.33
1106	326	1.99	0.61	19.2	5.9	218	67	1.16	0.36
1107	313	1.92	0.61	17.6	5.6	273	87	1.00	0.32
1108	324	1.86	0.57	11.4	3.5	228	70	1.20	0.37
1109	335	1.93	0.58	18.7	5.6	316	94	1.10	0.33
1110	355	1.98	0.56	18.0	5.1	310	87	1.08	0.30
1111	364	2.07	0.57	18.9	5.2	232	64	1.22	0.34
1112	277	1.93	0.70	14.3	5.2	145	52	1.01	0.36
n	12	12	12	12	12	12	12	12	12
Mean	333	1.99	0.60	16.1	4.9	244	73	1.12	0.34
S.D.	25	0.10	0.04	2.7	0.8	54	14	0.08	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
1101	10.95	3.17	0.55	0.16	2.26	0.66	71	20.6	91.9	26.6
1102	12.16	3.57	0.48	0.14	2.62	0.77	72	21.1	89.3	26.2
1103	11.87	3.32	0.57	0.16	2.53	0.71	80	22.4	101.2	28.3
1104	11.77	3.82	0.50	0.16	2.20	0.71	84	27.3	84.9	27.6
1105	11.17	3.23	0.59	0.17	2.52	0.73	84	24.3	92.4	26.7
1106	11.36	3.48	0.49	0.15	2.20	0.67	79	24.2	100.4	30.8
1107	11.13	3.56	0.49	0.16	2.24	0.72	79	25.2	79.0	25.2
1108	13.00	4.01	0.63	0.19	2.42	0.75	73	22.5	90.2	27.8
1109	11.68	3.49	0.76	0.23	2.34	0.70	62	18.5	87.9	26.2
1110	11.87	3.34	0.45	0.13	2.33	0.66	72	20.3	97.6	27.5
1111	12.98	3.57	0.65	0.18	2.72	0.75	72	19.8	97.9	26.9
1112	10.29	3.71	0.43	0.16	1.82	0.66	82	29.6	77.9	28.1
n	12	12	12	12	12	12	12	12	12	12
Mean	11.69	3.52	0.55	0.17	2.35	0.71	76	23.0	90.9	27.3
S.D.	0.79	0.24	0.10	0.03	0.24	0.04	7	3.3	7.7	1.4

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight

Stage : End of lactation (F0 dams)

Sex : Female

Dose : 4MBE 0 mg/kg

Species : Rat

Uterus		
Animal No.	AB mg	RE mg/100g
1101	623	181
1102	437	128
1103	560	157
1104	559	181
1105	472	136
1106	525	161
1107	474	151
1108	523	161
1109	493	147
1110	500	141
1111	566	155
1112	384	139
n	12	12
Mean	510	153
S.D.	64	17

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of lactation (F0 dams)
Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
2101	344	1.99	0.58	13.2	3.8	201	58	1.03	0.30
2102	362	2.03	0.56	16.6	4.6	163	45	1.11	0.31
2103	326	2.07	0.63	18.5	5.7	237	73	1.06	0.33
2104	332	1.97	0.59	16.4	4.9	316	95	1.07	0.32
2105	350	1.94	0.55	19.2	5.5	275	79	1.17	0.33
2106	318	1.92	0.60	12.5	3.9	193	61	1.12	0.35
2107	345	2.09	0.61	18.1	5.2	181	52	1.25	0.36
2108	308	1.98	0.64	19.0	6.2	243	79	1.05	0.34
2110	309	2.06	0.67	25.1	8.1	259	84	1.24	0.40
2111	351	1.85	0.53	15.6	4.4	383	109	1.20	0.34
2112	313	1.96	0.63	11.5	3.7	208	66	1.07	0.34
n	11	11	11	11	11	11	11	11	11
Mean	333	1.99	0.60	16.9	5.1	242	73	1.12	0.34
S.D.	19	0.07	0.04	3.8	1.3	65	19	0.08	0.03

Animal No.	Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
2101	11.16	3.24	0.66	0.19	2.35	0.68	82	23.8	108.8	31.6
2102	11.45	3.16	0.51	0.14	2.38	0.66	65	18.0	71.1	19.6
2103	10.58	3.25	0.60	0.18	2.29	0.70	71	21.8	81.8	25.1
2104	11.31	3.41	0.53	0.16	2.36	0.71	83	25.0	79.3	23.9
2105	13.12	3.75	0.59	0.17	2.42	0.69	83	23.7	94.1	26.9
2106	11.12	3.50	0.51	0.16	2.17	0.68	76	23.9	89.2	28.1
2107	12.88	3.73	0.75	0.22	2.59	0.75	88	25.5	95.7	27.7
2108	10.15	3.30	0.49	0.16	2.23	0.72	69	22.4	86.6	28.1
2110	9.91	3.21	0.57	0.18	2.17	0.70	67	21.7	89.1	28.8
2111	13.20	3.76	0.57	0.16	2.60	0.74	94	26.8	115.7	33.0
2112	9.81	3.13	0.66	0.21	2.09	0.67	71	22.7	81.5	26.0
n	11	11	11	11	11	11	11	11	11	11
Mean	11.34	3.40	0.59	0.18	2.33	0.70	77	23.2	90.3	27.2
S.D.	1.24	0.24	0.08	0.02	0.17	0.03	9	2.3	13.0	3.6

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight

Stage : End of lactation (F0 dams)

Sex : Female

Dose : 4MBE 100 mg/kg

Species : Rat

Uterus		
Animal No.	AB mg	RE mg/100g
2101	499	145
2102	520	144
2103	556	171
2104	517	156
2105	658	188
2106	525	165
2107	553	160
2108	512	166
2110	485	157
2111	970	276
2112	645	206
n	11	11
Mean	585	176
S.D.	139	38

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : Female
Stage : End of lactation (F0 dams)
Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
3101	313	1.94	0.62	13.3	4.2	161	51	1.11	0.35
3102	335	1.94	0.58	15.6	4.7	222	66	1.12	0.33
3103	363	1.95	0.54	20.0	5.5	258	71	1.18	0.33
3104	364	1.95	0.54	17.3	4.8	259	71	1.23	0.34
3105	343	2.00	0.58	8.6	2.5	225	66	1.26	0.37
3106	346	1.93	0.56	18.3	5.3	254	73	1.11	0.32
3107	352	2.00	0.57	13.9	3.9	214	61	1.10	0.31
3108	306	1.87	0.61	14.0	4.6	272	89	1.10	0.36
3109	319	1.97	0.62	20.3	6.4	303	95	1.19	0.37
3110	342	1.81	0.53	15.7	4.6	191	56	1.25	0.37
3111	344	1.95	0.57	21.1	6.1	283	82	1.39	0.40
3112	348	2.01	0.58	17.9	5.1	222	64	1.16	0.33
n	12	12	12	12	12	12	12	12	12
Mean	340	1.94	0.58	16.3	4.8	239	70	1.18	0.35
S.D.	18	0.06	0.03	3.6	1.0	40	13	0.09	0.03

Animal No.	Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
3101	12.53	4.00	0.46	0.15	2.26	0.72	77	24.6	75.2	24.0
3102	12.29	3.67	0.62	0.19	2.41	0.72	78	23.3	87.5	26.1
3103	14.36	3.96	0.67	0.18	2.79	0.77	83	22.9	92.9	25.6
3104	12.20	3.35	0.60	0.16	2.15	0.59	79	21.7	108.5	29.8
3105	12.39	3.61	0.57	0.17	2.47	0.72	74	21.6	86.4	25.2
3106	10.95	3.16	0.55	0.16	2.29	0.66	63	18.2	86.6	25.0
3107	12.08	3.43	0.58	0.16	2.41	0.68	87	24.7	96.0	27.3
3108	10.09	3.30	0.45	0.15	2.03	0.66	61	19.9	95.3	31.1
3109	11.34	3.55	0.64	0.20	2.04	0.64	78	24.5	118.9	37.3
3110	12.24	3.58	0.66	0.19	2.56	0.75	61	17.8	98.6	28.8
3111	14.43	4.19	0.98	0.28	2.70	0.78	80	23.3	95.9	27.9
3112	11.41	3.28	0.54	0.16	2.38	0.68	86	24.7	89.1	25.6
n	12	12	12	12	12	12	12	12	12	12
Mean	12.19	3.59	0.61	0.18	2.37	0.70	76	22.3	94.2	27.8
S.D.	1.25	0.32	0.14	0.04	0.24	0.06	9	2.5	11.3	3.7

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight

Stage : End of lactation (F0 dams)

Sex : Female

Dose : 4MBE 300 mg/kg

Species : Rat

Uterus		
Animal No.	AB mg	RE mg/100g
3101	563	180
3102	641	191
3103	766	211
3104	658	181
3105	597	174
3106	571	165
3107	610	173
3108	387	126
3109	613	192
3110	591	173
3111	608	177
3112	545	157
n	12	12
Mean	596	175
S.D.	87	21

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of administration (non-mating group)
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
5101	289	2.02	0.70	15.0	5.2	298	103	1.00	0.35
5102	310	2.00	0.65	14.4	4.6	351	113	1.00	0.32
5103	315	2.06	0.65	19.8	6.3	302	96	1.12	0.36
5104	296	1.95	0.66	18.3	6.2	269	91	0.95	0.32
5105	296	2.03	0.69	21.2	7.2	465	157	0.90	0.30
n	5	5	5	5	5	5	5	5	5
Mean	301	2.01	0.67	17.7	5.9	337	112	0.99	0.33
S.D.	11	0.04	0.02	3.0	1.0	77	26	0.08	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
5101	7.69	2.66	0.56	0.19	2.08	0.72	62	21.5	109.5	37.9
5102	7.52	2.43	0.51	0.16	1.93	0.62	59	19.0	62.8	20.3
5103	7.80	2.48	0.50	0.16	2.17	0.69	64	20.3	109.1	34.6
5104	8.06	2.72	0.49	0.17	2.15	0.73	80	27.0	66.2	22.4
5105	7.39	2.50	0.59	0.20	2.13	0.72	79	26.7	104.5	35.3
n	5	5	5	5	5	5	5	5	5	5
Mean	7.69	2.56	0.53	0.18	2.09	0.70	69	22.9	90.4	30.1
S.D.	0.26	0.12	0.04	0.02	0.10	0.05	10	3.7	23.8	8.1

Animal No.	Uterus	
	AB mg	RE mg/100g
5101	510	176
5102	748	241
5103	530	168
5104	525	177
5105	523	177
n	5	5
Mean	567	188
S.D.	101	30

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of administration (non-mating group)
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
6101	294	1.89	0.64	14.7	5.0	320	109	0.97	0.33
6102	337	1.85	0.55	18.6	5.5	422	125	1.00	0.30
6103	297	1.93	0.65	16.1	5.4	260	88	1.00	0.34
6104	318	1.88	0.59	15.4	4.8	272	86	1.11	0.35
6105	262	1.98	0.76	14.7	5.6	253	97	0.95	0.36
n	5	5	5	5	5	5	5	5	5
Mean	302	1.91	0.64	15.9	5.3	305	101	1.01	0.34
S.D.	28	0.05	0.08	1.6	0.3	70	16	0.06	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal-RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
6101	9.18	3.12	0.52	0.18	2.13	0.72	62	21.1	75.0	25.5
6102	10.42	3.09	0.62	0.18	2.16	0.64	47	13.9	64.6	19.2
6103	9.31	3.13	0.50	0.17	2.16	0.73	78	26.3	120.7	40.6
6104	9.47	2.98	0.47	0.15	2.48	0.78	77	24.2	89.3	28.1
6105	7.82	2.98	0.47	0.18	1.86	0.71	67	25.6	68.9	26.3
n	5	5	5	5	5	5	5	5	5	5
Mean	9.24	3.06	0.52	0.17	2.16	0.72	66	22.2	83.7	27.9
S.D.	0.93	0.07	0.06	0.01	0.22	0.05	13	5.1	22.7	7.8

Animal No.	Uterus	
	AB mg	RE mg/100g
6101	516	176
6102	384	114
6103	468	158
6104	662	208
6105	545	208
n	5	5
Mean	515	173
S.D.	102	39

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : MaleStage : End of recovery
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
1008	497	2.23	0.45	22.2	4.5	328	66	1.45	0.29
1009	570	2.19	0.38	22.0	3.9	478	84	1.53	0.27
1010	553	2.18	0.39	27.8	5.0	201	36	1.61	0.29
1011	547	2.06	0.38	24.8	4.5	326	60	1.54	0.28
1012	551	2.18	0.40	22.8	4.1	287	52	1.65	0.30
n	5	5	5	5	5	5	5	5	5
Mean	544	2.17	0.40	23.9	4.4	324	60	1.56	0.29
S.D.	27	0.06	0.03	2.4	0.4	100	18	0.08	0.01

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
1008	10.88	2.19	0.63	0.13	3.33	0.67	56	11.3	3.71	0.75
1009	13.95	2.45	0.81	0.14	3.47	0.61	57	10.0	3.45	0.61
1010	13.56	2.45	0.89	0.16	3.35	0.61	52	9.4	3.94	0.71
1011	14.78	2.70	0.98	0.18	3.83	0.70	64	11.7	3.81	0.70
1012	13.91	2.52	0.74	0.13	4.22	0.77	47	8.5	3.70	0.67
n	5	5	5	5	5	5	5	5	5	5
Mean	13.42	2.46	0.81	0.15	3.64	0.67	55	10.2	3.72	0.69
S.D.	1.49	0.18	0.13	0.02	0.38	0.07	6	1.3	0.18	0.05

Animal No.	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
1008	1346	271	1.40	0.28	1.58	0.32	1.54	0.31	168.8	34.0
1009	1430	251	1.49	0.26	1.27	0.22	1.73	0.30	126.4	22.2
1010	1473	266	1.50	0.27	1.71	0.31	1.70	0.31	121.9	22.0
1011	1573	288	1.67	0.31	1.92	0.35	1.89	0.35	153.4	28.0
1012	1389	252	1.07	0.19	1.52	0.28	1.50	0.27	134.3	24.4
n	5	5	5	5	5	5	5	5	5	5
Mean	1442	266	1.43	0.26	1.60	0.30	1.67	0.31	141.0	26.1
S.D.	87	15	0.22	0.04	0.24	0.05	0.16	0.03	19.7	5.0

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Organ weight
Sex : Male
Stage : End of recovery
Dose : 4MBE 0 mg/kg

Species : Rat

Glans penis		
Animal No.	AB mg	RE mg/100g
1008	175.4	35.3
1009	129.0	22.6
1010	132.0	23.9
1011	131.3	24.0
1012	104.6	19.0
n	5	5
Mean	134.5	25.0
S.D.	25.6	6.1

4MBE :Benzenemethanol, 4-methyl-
AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : MaleStage : End of recovery
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
4008	484	2.28	0.47	20.1	4.2	356	74	1.27	0.26
4009	597	2.20	0.37	21.7	3.6	262	44	1.77	0.30
4010	539	2.38	0.44	24.0	4.5	388	72	1.52	0.28
4011	481	2.12	0.44	23.8	4.9	337	70	1.45	0.30
4012	493	2.13	0.43	17.9	3.6	471	96	1.33	0.27
n	5	5	5	5	5	5	5	5	5
Mean	519	2.22	0.43	21.5	4.2	363	71	1.47	0.28
S.D.	50	0.11	0.04	2.6	0.6	76	18	0.20	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Testis-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB g	RE g/100g
4008	11.42	2.36	0.73	0.15	3.24	0.67	61	12.6	3.08	0.64
4009	14.56	2.44	0.69	0.12	3.92	0.66	67	11.2	2.75	0.46
4010	16.00	2.97	0.83	0.15	4.02	0.75	68	12.6	3.59	0.67
4011	11.71	2.43	0.71	0.15	3.27	0.68	57	11.9	3.26	0.68
4012	12.23	2.48	0.93	0.19	3.34	0.68	75	15.2	2.89	0.59
n	5	5	5	5	5	5	5	5	5	5
Mean	13.18	2.54	0.78	0.15	3.56	0.69	66	12.7	3.11	0.61
S.D.	2.00	0.25	0.10	0.02	0.38	0.04	7	1.5	0.33	0.09

Animal No.	Epididymis-RL		Prostate		Seminal vesicle		LABC		Cowper's gland-RL	
	AB mg	RE mg/100g	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g
4008	1145	237	1.25	0.26	1.22	0.25	1.63	0.34	119.6	24.7
4009	882	148	1.39	0.23	1.86	0.31	1.30	0.22	129.7	21.7
4010	1237	229	1.15	0.21	1.49	0.28	1.26	0.23	155.8	28.9
4011	1275	265	1.18	0.25	1.68	0.35	1.47	0.31	158.7	33.0
4012	974	198	1.42	0.29	1.92	0.39	1.34	0.27	107.1	21.7
n	5	5	5	5	5	5	5	5	5	5
Mean	1103	215	1.28	0.25	1.63	0.32	1.40	0.27	134.2	26.0
S.D.	169	45	0.12	0.03	0.29	0.06	0.15	0.05	22.6	4.9

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

LABC: Levator ani and bulbocavernosus muscle

Glans penis		
Animal No.	AB mg	RE mg/100g
4008	124.3	25.7
4009	116.4	19.5
4010	113.9	21.1
4011	126.5	26.3
4012	93.8	19.0
n	5	5
Mean	115.0	22.3
S.D.	13.0	3.5

4MBE :Benzenemethanol, 4-methyl-
AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of recovery (non-mating group)
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
5106	309	2.14	0.69	20.1	6.5	255	83	1.05	0.34
5107	297	2.02	0.68	16.9	5.7	364	123	0.95	0.32
5108	286	1.96	0.69	18.3	6.4	198	69	0.83	0.29
5109	308	2.06	0.67	15.1	4.9	269	87	1.28	0.42
5110	297	2.00	0.67	18.2	6.1	205	69	0.94	0.32
n	5	5	5	5	5	5	5	5	5
Mean	299	2.04	0.68	17.7	5.9	258	86	1.01	0.34
S.D.	9	0.07	0.01	1.9	0.6	67	22	0.17	0.05

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
5106	7.26	2.35	0.64	0.21	1.99	0.64	76	24.6	74.2	24.0
5107	7.20	2.42	0.58	0.20	2.05	0.69	54	18.2	93.0	31.3
5108	6.60	2.31	0.54	0.19	1.96	0.69	52	18.2	82.8	29.0
5109	7.63	2.48	0.53	0.17	2.17	0.70	78	25.3	115.9	37.6
5110	7.70	2.59	0.51	0.17	1.97	0.66	81	27.3	117.0	39.4
n	5	5	5	5	5	5	5	5	5	5
Mean	7.28	2.43	0.56	0.19	2.03	0.68	68	22.7	96.6	32.3
S.D.	0.44	0.11	0.05	0.02	0.09	0.03	14	4.2	19.3	6.3

Animal No.	Uterus	
	AB mg	RE mg/100g
5106	557	180
5107	489	165
5108	670	234
5109	715	232
5110	693	233
n	5	5
Mean	625	209
S.D.	97	34

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : End of recovery (non-mating group)
Dose : 4MBE 1000 mg/kg

Species : Rat

Animal No.	Body weight	Brain		Thyroid-RL		Thymus		Heart	
	g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g	AB g	RE g/100g
6106	276	2.01	0.73	15.8	5.7	302	109	0.93	0.34
6107	285	2.02	0.71	18.8	6.6	352	124	0.96	0.34
6108	282	2.06	0.73	14.6	5.2	202	72	0.88	0.31
6109	275	1.89	0.69	21.5	7.8	326	119	1.00	0.36
6110	286	1.95	0.68	15.7	5.5	406	142	0.96	0.34
n	5	5	5	5	5	5	5	5	5
Mean	281	1.99	0.71	17.3	6.2	318	113	0.95	0.34
S.D.	5	0.07	0.02	2.8	1.1	75	26	0.04	0.02

Animal No.	Liver		Spleen		Kidney-RL		Adrenal -RL		Ovary-RL	
	AB g	RE g/100g	AB g	RE g/100g	AB g	RE g/100g	AB mg	RE mg/100g	AB mg	RE mg/100g
6106	6.84	2.48	0.47	0.17	1.76	0.64	56	20.3	77.5	28.1
6107	7.26	2.55	0.50	0.18	2.01	0.71	62	21.8	63.5	22.3
6108	6.99	2.48	0.41	0.15	1.85	0.66	74	26.2	87.3	31.0
6109	7.00	2.55	0.51	0.19	1.80	0.65	60	21.8	115.6	42.0
6110	8.44	2.95	0.58	0.20	2.07	0.72	74	25.9	98.2	34.3
n	5	5	5	5	5	5	5	5	5	5
Mean	7.31	2.60	0.49	0.18	1.90	0.68	65	23.2	88.4	31.5
S.D.	0.65	0.20	0.06	0.02	0.14	0.04	8	2.7	19.8	7.3

Animal No.	Uterus	
	AB mg	RE mg/100g
6106	670	243
6107	570	200
6108	525	186
6109	793	288
6110	680	238
n	5	5
Mean	648	231
S.D.	105	40

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Appendix 9-1(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1001 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Liver Extramedullary hematopoiesis: minimal, granulocytic periportal

Pituitary Cyst: minimal
pars distalis

Prostate Infiltrate, inflammatory cell: minimal, interstitial mononuclear, ventral lobe

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain(cerebrum, cerebellum, pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum
Intestine, ileum, Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Lung(bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-2 (1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1002 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Kidney	Dilatation,tubule: minimal, unilateral, focal
Liver	Infiltrate,inflammatory cell: minimal, mononuclear
Parathyroid	No sample
Pancreas	Focus,basophilic: minimal
Pituitary	Aberrant craniopharyngeal tissue: minimal between pars intermedia and pars nervosa Cyst: minimal pars distalis
Prostate	Infiltrate,inflammatory cell: mild, interstitial mononuclear, ventral lobe

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum
Lymph node,mesenteric, Lymph node,submandibular, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Peyer's patch,ileal, Salivary gland,submandibular, Skin,inguinal
Sciatic nerve, Spleen, Stomach, Seminal vesicle, Spinal cord,thoracic, Testis
Thymus, Trachea, Thyroid, Urinary bladder

Appendix 9-3 (1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1003 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Prostate Infiltrate, inflammatory cell: mild, interstitial mononuclear, ventral lobe

Urinary bladder Calculus: mild with urothelial erosion

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain (cerebrum, cerebellum, pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum
Intestine, ileum, Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung (bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid

Appendix 9-4 (1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1004 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Heart Rodent progressive cardiomyopathy: minimal, focal

Kidney Basophilia,tubule: minimal, unilateral

Liver Infiltrate,inflammatory cell: minimal, mononuclear

Prostate Infiltrate,inflammatory cell: moderate, interstitial mononuclear, ventral lobe

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum
Lymph node,mesenteric, Lymph node,submandibular, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-5 (1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1005 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Pancreas Infiltrate, inflammatory cell: minimal, focal mixed

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain (cerebrum, cerebellum, pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum
Intestine, ileum, Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung (bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pituitary, Prostate, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-6(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1006 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-7(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1007 Male 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Animal No. 2001 Male 100 mg/kg Day 43 End of dosing

All tissues	Not remarkable
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Following tissues : Not remarkable

848

Appendix 9-9(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2002 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Kidney Basophilia,tubule: minimal, unilateral

Following tissues : Not remarkable

Bone,femur, Epididymis, Stomach, Urinary bladder

Appendix 9-10(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2003 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Stomach, Urinary bladder

Appendix 9-11(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2004 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Stomach, Urinary bladder

Appendix 9-12(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2005 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Stomach, Urinary bladder

Appendix 9-13(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2006 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-14(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2007 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-15(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2008 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-16(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2009 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum, Kidney
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-17(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2010 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-18(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2011 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-19(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2012 Male 100 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-20(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3001 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Kidney Basophilia,tubule: minimal, unilateral

Following tissues : Not remarkable

Bone,femur, Epididymis, Stomach, Urinary bladder

Appendix 9-21(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3002 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Stomach, Urinary bladder

Appendix 9-22(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3003 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Stomach Hyperkeratosis, forestomach: minimal, focal
Hyperplasia, squamous cell, forestomach: minimal, focal

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Urinary bladder

Appendix 9-23(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3004 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Stomach, Urinary bladder

Appendix 9-24(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3005 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Stomach Hyperkeratosis, forestomach: minimal, diffuse
Hyperplasia, squamous cell, forestomach: minimal, diffuse

Following tissues : Not remarkable

Bone, femur, Epididymis, Kidney, Urinary bladder

Appendix 9-25(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3006 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-26(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3007 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-27(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3008 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-28(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3009 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-29(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3010 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-30(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3011 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-31(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3012 Male 300 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-32(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4001 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Epididymis	Edema: mild, bilateral, interstitial cauda, with mononuclear inflammatory cell infiltration Cell debris, lumen: minimal, bilateral cauda
Intestine, duodenum	Infiltrate, inflammatory cell: minimal, submucosal eosinophilic
Kidney	Vacuolation, urothelium: minimal, unilateral umbrella cell
Stomach	Erosion, glandular stomach: minimal, focal, pyloric with neutrophil infiltration Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, jejunum, Intestine, ileum, Intestine, cecum, Intestine, colon
Intestine, rectum, Lymph node, mesenteric, Lymph node, submandibular, Liver
Lung(bronchus), Mammary gland, inguinal, Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Prostate, Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal
Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic, Testis, Thymus
Trachea, Thyroid

Appendix 9-33(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4002 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

Epididymis Focus, white: 1 present, right, cauda
8x5mm

Other tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: mild
metaphysis

Epididymis Edema: mild, bilateral, interstitial
cauda, with mononuclear inflammatory cell infiltration
Sperm granuloma: mild, unilateral
cauda
Cell debris, lumen: minimal, bilateral
cauda

Kidney Vacuolation, urothelium: minimal, bilateral
umbrella cell

Stomach Hyperkeratosis, forestomach: minimal, diffuse
Hyperplasia, squamous cell, forestomach: minimal, diffuse

Urinary bladder Infiltrate, inflammatory cell: minimal, focal, submucosal
Vacuolation, urothelium: mild
umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Prostate, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic
Testis, Thymus, Trachea, Thyroid

Appendix 9-34(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4003 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Epididymis	Edema: mild, bilateral, interstitial cauda, with mononuclear inflammatory cell infiltration Sperm granuloma: mild, unilateral Cell debris, lumen: minimal, bilateral cauda
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Stomach	Hyperkeratosis, forestomach: mild, diffuse Hyperplasia, squamous cell, forestomach: mild, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Prostate, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic
Testis, Thymus, Trachea, Thyroid

Appendix 9-35(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4004 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Epididymis	Edema: minimal, bilateral, interstitial Cell debris, lumen: minimal, bilateral caput and cauda
Kidney	Basophilia, tubule: minimal, unilateral Infiltrate, inflammatory cell: minimal, mononuclear Vacuolation, urothelium: minimal, unilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: minimal
Stomach	Erosion, glandular stomach: minimal, focal, pyloric with neutrophil infiltration and hemorrhage Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Prostate, Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal
Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic, Testis, Thymus
Trachea, Thyroid

Appendix 9-36(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4005 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Epididymis	Edema: minimal, bilateral, interstitial cauda, with mononuclear inflammatory cell infiltration Cell debris, lumen: minimal, bilateral caput and cauda
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Stomach	Erosion, glandular stomach: minimal, focal, pyloric with neutrophil infiltration Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Prostate, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic
Testis, Thymus, Trachea, Thyroid

Appendix 9-37(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4006 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: minimal metaphysis
Epididymis	Cell debris, lumen: minimal, bilateral cauda
Kidney	Basophilia, tubule: minimal, unilateral
Stomach	Hyperkeratosis, forestomach: mild, diffuse Hyperplasia, squamous cell, forestomach: mild, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Prostate, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic
Testis, Thymus, Trachea, Thyroid

Appendix 9-38(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4007 Male 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Epididymis	Cell debris, lumen: minimal, bilateral
Kidney	Basophilia, tubule: mild, unilateral Vacuolation, urothelium: mild, bilateral umbrella cell
Liver	Vacuolation, hepatocyte, periportal: minimal
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Prostate, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Seminal vesicle, Spinal cord, thoracic
Testis, Thymus, Trachea, Thyroid

Appendix 9-39(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5101 Female 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-40(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5102 Female 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-41(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5103 Female 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-42(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5104 Female 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-43(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5105 Female 0 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Parathyroid No sample

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Pancreas
Pituitary, Peyer's patch,ileal, Salivary gland,submandibular, Skin,inguinal
Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus, Trachea, Thyroid
Urinary bladder, Uterus, Vagina

Appendix 9-44(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6101 Female 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Intestine, duodenum	Erosion/ulcer: minimal
Liver	Vacuolation, hepatocyte, periportal: mild
Pancreas	Infiltrate, inflammatory cell: minimal, mononuclear
Stomach	Edema, lamina propria, forestomach: minimal with capillary dilatation and mixed inflammatory cell infiltration Hyperkeratosis, forestomach: minimal Hyperplasia, squamous cell, forestomach: minimal
Trachea	Necrosis: moderate
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, jejunum, Intestine, ileum, Intestine, cecum, Intestine, colon
Intestine, rectum, Kidney, Lymph node, mesenteric, Lymph node, submandibular
Lung(bronchus), Mammary gland, inguinal, Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Thyroid, Uterus, Vagina

Appendix 9-45(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6102 Female 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Hyperplasia, interstitial cell: minimal, unilateral Decreased No./absent, large follicles: moderate, unilateral Hypertrophy, corpora lutea: mild, bilateral
Stomach	Hyperkeratosis, forestomach: minimal Hyperplasia, squamous cell, forestomach: minimal
Urinary bladder	Vacuolation, urothelium: mild umbrella cell
Vagina	Mucification, increased: mild

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus

Appendix 9-46(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6103 Female 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: mild metaphysis

Stomach Edema, lamina propria, forestomach: minimal with mixed inflammatory cell infiltration
Hyperkeratosis, forestomach: minimal, diffuse
Hyperplasia, squamous cell, forestomach: minimal, diffuse

Urinary bladder Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Spinal cord, thoracic, Thymus, Trachea
Thyroid, Uterus, Vagina

Appendix 9-47(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6104 Female 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: minimal metaphysis
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Ovary	Hyperplasia, interstitial cell: minimal, unilateral Decreased No./absent, large follicles: moderate, unilateral middle/large
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal
Sciatic nerve, Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus
Vagina

Appendix 9-48(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6105 Female 1000 mg/kg Day 43 End of dosing

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Vacuolation, urothelium: minimal, unilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: minimal
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse with cellular vacuolation
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-49(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1101 Female 0 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-50(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1102 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Parathyroid No sample

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Pancreas
Pituitary, Peyer's patch,ileal, Salivary gland,submandibular, Skin,inguinal
Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus, Trachea, Thyroid
Urinary bladder, Uterus, Vagina

Appendix 9-51(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1103 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Adrenal Hypertrophy,cortex,diffuse: minimal, bilateral, zona fasciculata

Lung (bronchus) Macrophage,increased: minimal

Following tissues : Not remarkable

Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye, Heart
Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Mammary gland,inguinal, Medulla oblongata
Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary
Peyer's patch,ileal, Salivary gland,submandibular, Skin,inguinal, Sciatic nerve
Spleen, Stomach, Spinal cord,thoracic, Thymus, Trachea, Thyroid, Urinary bladder
Uterus, Vagina

Appendix 9-52(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1104 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-53(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1105 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-54(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1106 Female 0 mg/kg Day 51 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Pituitary Cyst: mild

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Peyer's patch,ileal, Salivary gland,submandibular, Skin,inguinal
Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus, Trachea, Thyroid
Urinary bladder, Uterus, Vagina

Appendix 9-55(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1107 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-56(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1108 Female 0 mg/kg Day 55 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-57(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1109 Female 0 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-58(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1110 Female 0 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-59(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1111 Female 0 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-60(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1112 Female 0 mg/kg Day 55 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-61(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2101 Female 100 mg/kg Day 51 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Stomach Vacuolation,limiting ridge: minimal

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Urinary bladder, Vagina

Appendix 9-62(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2102 Female 100 mg/kg Day 65 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-63(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2103 Female 100 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Kidney Dilatation,tubule: minimal, unilateral
Basophilia,tubule: minimal, unilateral

Following tissues : Not remarkable

Bone,femur, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder, Vagina

Appendix 9-64(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2104 Female 100 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder
Vagina

Appendix 9-65(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2105 Female 100 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder
Vagina

Appendix 9-66(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2106 Female 100 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-67(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2107 Female 100 mg/kg Day 55 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-68(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2108 Female 100 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-69(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2110 Female 100 mg/kg Day 55 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-70(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2111 Female 100 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-71(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2112 Female 100 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder
Vagina

Appendix 9-72(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3101 Female 300 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-73(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3102 Female 300 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder
Vagina

Appendix 9-74(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3103 Female 300 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Kidney Infiltrate,inflammatory cell: minimal, unilateral, focal
cortex and pelvis

Following tissues : Not remarkable

Bone,femur, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder, Vagina

Appendix 9-75(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3104 Female 300 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-76(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3105 Female 300 mg/kg Day 52 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Stomach Hyperkeratosis,forestomach: minimal, diffuse
Hyperplasia,squamous cell,forestomach: minimal, diffuse

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Urinary bladder, Vagina

Appendix 9-77(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3106 Female 300 mg/kg Day 54 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-78(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3107 Female 300 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Mammary gland,inguinal Necrosis,acinar cell: mild, multifocal
with inflammatory cell infiltration

Following tissues : Not remarkable

Bone,femur, Kidney, Ovary, Stomach, Urinary bladder, Vagina

Appendix 9-79(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3108 Female 300 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Bone,femur, Kidney, Mammary gland,inguinal, Ovary, Stomach, Urinary bladder, Vagina

Appendix 9-80(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3109 Female 300 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-81(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3110 Female 300 mg/kg Day 65 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-82(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3111 Female 300 mg/kg Day 53 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-83(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 3112 Female 300 mg/kg Day 55 End of dosing,Dams

Gross pathology:

All tissues Not remarkable

Histopathology:

No tissues examined

Appendix 9-84(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1008 Male 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum, Kidney
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-85(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1009 Male 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Prostate Infiltrate, inflammatory cell: minimal, interstitial mononuclear, ventral lobe

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain(cerebrum, cerebellum, pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum
Intestine, ileum, Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung(bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-86(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1010 Male 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Heart Rodent progressive cardiomyopathy: minimal, focal

Kidney Basophilia,tubule: minimal, unilateral

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-87(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1011 Male 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum, Kidney
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-88(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 1012 Male 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum, Kidney
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-89(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4008 Male 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons)
Coagulating gland, Epididymis, Eye, Heart, Intestine,duodenum, Intestine,jejunum
Intestine,ileum, Intestine,cecum, Intestine,colon, Intestine,rectum, Kidney
Lymph node,mesenteric, Lymph node,submandibular, Liver, Lung(bronchus)
Mammary gland,inguinal, Medulla oblongata, Muscle,quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch,ileal
Salivary gland,submandibular, Skin,inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord,thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-90(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4009 Male 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: minimal metaphysis
Epididymis	Sperm, decreased, lumen: severe, unilateral caput-cauda
Prostate	Infiltrate, inflammatory cell: minimal, interstitial mononuclear, ventral lobe
Testis	Degeneration/atrophy, tubule: severe, unilateral

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
 Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
 Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
 Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung(bronchus)
 Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
 Optic nerve, Parathyroid, Pancreas, Pituitary, Peyer's patch, ileal
 Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
 Seminal vesicle, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Urinary bladder

Appendix 9-91(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4010 Male 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: minimal metaphysis

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung(bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-92(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4011 Male 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: mild metaphysis

Prostate Infiltrate, inflammatory cell: minimal, interstitial mononuclear, ventral lobe

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
Epididymis, Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
Lymph node, mesenteric, Lymph node, submandibular, Liver, Lung (bronchus)
Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Parathyroid, Pancreas, Pituitary, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
Seminal vesicle, Spinal cord, thoracic, Testis, Thymus, Trachea, Thyroid
Urinary bladder

Appendix 9-93(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4012 Male 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: minimal metaphysis
Epididymis	Sperm, decreased, lumen: moderate, bilateral
Liver	Infiltrate, inflammatory cell: minimal, focal, mononuclear with hepatocellular necrosis
Testis	Degeneration/atrophy, tubule: mild, bilateral

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Coagulating gland
 Eye, Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum
 Intestine, cecum, Intestine, colon, Intestine, rectum, Kidney
 Lymph node, mesenteric, Lymph node, submandibular, Lung(bronchus)
 Mammary gland, inguinal, Medulla oblongata, Muscle, quadriceps femoris
 Optic nerve, Parathyroid, Pancreas, Pituitary, Prostate, Peyer's patch, ileal
 Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen, Stomach
 Seminal vesicle, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Urinary bladder

Appendix 9-94(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5106 Female 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Adrenal Hypertrophy, cortex, focal: minimal, unilateral, zona fasciculata

Following tissues : Not remarkable

Bone, femur, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord, thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-95(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5107 Female 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Heart Infiltrate, inflammatory cell: minimal, focal,
mononuclear
subendocardial

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord, thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-96(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5108 Female 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-97(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5109 Female 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-98(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 5110 Female 0 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-99(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6106 Female 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Adrenal Hypertrophy, cortex, diffuse: minimal, bilateral, zona glomerulosa

Bone, femur Bone, increased, trabeculae: minimal metaphysis

Following tissues : Not remarkable

Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord, thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-100(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6107 Female 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: minimal metaphysis

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord, thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-101(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6108 Female 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone,femur Bone,increased,trabeculae: minimal metaphysis

Parathyroid No sample

Stomach Cyst,glandular stomach: minimal

Following tissues : Not remarkable

Adrenal, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye, Heart
Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Spinal cord,thoracic, Thymus, Trachea
Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-102(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6109 Female 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Following tissues : Not remarkable

Adrenal, Bone,femur, Bone marrow,femur, Brain(cerebrum,cerebellum,pons), Eye
Heart, Intestine,duodenum, Intestine,jejunum, Intestine,ileum, Intestine,cecum
Intestine,colon, Intestine,rectum, Kidney, Lymph node,mesenteric
Lymph node,submandibular, Liver, Lung(bronchus), Mammary gland,inguinal
Medulla oblongata, Muscle,quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch,ileal, Salivary gland,submandibular
Skin,inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord,thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-103(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 6110 Female 1000 mg/kg Day 57 End of recovery

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: minimal metaphysis

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Stomach, Spinal cord, thoracic, Thymus
Trachea, Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-104(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 2109 Female 100 mg/kg Day 54 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Spleen Pigmentation, increased: moderate, brown red pulp

Following tissues : Not remarkable

Adrenal, Bone, femur, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye
Heart, Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Stomach, Spinal cord, thoracic, Thymus, Trachea
Thyroid, Urinary bladder, Uterus, Vagina

Appendix 9-105(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4101 Female 1000 mg/kg Day 41 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Basophilia, tubule: minimal, bilateral Infiltrate, inflammatory cell: minimal, unilateral, interstitial mononuclear
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Hyperplasia, interstitial cell: minimal, bilateral Decreased No./absent, large follicles: mild, bilateral middle/large Hypertrophy, corpora lutea: mild, bilateral with decreased old corpora lutea
Pituitary	No sample
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Vagina	Mucification, increased: mild

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Urinary bladder, Uterus

Appendix 9-106(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4102 Female 1000 mg/kg Day 43 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: minimal metaphysis
Lung (bronchus)	Metaplasia, osseous: minimal
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: minimal umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Medulla oblongata, Muscle, quadriceps femoris
Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary, Peyer's patch, ileal
Salivary gland, submandibular, Skin, inguinal, Sciatic nerve, Spleen
Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-107(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4103 Female 1000 mg/kg Day 41 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur Bone, increased, trabeculae: mild metaphysis

Stomach Hyperkeratosis, forestomach: minimal, diffuse
Hyperplasia, squamous cell, forestomach: minimal, diffuse

Urinary bladder Vacuolation, urothelium: minimal
umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid
Pancreas, Pituitary, Peyer's patch, ileal, Salivary gland, submandibular
Skin, inguinal, Sciatic nerve, Spleen, Spinal cord, thoracic, Thymus, Trachea
Thyroid, Uterus, Vagina

Appendix 9-108(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4104 Female 1000 mg/kg Day 44 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: minimal
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-109(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4105 Female 1000 mg/kg Day 42 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Decreased No./absent, large follicles: minimal, unilateral
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-110(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4106 Female 1000 mg/kg Day 42 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Ovary	Hyperplasia, interstitial cell: mild, bilateral Decreased No./absent, large follicles: mild, bilateral
Stomach	Edema, lamina propria, forestomach: minimal Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse with cellular vacuolation

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Mammary gland, inguinal
Medulla oblongata, Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Pituitary, Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal
Sciatic nerve, Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid
Urinary bladder, Uterus, Vagina

Appendix 9-111(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4107 Female 1000 mg/kg Day 44 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Vacuolation, urothelium: minimal, bilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: minimal brown pigmented
Ovary	Hyperplasia, interstitial cell: minimal, unilateral Decreased No./absent, large follicles: mild, unilateral Hypertrophy, corpora lutea: mild, bilateral
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-112(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4108 Female 1000 mg/kg Day 43 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: moderate metaphysis
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Decreased No./absent, large follicles: mild, unilateral middle/large Hypertrophy, corpora lutea: mild, bilateral with decreased old corpora lutea
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: minimal umbrella cell
Vagina	Mucification, increased: mild

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus

Appendix 9-113(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4109 Female 1000 mg/kg Day 42 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Kidney	Vacuolation, urothelium: minimal, unilateral umbrella cell
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Hypertrophy, corpora lutea: mild, bilateral with decreased old corpora lutea
Pituitary	Pseudocyst: minimal pars distalis
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: minimal umbrella cell
Vagina	Mucification, increased: mild

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus

Appendix 9-114(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4110 Female 1000 mg/kg Day 43 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Ovary	Hyperplasia, interstitial cell: minimal, unilateral Decreased No./absent, large follicles: mild, unilateral Hypertrophy, corpora lutea: mild, bilateral with decreased corpora lutea
Pituitary	Cyst: mild, Rathke's cleft
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Parathyroid, Pancreas
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-115(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4111 Female 1000 mg/kg Day 42 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: mild vacuolated
Salivary gland, submandibular	Secretion, decreased, granular duct: mild
Stomach	Edema, lamina propria, forestomach: minimal Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: mild umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Skin, inguinal, Sciatic nerve, Spleen, Spinal cord, thoracic
Thymus, Trachea, Thyroid, Uterus, Vagina

Appendix 9-116(1/1) Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study with the reproduction/ developmental toxicity screening test in rats

Individual gross and histopathological findings

Animal No. 4112 Female 1000 mg/kg Day 42 Undelivered

Gross pathology:

All tissues Not remarkable

Histopathology:

Bone, femur	Bone, increased, trabeculae: mild metaphysis
Mammary gland, inguinal	Hyperplasia, lobuloalveolar, diffuse: minimal
Stomach	Hyperkeratosis, forestomach: minimal, diffuse Hyperplasia, squamous cell, forestomach: minimal, diffuse
Urinary bladder	Vacuolation, urothelium: minimal umbrella cell

Following tissues : Not remarkable

Adrenal, Bone marrow, femur, Brain(cerebrum, cerebellum, pons), Eye, Heart
Intestine, duodenum, Intestine, jejunum, Intestine, ileum, Intestine, cecum
Intestine, colon, Intestine, rectum, Kidney, Lymph node, mesenteric
Lymph node, submandibular, Liver, Lung(bronchus), Medulla oblongata
Muscle, quadriceps femoris, Optic nerve, Ovary, Parathyroid, Pancreas, Pituitary
Peyer's patch, ileal, Salivary gland, submandibular, Skin, inguinal, Sciatic nerve
Spleen, Spinal cord, thoracic, Thymus, Trachea, Thyroid, Uterus, Vagina

Estrus cycles

Generation : F0

Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	/Before mating (day)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1101	E	M	D	P	E	M	D	P	E	M	D	P	E	M
1102	E	M	D	D	P	E	M	D	D	P	E	M	D	D
1103	P	E	M	D	P	E	M	D	D	P	E	M	D	D
1104	P	E	M	D	P	E	M	D	D	P	E	E	M	D
1105	D	P	E	M	D	P	E	E	M	D	P	E	M	D
1106	M	D	P	E	M	D	P	E	M	D	P	E	M	D
1107	D	P	E	M	D	P	E	M	D	P	E	M	D	P
1108	D	P	E	M	D	P	E	M	D	P	E	M	D	P
1109	M	D	P	E	M	D	P	E	M	D	P	E	M	D
1110	E	M	D	P	E	M	D	P	E	E	M	D	P	E
1111	P	E	M	D	P	E	M	D	P	E	M	D	P	E
1112	D	P	E	M	D	P	E	M	D	P	E	M	D	P

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

Estrus cycles

Generation : F0

Dose : 4MBE 0 mg/kg

Species : Rat

Generation: F0		Dose: 4MBE 0 mg/kg			Species: Rat		
Animal No.	Before mating (day)	Length of estrous cycle			Mean	Number of estrus	Animal with abnormal estrous cycle
	15	(days)					
1101	D	4	4	4	4.0	4	-
1102	P	5	5		5.0	3	-
1103	P	4	5		4.5	3	-
1104	D	4	5		4.5	3	+
1105	P	4	5		4.5	3	-
1106	P	4	4		4.0	3	-
1107	E	4	4	4	4.0	4	-
1108	E	4	4	4	4.0	4	-
1109	D	4	4		4.0	3	-
1110	M	4	4	5	4.3	4	-
1111	M	4	4	4	4.0	4	-
1112	E	4	4	4	4.0	4	-

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

+ : Animal with abnormal estrous cycle, - : Animal with normal and regular cycle

	Generation : F0										Dose : 4MBE 100 mg/kg				Species : Rat	
Animal No.	/Before mating (day)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
2101	M	D	P	E	M	D	P	E	M	D	P	E	M	D		
2102	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2103	E	M	D	P	E	M	D	P	E	M	D	P	E	M		
2104	M	D	P	E	M	D	P	E	M	D	P	E	M	D		
2105	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2106	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2107	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2108	P	E	M	D	P	E	M	D	P	E	M	D	P	E		
2109	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2110	D	P	E	M	D	P	E	M	D	P	E	M	D	P		
2111	P	E	M	D	P	E	M	D	P	E	M	D	P	E		
2112	M	D	P	E	M	D	P	E	M	D	P	E	M	D		

4MBE :Benzenemethanol, 4-methyl-
P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

Estrus cycles

Generation : F0

Dose : 4MBE 100 mg/kg

Species : Rat

Generation: F0		Dose: 4MBE 100 mg/kg			Species: Rat		
Animal No.	/Before mating (day)	Length of estrous cycle			Mean	Number of estrus	Animal with abnormal estrous cycle
	15	(days)					
2101	P	4	4		4.0	3	-
2102	E	4	4	4	4.0	4	-
2103	D	4	4	4	4.0	4	-
2104	P	4	4		4.0	3	-
2105	E	4	4	4	4.0	4	-
2106	E	4	4	4	4.0	4	-
2107	E	4	4	4	4.0	4	-
2108	M	4	4	4	4.0	4	-
2109	E	4	4	4	4.0	4	-
2110	E	4	4	4	4.0	4	-
2111	M	4	4	4	4.0	4	-
2112	P	4	4		4.0	3	-

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

+ : Animal with abnormal estrous cycle, - : Animal with normal and regular cycle

Appendix 10 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Estrus cycles

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	/Before mating (day)													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
3101	P	E	M	D	P	E	M	D	P	E	M	D	P	E
3102	E	M	D	P	E	M	D	P	E	M	D	P	E	M
3103	E	M	D	P	E	M	D	P	E	M	D	P	E	M
3104	D	P	E	E	M	D	P	E	E	M	D	P	E	E
3105	D	P	E	M	D	D	P	E	M	D	P	E	M	D
3106	P	E	M	D	P	E	M	D	P	E	M	D	P	E
3107	E	M	D	P	E	M	D	P	E	M	D	P	E	M
3108	P	E	M	D	D	P	E	M	D	D	P	E	M	D
3109	E	M	D	P	E	M	D	P	E	M	D	P	E	M
3110	D	P	E	M	D	P	E	M	D	P	E	M	D	P
3111	E	M	D	P	E	M	D	P	E	M	D	P	E	M
3112	D	P	E	M	D	P	E	M	D	P	E	M	D	P

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

Estrus cycles

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

Generation: F0		Dose: 4MBE 500 mg/kg			Species: Rat		
Animal No.	/Before mating (day)	Length of estrous cycle			Mean	Number of estrus	Animal with abnormal estrous cycle
	15	(days)					
3101	M	4	4	4	4.0	4	-
3102	D	4	4	4	4.0	4	-
3103	D	4	4	4	4.0	4	-
3104	M	5	5		5.0	3	-
3105	P	5	4		4.5	3	-
3106	M	4	4	4	4.0	4	-
3107	D	4	4	4	4.0	4	-
3108	D	5	5		5.0	3	-
3109	D	4	4	4	4.0	4	-
3110	E	4	4	4	4.0	4	-
3111	D	4	4	4	4.0	4	-
3112	E	4	4	4	4.0	4	-

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

+ : Animal with abnormal estrous cycle, - : Animal with normal and regular cycle

	Generation : F0										Dose : 4MBE 1000 mg/kg				Species : Rat	
Animal No.	/Before mating (day)															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
4101	M	D	D	P	E	M	D	D	D	D	D	D	D	D		
4102	E	M	D	P	E	E	M	D	D	D	D	D	D	D		
4103	M	D	P	E	M	D	P	E	M	D	P	E	M	D		
4104	P	E	M	D	D	D	D	D	D	D	D	D	D	D		
4105	E	M	D	P	E	M	D	P	E	M	D	P	E	M		
4106	M	D	P	E	M	D	D	D	D	D	D	D	D	D		
4107	M	D	P	E	M	D	D	D	D	D	D	D	D	D		
4108	D	P	E	E	M	D	P	E	M	D	D	D	D	D		
4109	E	M	D	P	E	M	D	D	D	D	D	D	D	D		
4110	E	M	D	P	E	M	D	D	P	E	M	D	P	E		
4111	M	D	D	D	D	D	D	D	D	D	D	D	D	D		
4112	E	M	D	P	E	E	M	D	D	D	D	D	D	D		

4MBE :Benzenemethanol, 4-methyl-
P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

Estrus cycles		Dose : 4MBE 1000 mg/kg			Species : Rat		
Generation : F0							
	/Before mating (day)	Length of estrous cycle			Number of	Animal with	
Animal No.	15	(days)			Mean	estrus	abnormal estrous cycle
4101	D					1	+
4102	D	4			4.0	2	+
4103	P	4	4		4.0	3	-
4104	D					1	+
4105	D	4	4	4	4.0	4	-
4106	D					1	+
4107	D					1	+
4108	D	5			5.0	2	+
4109	D	4			4.0	2	+
4110	M	4	5	4	4.3	4	-
4111	D					0	+
4112	D	4			4.0	2	+

4MBE : Benzenemethanol, 4-methyl-

P : Proestrus, E : Estrus, M : Metestrus, D : Diestrus, - : Smear was not sampled or missing value

+ : Animal with abnormal estrous cycle, - : Animal with normal and regular cycle

Reproductive performance		Dose : 4MBE 0 mg/kg			Species : Rat
	Generation : F0	Sex : Male	1st mating		
Animal No.	Elapsed day of conceiving	Paired animal	Copulation a)	Fertility b)	
1001	2	1101	+	+	
1002	1	1102	+	+	
1003	1	1103	+	+	
1004	1	1104	+	+	
1005	1	1105	+	+	
1006	1	1106	+	+	
1007	1	1107	+	+	
1008	4	1108	+	+	
1009	1	1109	+	+	
1010	3	1110	+	+	
1011	3	1111	+	+	
1012	4	1112	+	+	
n	12		12	12	
Mean	1.9				
S.D.	1.2				
No. of positives			12	12	
%			100.0 c)	100.0 d)	

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of males which impregnated females / Number of copulated males)x 100

Reproductive performance

Generation : F0

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	Elapsed day of conceiving	1st mating		
		Paired animal	Copulation a)	Fertility b)
2001	1	2101	+	+
2002	14	2102	+	+
2003	2	2103	+	+
2004	1	2104	+	+
2005	1	2105	+	+
2006	4	2106	+	+
2007	4	2107	+	+
2008	3	2108	+	+
2009	-	2109	-	///
2010	4	2110	+	+
2011	3	2111	+	+
2012	1	2112	+	+
n	11		12	11
Mean	3.5			
S.D.	3.7			
No. of positives			11	11
%			91.7 c)	100.0 d)

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of males which impregnated females / Number of copulated males)x 100

Animal No.	Elapsed day of conceiving	Paired animal	1st mating	
			Copulation a)	Fertility b)
3001	3	3101	+	+
3002	2	3102	+	+
3003	2	3103	+	+
3004	3	3104	+	+
3005	1	3105	+	+
3006	3	3106	+	+
3007	2	3107	+	+
3008	2	3108	+	+
3009	2	3109	+	+
3010	14	3110	+	+
3011	2	3111	+	+
3012	4	3112	+	+
n	12		12	12
Mean	3.3			
S.D.	3.4			
No. of positives			12	12
%			100.0 c)	100.0 d)

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of males which impregnated females / Number of copulated males)x 100

Animal No.	Elapsed day of conceiving	Paired animal	1st mating	
			Copulation a)	Fertility b)
4001	1	4101	+	-
4002	3	4102	+	-
4003	1	4103	+	-
4004	4	4104	+	-
4005	2	4105	+	-
4006	2	4106	+	-
4007	4	4107	+	-
4008	3	4108	+	-
4009	2	4109	+	-
4010	3	4110	+	-
4011	2	4111	+	-
4012	2	4112	+	-
n	12		12	12
Mean	2.4			
S.D.	1.0			
No. of positives			12	0
%			100.0 c)	0.0 d)

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of males which impregnated females / Number of copulated males)x 100

Reproductive performance		Dose : 4MBE 0 mg/kg			Species : Rat
	Generation : F0	Sex : Female	1st mating		
Animal No.	Elapsed day of conceiving	Paired animal	Copulation a)	Fertility b)	
1101	2	1001	+	+	
1102	1	1002	+	+	
1103	1	1003	+	+	
1104	1	1004	+	+	
1105	1	1005	+	+	
1106	1	1006	+	+	
1107	1	1007	+	+	
1108	4	1008	+	+	
1109	1	1009	+	+	
1110	3	1010	+	+	
1111	3	1011	+	+	
1112	4	1012	+	+	
n	12		12	12	
Mean	1.9				
S.D.	1.2				
No. of positives			12	12	
%			100.0 c)	100.0 d)	

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of pregnant females / Number of copulated females)x 100

Animal No.	Elapsed day of conceiving	Paired animal	1st mating	
			Copulation a)	Fertility b)
2101	1	2001	+	+
2102	14	2002	+	+
2103	2	2003	+	+
2104	1	2004	+	+
2105	1	2005	+	+
2106	4	2006	+	+
2107	4	2007	+	+
2108	3	2008	+	+
2109	-	2009	-	///
2110	4	2010	+	+
2111	3	2011	+	+
2112	1	2012	+	+
n	11		12	11
Mean	3.5			
S.D.	3.7			
No. of positives			11	11
%			91.7 c)	100.0 d)

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of pregnant females / Number of copulated females)x 100

Reproductive performance		Dose : 4MBE 300 mg/kg			Species : Rat
Generation : F0		Sex : Female	1st mating		
Animal No.	Elapsed day of conceiving	Paired animal	Copulation a)	Fertility b)	
3101	3	3001	+	+	
3102	2	3002	+	+	
3103	2	3003	+	+	
3104	3	3004	+	+	
3105	1	3005	+	+	
3106	3	3006	+	+	
3107	2	3007	+	+	
3108	2	3008	+	+	
3109	2	3009	+	+	
3110	14	3010	+	+	
3111	2	3011	+	+	
3112	4	3012	+	+	
n	12		12	12	
Mean	3.3				
S.D.	3.4				
No. of positives			12	12	
%			100.0 c)	100.0 d)	

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of pregnant females / Number of copulated females)x 100

Reproductive performance		Dose : 4MBE 1000 mg/kg			Species : Rat
	Generation : F0	Sex : Female	1st mating		
Animal No.	Elapsed day of conceiving	Paired animal	Copulation a)	Fertility b)	
4101	1	4001	+	-	
4102	3	4002	+	-	
4103	1	4003	+	-	
4104	4	4004	+	-	
4105	2	4005	+	-	
4106	2	4006	+	-	
4107	4	4007	+	-	
4108	3	4008	+	-	
4109	2	4009	+	-	
4110	3	4010	+	-	
4111	2	4011	+	-	
4112	2	4012	+	-	
n	12		12	12	
Mean	2.4				
S.D.	1.0				
No. of positives			12	0	
%			100.0 c)	0.0 d)	

4MBE :Benzenemethanol, 4-methyl-

/// : No need to input/measure

a) + : Copulation, - : Not copulation

b) + : Pregnancy, - : Non-pregnancy

c) : (Number of copulated animals / Number of mated animals)x 100

d) : (Number of pregnant females / Number of copulated females)x 100

Delivery data

Generation : F0

Dose : 4MBE 0 mg/kg

Species : Rat

Dam No.	Gestation period (day)	Number of implan- tation	Delivery index (%) a)	Live birth index (%) b)	Number of offspring	Number of live newborns			Number of dead newborns			
						M	F	Total	M	F	U	Total
1101	22	17(6/11)	82.4	100.0	14	8	6	14	0	0	0	0
1102	22.5	16(11/5)	100.0	100.0	16	10	6	16	0	0	0	0
1103	22	16(6/10)	100.0	100.0	16	6	10	16	0	0	0	0
1104	22	19(9/10)	94.7	100.0	18	11	7	18	0	0	0	0
1105	22.5	18(4/14)	77.8	92.9	14	6	7	13	0	1	0	1
1106	21.5	15(7/8)	93.3	100.0	14	7	7	14	0	0	0	0
1107	22	15(9/6)	100.0	100.0	15	7	8	15	0	0	0	0
1108	22	16(10/6)	93.8	100.0	15	8	7	15	0	0	0	0
1109	22	16(6/10)	87.5	92.9	14	4	9	13	0	1	0	1
1110	22	19(9/10)	94.7	100.0	18	10	8	18	0	0	0	0
1111	22	18(11/7)	100.0	100.0	18	10	8	18	0	0	0	0
1112	22	17(9/8)	94.1	100.0	16	11	5	16	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12
Mean	22.0	16.8	93.2	98.8	15.7	8.2	7.3	15.5	0.0	0.2	0.0	0.2
S.D.	0.3	1.4	7.2	2.8	1.6	2.2	1.4	1.8	0.0	0.4	0.0	0.4

4MBE :Benzenemethanol, 4-methyl-

(/) : Right/Left, M : Male, F : Female, U : Unable to be sexed

a): (Number of delivered pups / Number of implantation) x 100

b): (Number of liveborns / Number of delivered pups) x 100

Delivery data

Generation : F0

Dose : 4MBE 100 mg/kg

Species : Rat

Dam No.	Gestation period (day)	Number of implan- tation	Delivery index (%) a)	Live birth index (%) b)	Number of offspring	Number of live newborns			Number of dead newborns			
						M	F	Total	M	F	U	Total
2101	21.5	18(9/9)	100.0	100.0	18	14	4	18	0	0	0	0
2102	22	12(4/8)	100.0	100.0	12	6	6	12	0	0	0	0
2103	21.5	15(8/7)	100.0	100.0	15	7	8	15	0	0	0	0
2104	22	17(11/6)	100.0	100.0	17	12	5	17	0	0	0	0
2105	22	15(8/7)	100.0	100.0	15	5	10	15	0	0	0	0
2106	21.5	14(12/2)	92.9	100.0	13	9	4	13	0	0	0	0
2107	22	17(10/7)	94.1	100.0	16	6	10	16	0	0	0	0
2108	21.5	11(5/6)	100.0	100.0	11	6	5	11	0	0	0	0
2110	22.5	13(7/6)	76.9	90.0	10	4	5	9	1	0	0	1
2111	22	18(4/14)	100.0	100.0	18	12	6	18	0	0	0	0
2112	22	16(8/8)	81.3	100.0	13	7	6	13	0	0	0	0
n	11	11	11	11	11	11	11	11	11	11	11	11
Mean	21.9	15.1	95.0	99.1	14.4	8.0	6.3	14.3	0.1	0.0	0.0	0.1
S.D.	0.3	2.4	8.3	3.0	2.8	3.3	2.1	2.9	0.3	0.0	0.0	0.3

4MBE :Benzenemethanol, 4-methyl-

(/) : Right/Left, M : Male, F : Female, U : Unable to be sexed

a): (Number of delivered pups / Number of implantation) x 100

b): (Number of liveborns / Number of delivered pups) x 100

Delivery data

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

Dam No.	Gestation period (day)	Number of implan- tation	Delivery index (%) a)	Live birth index (%) b)	Number of offspring	Number of live newborns			Number of dead newborns				
						M	F	Total	M	F	U	Total	
3101	22	16(5/11)	16(5/11)	100.0	100.0	16	4	12	16	0	0	0	0
3102	22	17(7/10)	17(7/10)	100.0	100.0	17	9	8	17	0	0	0	0
3103	21.5	17(8/9)	17(8/9)	94.1	100.0	16	5	11	16	0	0	0	0
3104	22	18(5/13)	18(5/13)	83.3	100.0	15	7	8	15	0	0	0	0
3105	22.5	16(8/8)	16(8/8)	93.8	100.0	15	9	6	15	0	0	0	0
3106	22	13(4/9)	13(4/9)	100.0	100.0	13	6	7	13	0	0	0	0
3107	22	17(8/9)	17(8/9)	88.2	100.0	15	9	6	15	0	0	0	0
3108	22	13(5/8)	13(5/8)	100.0	100.0	13	7	6	13	0	0	0	0
3109	22	19(13/6)	19(13/6)	89.5	100.0	17	9	8	17	0	0	0	0
3110	22	17(8/9)	17(8/9)	94.1	93.8	16	6	9	15	1	0	0	1
3111	22	16(11/5)	16(11/5)	100.0	100.0	16	9	7	16	0	0	0	0
3112	22	19(9/10)	19(9/10)	89.5	100.0	17	10	7	17	0	0	0	0
n	12	12	12	12	12	12	12	12	12	12	12	12	12
Mean	22.0	16.5	16.5	94.4	99.5	15.5	7.5	7.9	15.4	0.1	0.0	0.0	0.1
S.D.	0.2	1.9	1.9	5.8	1.8	1.4	1.9	1.9	1.4	0.3	0.0	0.0	0.3

4MBE :Benzenemethanol, 4-methyl-

(/) : Right/Left, M : Male, F : Female, U : Unable to be sexed

a): (Number of delivered pups / Number of implantation) x 100

b): (Number of liveborns / Number of delivered pups) x 100

Dam No.	Number of offspring examined	/Findings
1101	14	No anomaly
1102	16	No anomaly
1103	16	No anomaly
1104	18	No anomaly
1105	14	No anomaly
1106	14	No anomaly
1107	15	No anomaly
1108	15	No anomaly
1109	14	No anomaly
1110	18	No anomaly
1111	18	No anomaly
1112	16	No anomaly
Total	188	
n	12	
Mean		
S.D.		

4MBE :Benzenemethanol, 4-methyl-

Mean : Average of incidence (%) : (Number of pups with external anomalies / Number of delivered pups) x 100

"No anomaly" was calculated as "0".

Appendix 13 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

External examination of offspring

Unit : Number of anomalous offspring (incidence %)

Days after birth : 0

Generation : F0

Dose : 4MBE 100 mg/kg

Species : Rat

Dam No.	Number of offspring examined	/Findings
2101	18	No anomaly
2102	12	No anomaly
2103	15	No anomaly
2104	17	No anomaly
2105	15	No anomaly
2106	13	No anomaly
2107	16	No anomaly
2108	11	No anomaly
2110	10	No anomaly
2111	18	No anomaly
2112	13	No anomaly
Total	158	
n	11	
Mean		
S.D.		

4MBE : Benzenemethanol, 4-methyl-

Mean : Average of incidence (%) : (Number of pups with external anomalies / Number of delivered pups) x 100

"No anomaly" was calculated as "0".

Appendix 13 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

External examination of offspring

Unit : Number of anomalous offspring (incidence %)

Days after birth : 0

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

Dam No.	Number of offspring examined	/Findings
3101	16	No anomaly
3102	17	No anomaly
3103	16	No anomaly
3104	15	No anomaly
3105	15	No anomaly
3106	13	No anomaly
3107	15	No anomaly
3108	13	No anomaly
3109	17	No anomaly
3110	16	No anomaly
3111	16	No anomaly
3112	17	No anomaly
Total	186	
n	12	
Mean		
S.D.		

4MBE :Benzenemethanol, 4-methyl-

Mean : Average of incidence (%) : (Number of pups with external anomalies / Number of delivered pups) x 100

"No anomaly" was calculated as "0".

Anogenital of offspring		Generation : F0		Dose : 4MBE 0 mg/kg		Unit : mm		Species : Rat	
Sex		/Days after birth		0					
				Normalized a)					
Dam No.		n	AGD	AGD					
1101	Male	8	2.3	1.3					
	Female	6	0.9	0.5					
1102	Male	10	2.3	1.2					
	Female	6	0.7	0.4					
1103	Male	6	2.3	1.2					
	Female	10	0.9	0.5					
1104	Male	11	2.4	1.3					
	Female	7	0.9	0.5					
1105	Male	6	2.5	1.3					
	Female	7	0.8	0.4					
1106	Male	7	2.3	1.2					
	Female	7	0.9	0.5					
1107	Male	7	2.3	1.2					
	Female	8	0.9	0.5					
1108	Male	8	2.3	1.2					
	Female	7	0.7	0.4					
1109	Male	4	2.5	1.3					
	Female	9	0.9	0.5					
1110	Male	10	2.3	1.2					
	Female	8	0.8	0.4					
1111	Male	10	2.3	1.2					
	Female	8	0.9	0.5					
1112	Male	11	2.3	1.3					
	Female	5	0.7	0.4					
n	Male	98							
	Female	88							
Mean	Male		2.3	1.2					
	Female		0.8	0.5					
S.D.	Male		0.1	0.1					
	Female		0.1	0.1					

4MBE :Benzenemethanol, 4-methyl-

AGD : Anogenital Distance

a): AGD (mm) / Cube root of body weight (g)

Appendix 14 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Generation : F0		Dose : 4MBE 100 mg/kg		Unit : mm	Species : Rat
Sex		/Days after birth			
		0			
Dam No.		n	Normalized a)		
			AGD	AGD	
2101	Male	14	2.3	1.3	
	Female	4	1.0	0.6	
2102	Male	6	2.3	1.2	
	Female	6	0.8	0.5	
2103	Male	7	2.4	1.3	
	Female	8	0.8	0.4	
2104	Male	12	2.4	1.4	
	Female	5	0.9	0.5	
2105	Male	5	2.6	1.4	
	Female	10	0.9	0.5	
2106	Male	9	2.6	1.4	
	Female	4	0.8	0.4	
2107	Male	6	2.4	1.3	
	Female	10	0.8	0.4	
2108	Male	6	2.4	1.3	
	Female	5	0.8	0.4	
2110	Male	4	2.5	1.3	
	Female	5	0.8	0.4	
2111	Male	12	2.3	1.2	
	Female	6	0.8	0.5	
2112	Male	7	2.4	1.3	
	Female	6	0.9	0.5	
n	Male	88			
	Female	69			
Mean	Male		2.4	1.3	
	Female		0.8	0.5	
S.D.	Male		0.1	0.1	
	Female		0.1	0.1	

4MBE :Benzenemethanol, 4-methyl-

AGD : Anogenital Distance

a): AGD (mm) / Cube root of body weight (g)

Appendix 14 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats

Study No. : R-1273

Generation : F0		Dose : 4MBE 300 mg/kg		Unit : mm	Species : Rat
Sex		/Days after birth			
		0			
Dam No.		n	Normalized a)		
			AGD	AGD	
3101	Male	4	2.3	1.2	
	Female	12	0.9	0.5	
3102	Male	9	2.5	1.3	
	Female	8	0.9	0.5	
3103	Male	5	2.4	1.3	
	Female	11	0.7	0.4	
3104	Male	7	2.3	1.3	
	Female	8	0.9	0.5	
3105	Male	9	2.3	1.2	
	Female	6	0.8	0.4	
3106	Male	6	2.3	1.2	
	Female	7	0.8	0.5	
3107	Male	9	2.5	1.3	
	Female	6	0.9	0.5	
3108	Male	7	2.3	1.3	
	Female	6	0.8	0.4	
3109	Male	9	2.3	1.3	
	Female	8	0.8	0.4	
3110	Male	6	2.3	1.3	
	Female	9	0.9	0.5	
3111	Male	9	2.4	1.3	
	Female	7	0.8	0.5	
3112	Male	10	2.5	1.3	
	Female	7	0.8	0.4	
n	Male	90			
	Female	95			
Mean	Male		2.4	1.3	
	Female		0.8	0.5	
S.D.	Male		0.1	0.0	
	Female		0.1	0.1	

4MBE :Benzenemethanol, 4-methyl-

AGD : Anogenital Distance

a): AGD (mm) / Cube root of body weight (g)

Generation : F0					Dose : 4MBE 0 mg/kg		Species : Rat	
/Days after birth								
		0	4	4	4	13	13	
			Pre-culled	Viability	Culled		Viability	
Dam No.	Sex	Male/Female	Male/Female	index (%) a)	Male/Female	Male/Female	index (%) b)	
1101	Total	14	14	100.0	8	8	100.0	
		(8/6)	(8/6)		(4/4)	(4/4)		
1102	Total	16	16	100.0	8	8	100.0	
		(10/6)	(10/6)		(4/4)	(4/4)		
1103	Total	16	15	93.8	8	8	100.0	
		(6/10)	(5/10)		(4/4)	(4/4)		
1104	Total	18	18	100.0	8	8	100.0	
		(11/7)	(11/7)		(4/4)	(4/4)		
1105	Total	13	13	100.0	8	8	100.0	
		(6/7)	(6/7)		(4/4)	(4/4)		
1106	Total	14	14	100.0	8	8	100.0	
		(7/7)	(7/7)		(4/4)	(4/4)		
1107	Total	15	14	93.3	8	8	100.0	
		(7/8)	(7/7)		(4/4)	(4/4)		
1108	Total	15	15	100.0	8	8	100.0	
		(8/7)	(8/7)		(4/4)	(4/4)		
1109	Total	13	13	100.0	8	8	100.0	
		(4/9)	(4/9)		(4/4)	(4/4)		
1110	Total	18	18	100.0	8	8	100.0	
		(10/8)	(10/8)		(4/4)	(4/4)		
1111	Total	18	18	100.0	8	8	100.0	
		(10/8)	(10/8)		(4/4)	(4/4)		
1112	Total	16	16	100.0	8	8	100.0	
		(11/5)	(11/5)		(4/4)	(4/4)		
Total		186	184		96	96		
Male/Female		98/88	97/87		48/48	48/48		
n		12	12	12	12	12	12	
Mean				98.9			100.0	
S.D.				2.5			0.0	

4MBE : Benzenemethanol, 4-methyl-

a): (Number of pups alive on day 4 after birth / Number of live born pups) × 100

b): (Number of pups alive on day 13 after birth / Number of pups after culling on day 4 after birth) × 100

Appendix 15 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Litter size and viability index of offspring

Study No. : R-1273

		Generation : F0				Dose : 4MBE 100 mg/kg		Species : Rat	
		/Days after birth							
		0	4	4	4	13	13		
			Pre-culled	Viability	Culled		Viability		
Dam No.	Sex	Male/Female	Male/Female	index (%) a)	Male/Female	Male/Female	index (%) b)		
2101	Total	18	18	100.0	8	8	100.0		
		(14/4)	(14/4)		(4/4)	(4/4)			
2102	Total	12	12	100.0	8	8	100.0		
		(6/6)	(6/6)		(4/4)	(4/4)			
2103	Total	15	15	100.0	8	8	100.0		
		(7/8)	(7/8)		(4/4)	(4/4)			
2104	Total	17	17	100.0	8	8	100.0		
		(12/5)	(12/5)		(4/4)	(4/4)			
2105	Total	15	15	100.0	8	8	100.0		
		(5/10)	(5/10)		(4/4)	(4/4)			
2106	Total	13	13	100.0	8	8	100.0		
		(9/4)	(9/4)		(4/4)	(4/4)			
2107	Total	16	16	100.0	8	8	100.0		
		(6/10)	(6/10)		(4/4)	(4/4)			
2108	Total	11	11	100.0	8	8	100.0		
		(6/5)	(6/5)		(4/4)	(4/4)			
2110	Total	9	9	100.0	8	8	100.0		
		(4/5)	(4/5)		(4/4)	(4/4)			
2111	Total	18	18	100.0	8	8	100.0		
		(12/6)	(12/6)		(4/4)	(4/4)			
2112	Total	13	13	100.0	8	8	100.0		
		(7/6)	(7/6)		(4/4)	(4/4)			
Total		157	157		88	88			
Male/Female		88/69	88/69		44/44	44/44			
n		11	11	11	11	11	11		
Mean				100.0			100.0		
S.D.				0.0			0.0		

4MBE : Benzenemethanol, 4-methyl-

a): (Number of pups alive on day 4 after birth / Number of live born pups) × 100

b): (Number of pups alive on day 13 after birth / Number of pups after culling on day 4 after birth) × 100

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

		/Days after birth					
Dam No.	Sex	0	4	4	4	13	13
		Male/Female	Pre-culled Male/Female	Viability index (%) a)	Culled Male/Female	Male/Female	Viability index (%) b)
3101	Total	16 (4/12)	16 (4/12)	100.0	8 (4/4)	8 (4/4)	100.0
3102	Total	17 (9/8)	16 (8/8)	94.1	8 (4/4)	8 (4/4)	100.0
3103	Total	16 (5/11)	15 (5/10)	93.8	8 (4/4)	8 (4/4)	100.0
3104	Total	15 (7/8)	14 (7/7)	93.3	8 (4/4)	8 (4/4)	100.0
3105	Total	15 (9/6)	15 (9/6)	100.0	8 (4/4)	8 (4/4)	100.0
3106	Total	13 (6/7)	11 (6/5)	84.6	8 (4/4)	8 (4/4)	100.0
3107	Total	15 (9/6)	15 (9/6)	100.0	8 (4/4)	8 (4/4)	100.0
3108	Total	13 (7/6)	13 (7/6)	100.0	8 (4/4)	8 (4/4)	100.0
3109	Total	17 (9/8)	17 (9/8)	100.0	8 (4/4)	8 (4/4)	100.0
3110	Total	15 (6/9)	15 (6/9)	100.0	8 (4/4)	8 (4/4)	100.0
3111	Total	16 (9/7)	15 (9/6)	93.8	8 (4/4)	8 (4/4)	100.0
3112	Total	17 (10/7)	17 (10/7)	100.0	8 (4/4)	8 (4/4)	100.0
Total		185	179		96	96	
Male/Female		90/95	89/90		48/48	48/48	
n		12	12	12	12	12	12
Mean				96.6			100.0
S.D.				4.8			0.0

4MBE : Benzenemethanol, 4-methyl-

a): (Number of pups alive on day 4 after birth / Number of live born pups) × 100

b): (Number of pups alive on day 13 after birth / Number of pups after culling on day 4 after birth) × 100

Dam No.	day 4 after birth		
	Number of males	Number of females	Sex ratio (%) a)
1101	8	6	
1102	10	6	
1103	5	10	
1104	11	7	
1105	6	7	
1106	7	7	
1107	7	7	
1108	8	7	
1109	4	9	
1110	10	8	
1111	10	8	
1112	11	5	
n	12	12	
Total	97	87	97/184
(%)			52.7

4MBE :Benzenemethanol, 4-methyl-

a): (Number of male pups alive on day 4 after birth / Number of pups alive on day 4 after birth) × 100

Sex ratio

Generation : F0

Dose : 4MBE 100 mg/kg

Species : Rat

Dam No.	day 4 after birth		
	Number of males	Number of females	Sex ratio (%) a)
2101	14	4	
2102	6	6	
2103	7	8	
2104	12	5	
2105	5	10	
2106	9	4	
2107	6	10	
2108	6	5	
2110	4	5	
2111	12	6	
2112	7	6	
n	11	11	
Total	88	69	88/157
(%)			56.1

4MBE : Benzenemethanol, 4-methyl-

a): (Number of male pups alive on day 4 after birth / Number of pups alive on day 4 after birth) × 100

Sex ratio

Generation : F0

Dose : 4MBE 300 mg/kg

Species : Rat

Dam No.	day 4 after birth		Sex ratio (%) a)
	Number of males	Number of females	
3101	4	12	
3102	8	8	
3103	5	10	
3104	7	7	
3105	9	6	
3106	6	5	
3107	9	6	
3108	7	6	
3109	9	8	
3110	6	9	
3111	9	6	
3112	10	7	
n	12	12	
Mean	89	90	89/179
S.D.			49.7

4MBE : Benzenemethanol, 4-methyl-

a): $(\text{Number of male pups alive on day 4 after birth} / \text{Number of pups alive on day 4 after birth}) \times 100$

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Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight of offspring

Study No. : R-1273

		Body weight (g) at birth						Dose : 4MBE 0 mg/kg		Unit : g		Species : Rat	
		Generation : F0											
		/Days after birth											
		0		4/Pre-culled		4/Culled		7		13			
Dam No.	Sex	n	B.W.	n	B.W.	n	B.W.	n	B.W.	n	B.W.		
1101	Male	8	6.4	8	10.3	4	10.5	4	16.8	4	32.1		
	Female	6	6.2	6	10.0	4	9.9	4	15.6	4	30.1		
1102	Male	10	6.5	10	9.7	4	10.1	4	16.9	4	32.7		
	Female	6	6.6	6	10.0	4	10.2	4	16.7	4	31.4		
1103	Male	6	6.6	5	10.4	4	10.7	4	17.1	4	33.8		
	Female	10	6.4	10	9.9	4	10.3	4	16.4	4	33.1		
1104	Male	11	6.0	11	9.5	4	9.8	4	16.4	4	33.3		
	Female	7	5.9	7	9.6	4	10.0	4	16.5	4	33.4		
1105	Male	6	7.1	6	11.7	4	12.2	4	19.4	4	35.5		
	Female	7	6.6	7	11.0	4	11.5	4	18.8	4	34.6		
1106	Male	7	6.4	7	9.6	4	9.5	4	14.6	4	28.6		
	Female	7	5.9	7	8.8	4	9.1	4	14.2	4	28.1		
1107	Male	7	7.0	7	11.1	4	11.7	4	19.4	4	36.0		
	Female	8	6.9	7	10.8	4	11.3	4	18.4	4	34.2		
1108	Male	8	6.8	8	10.7	4	10.8	4	17.3	4	33.1		
	Female	7	6.1	7	9.9	4	10.1	4	15.8	4	31.5		
1109	Male	4	6.6	4	11.3	4	11.3	4	18.6	4	34.5		
	Female	9	5.9	9	10.3	4	10.7	4	17.4	4	32.5		
1110	Male	10	6.7	10	10.6	4	10.8	4	18.2	4	35.6		
	Female	8	6.3	8	9.7	4	10.5	4	17.9	4	33.9		
1111	Male	10	6.3	10	9.9	4	10.1	4	17.5	4	33.7		
	Female	8	5.9	8	9.1	4	9.5	4	16.2	4	32.0		
1112	Male	11	6.1	11	9.7	4	9.8	4	15.7	4	30.4		
	Female	5	5.6	5	9.0	4	9.2	4	14.5	4	28.5		
n	Male	98		97		48		48		48			
	Female	88		87		48		48		48			
Mean	Male		6.5		10.4		10.6		17.3		33.3		
	Female		6.2		9.8		10.2		16.5		31.9		
S.D.	Male		0.3		0.7		0.8		1.4		2.2		
	Female		0.4		0.7		0.7		1.4		2.1		

4MBE : Benzenemethanol, 4-methyl-

Appendix 17 - 2

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight of offspring

Study No. : R-1273

		Dose : 4MBE 100 mg/kg										Unit : g	Species : Rat
		Generation : F0											
		/Days after birth											
Dam No.	Sex	0		4/Pre-culled		4/Culled		7		13			
		n	B.W.	n	B.W.	n	B.W.	n	B.W.	n	B.W.		
2101	Male	14	5.8	14	8.8	4	9.7	4	16.8	4	34.0		
	Female	4	5.7	4	8.5	4	8.5	4	15.0	4	31.5		
2102	Male	6	6.3	6	10.4	4	10.6	4	16.8	4	31.8		
	Female	6	5.9	6	10.1	4	10.6	4	16.6	4	31.9		
2103	Male	7	5.9	7	9.9	4	10.1	4	17.5	4	33.6		
	Female	8	5.5	8	8.9	4	9.4	4	15.9	4	31.5		
2104	Male	12	5.8	12	9.5	4	9.9	4	17.4	4	34.6		
	Female	5	5.7	5	8.8	4	9.0	4	15.7	4	32.9		
2105	Male	5	6.5	5	11.2	4	11.5	4	18.7	4	35.6		
	Female	10	6.0	10	10.3	4	10.7	4	17.2	4	33.3		
2106	Male	9	6.4	9	9.6	4	9.6	4	15.7	4	30.9		
	Female	4	5.7	4	8.6	4	8.6	4	14.1	4	28.5		
2107	Male	6	6.6	6	10.9	4	11.2	4	19.2	4	35.5		
	Female	10	6.4	10	10.4	4	10.9	4	18.6	4	36.0		
2108	Male	6	6.4	6	10.0	4	10.1	4	16.2	4	29.5		
	Female	5	5.9	5	9.4	4	9.4	4	14.8	4	28.3		
2110	Male	4	7.6	4	14.0	4	14.0	4	20.4	4	34.2		
	Female	5	6.5	5	11.5	4	12.0	4	17.5	4	31.8		
2111	Male	12	6.6	12	9.7	4	10.0	4	16.3	4	31.8		
	Female	6	5.8	6	8.6	4	8.8	4	13.8	4	28.7		
2112	Male	7	6.6	7	10.8	4	11.0	4	18.0	4	32.3		
	Female	6	5.9	6	9.7	4	9.5	4	15.8	4	29.5		
n	Male	88		88		44		44		44			
	Female	69		69		44		44		44			
Mean	Male		6.4		10.4		10.7		17.5		33.1		
	Female		5.9		9.5		9.8		15.9		31.3		
S.D.	Male		0.5		1.4		1.3		1.4		2.0		
	Female		0.3		1.0		1.1		1.5		2.4		

4MBE : Benzenemethanol, 4-methyl-

Appendix 17 - 3

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight of offspring

Study No. : R-1273

		Body weight (g) at birth				Dose : 4MBE 300 mg/kg				Unit : g		Species : Rat	
		Generation : F0											
		/Days after birth											
		0		4/Pre-culled		4/Culled		7		13			
Dam No.	Sex	n	B.W.	n	B.W.	n	B.W.	n	B.W.	n	B.W.		
3101	Male	4	6.8	4	10.5	4	10.5	4	17.8	4	36.0		
	Female	12	6.3	12	9.9	4	10.0	4	17.3	4	35.2		
3102	Male	9	6.5	8	10.4	4	10.8	4	18.9	4	35.3		
	Female	8	6.4	8	10.2	4	10.4	4	17.4	4	32.6		
3103	Male	5	5.9	5	9.9	4	10.1	4	17.6	4	34.1		
	Female	11	5.3	10	8.7	4	9.4	4	15.9	4	32.0		
3104	Male	7	5.9	7	9.7	4	10.5	4	16.4	4	30.9		
	Female	8	5.3	7	9.4	4	9.9	4	15.5	4	29.1		
3105	Male	9	7.2	9	10.3	4	11.0	4	18.6	4	35.0		
	Female	6	6.6	6	8.9	4	9.4	4	16.2	4	32.0		
3106	Male	6	6.4	6	11.5	4	11.6	4	18.2	4	32.4		
	Female	7	6.1	5	12.2	4	12.2	4	19.0	4	33.9		
3107	Male	9	6.9	9	11.1	4	11.1	4	18.7	4	33.5		
	Female	6	6.4	6	10.4	4	10.8	4	18.1	4	32.9		
3108	Male	7	6.6	7	11.1	4	11.1	4	17.9	4	33.3		
	Female	6	6.3	6	10.6	4	10.8	4	17.9	4	33.2		
3109	Male	9	6.1	9	9.8	4	10.1	4	17.0	4	30.9		
	Female	8	5.9	8	8.8	4	9.5	4	15.0	4	28.5		
3110	Male	6	6.1	6	9.9	4	9.9	4	17.5	4	33.4		
	Female	9	6.1	9	10.2	4	10.7	4	18.6	4	34.7		
3111	Male	9	6.8	9	11.6	4	11.8	4	19.9	4	36.9		
	Female	7	6.3	6	10.9	4	11.2	4	19.4	4	36.7		
3112	Male	10	6.6	10	10.3	4	10.3	4	17.2	4	33.9		
	Female	7	6.4	7	9.7	4	9.8	4	16.1	4	32.5		
n	Male	90		89		48		48		48			
	Female	95		90		48		48		48			
Mean	Male		6.5		10.5		10.7		18.0		33.8		
	Female		6.1		10.0		10.3		17.2		32.8		
S.D.	Male		0.4		0.7		0.6		1.0		1.8		
	Female		0.4		1.0		0.8		1.4		2.3		

4MBE : Benzenemethanol, 4-methyl-

Appendix 17 - 4

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight gain of offspring

Study No. : R-1273

Generation : F0

Dose : 4MBE 0 mg/kg

Base : Day 4 after birth

Unit : g

Species : Rat

Dam No.	Sex	/Days after birth /Before culling		/After culling			
		n	0-4	n	4-7	n	4-13
1101	Male	8	3.9	4	6.3	4	21.6
	Female	6	3.8	4	5.7	4	20.3
1102	Male	10	3.2	4	6.8	4	22.6
	Female	6	3.4	4	6.5	4	21.2
1103	Male	5	3.8	4	6.5	4	23.2
	Female	10	3.5	4	6.1	4	22.8
1104	Male	11	3.5	4	6.6	4	23.5
	Female	7	3.7	4	6.5	4	23.4
1105	Male	6	4.6	4	7.2	4	23.3
	Female	7	4.4	4	7.3	4	23.1
1106	Male	7	3.2	4	5.1	4	19.1
	Female	7	2.9	4	5.0	4	19.0
1107	Male	7	4.1	4	7.7	4	24.3
	Female	7	3.9	4	7.1	4	22.9
1108	Male	8	3.9	4	6.5	4	22.2
	Female	7	3.8	4	5.7	4	21.5
1109	Male	4	4.7	4	7.3	4	23.3
	Female	9	4.4	4	6.7	4	21.9
1110	Male	10	3.9	4	7.4	4	24.8
	Female	8	3.4	4	7.3	4	23.4
1111	Male	10	3.6	4	7.4	4	23.6
	Female	8	3.2	4	6.7	4	22.5
1112	Male	11	3.6	4	5.8	4	20.5
	Female	5	3.4	4	5.3	4	19.3
n	Male	97		48		48	
	Female	87		48		48	
Mean	Male		3.8		6.7		22.7
	Female		3.7		6.3		21.8
S.D.	Male		0.5		0.8		1.6
	Female		0.4		0.8		1.5

4MBE : Benzenemethanol, 4-methyl-

Appendix 17 - 5

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight gain of offspring

Study No. : R-1273

Generation : F0

Dose : 4MBE 100 mg/kg

Base : Day 4 after birth

Unit : g

Species : Rat

Dam No.	Sex	/Days after birth /Before culling		/After culling			
		n	0-4	n	4-7	n	4-13
2101	Male	14	3.0	4	7.1	4	24.3
	Female	4	2.8	4	6.6	4	23.1
2102	Male	6	4.1	4	6.2	4	21.2
	Female	6	4.2	4	6.0	4	21.3
2103	Male	7	4.0	4	7.5	4	23.6
	Female	8	3.4	4	6.6	4	22.1
2104	Male	12	3.7	4	7.5	4	24.7
	Female	5	3.1	4	6.7	4	23.9
2105	Male	5	4.7	4	7.2	4	24.1
	Female	10	4.3	4	6.6	4	22.6
2106	Male	9	3.2	4	6.1	4	21.3
	Female	4	2.9	4	5.6	4	19.9
2107	Male	6	4.3	4	8.0	4	24.3
	Female	10	4.0	4	7.7	4	25.2
2108	Male	6	3.6	4	6.1	4	19.4
	Female	5	3.5	4	5.4	4	18.9
2110	Male	4	6.4	4	6.4	4	20.2
	Female	5	5.0	4	5.6	4	19.9
2111	Male	12	3.1	4	6.3	4	21.8
	Female	6	2.8	4	5.1	4	20.0
2112	Male	7	4.2	4	7.0	4	21.3
	Female	6	3.8	4	6.3	4	19.9
n	Male	88		44		44	
	Female	69		44		44	
Mean	Male		4.0		6.9		22.4
	Female		3.6		6.2		21.5
S.D.	Male		1.0		0.7		1.9
	Female		0.7		0.7		2.0

4MBE :Benzenemethanol, 4-methyl-

Appendix 17 - 6

Benzenemethanol, 4-methyl-: An oral combined repeated dose toxicity study
with the reproduction/ developmental toxicity screening test in rats
Body weight gain of offspring

Study No. : R-1273

Generation : F0

Dose : 4MBE 300 mg/kg

Base : Day 4 after birth

Unit : g

Species : Rat

Dam No.	Sex	/Days after birth /Before culling		/After culling			
		n	0-4	n	4-7	n	4-13
3101	Male	4	3.7	4	7.3	4	25.5
	Female	12	3.6	4	7.2	4	25.1
3102	Male	8	3.9	4	8.1	4	24.5
	Female	8	3.8	4	7.0	4	22.3
3103	Male	5	4.0	4	7.5	4	24.0
	Female	10	3.4	4	6.5	4	22.5
3104	Male	7	3.8	4	5.9	4	20.5
	Female	7	4.1	4	5.6	4	19.2
3105	Male	9	3.1	4	7.6	4	23.9
	Female	6	2.3	4	6.8	4	22.7
3106	Male	6	5.1	4	6.6	4	20.9
	Female	5	6.1	4	6.8	4	21.7
3107	Male	9	4.2	4	7.6	4	22.4
	Female	6	4.0	4	7.3	4	22.2
3108	Male	7	4.5	4	6.9	4	22.2
	Female	6	4.3	4	7.1	4	22.4
3109	Male	9	3.7	4	6.9	4	20.9
	Female	8	2.9	4	5.5	4	19.0
3110	Male	6	3.8	4	7.6	4	23.5
	Female	9	4.1	4	7.9	4	23.9
3111	Male	9	4.8	4	8.1	4	25.1
	Female	6	4.6	4	8.2	4	25.5
3112	Male	10	3.7	4	6.9	4	23.6
	Female	7	3.3	4	6.4	4	22.7
n	Male	89		48		48	
	Female	90		48		48	
Mean	Male		4.0		7.3		23.1
	Female		3.9		6.9		22.4
S.D.	Male		0.5		0.6		1.7
	Female		0.9		0.8		1.9

4MBE : Benzenemethanol, 4-methyl-

			Dose : 4MBE 0 mg/kg		Species : Rat	
Animal No.	Number of pups examined		Findings			
	Total	(Male + Female)				
1101	0		NAF			
1102	0					
1103	1	(1+0)				
1104	0					
1105	0					
1106	0		NAF			
1107	1	(0+1)				
1108	0					
1109	0					
1110	0					
1111	0					
1112	0					

4MBE :Benzenemethanol, 4-methyl-
NAF : No abnormal findings

Animal No.	Number of pups examined	Findings	Dose : 4MBE 100 mg/kg	Species : Rat
	Total (Male + Female)			
2101	0			
2102	0			
2103	0			
2104	0			
2105	0			
2106	0			
2107	0			
2108	0			
2110	0			
2111	0			
2112	0			
4MBE :Benzenemethanol, 4-methyl-				
NAF : No abnormal findings				

Externally for gross abnormalities in dead pups			Dose : 4MBE 300 mg/kg	Species : Rat
Animal No.	Number of pups examined		Findings	
	Total (Male + Female)			
3101	0			
3102	1	(1+0)	NAF	
3103	0			
3104	0			
3105	0			
3106	1	(0+1)	NAF	
3107	0			
3108	0			
3109	0			
3110	0			
3111	1	(0+1)	NAF	
3112	0			

Dose : 4MBE 300 mg/kg

Species : Rat

4MBE : Benzenemethanol, 4-methyl-

NAF : No abnormal findings

		Dose : 4MBE 0 mg/kg				Days after birth : 13		
		Unit : No.				Species : Rat		
		Generation : F0						
Dam No.	Sex	Offspring No. : Nipple retention				Mean	S.D.	n
1101	Male	1101M01 : 0	1101M02 : 0	1101M03 : 0	1101M04 : 0	0.0	0.0	4
1102	Male	1102M01 : 0	1102M02 : 0	1102M03 : 0	1102M04 : 0	0.0	0.0	4
1103	Male	1103M01 : 0	1103M02 : 0	1103M03 : 0	1103M04 : 0	0.0	0.0	4
1104	Male	1104M01 : 0	1104M02 : 0	1104M03 : 0	1104M04 : 0	0.0	0.0	4
1105	Male	1105M01 : 0	1105M02 : 0	1105M03 : 0	1105M04 : 0	0.0	0.0	4
1106	Male	1106M01 : 0	1106M02 : 0	1106M03 : 0	1106M04 : 0	0.0	0.0	4
1107	Male	1107M01 : 0	1107M02 : 0	1107M03 : 0	1107M04 : 0	0.0	0.0	4
1108	Male	1108M01 : 0	1108M02 : 0	1108M03 : 0	1108M04 : 0	0.0	0.0	4
1109	Male	1109M01 : 0	1109M02 : 0	1109M03 : 0	1109M04 : 0	0.0	0.0	4
1110	Male	1110M01 : 0	1110M02 : 0	1110M03 : 0	1110M04 : 0	0.0	0.0	4
1111	Male	1111M01 : 0	1111M02 : 0	1111M03 : 0	1111M04 : 0	0.0	0.0	4
1112	Male	1112M01 : 0	1112M02 : 0	1112M03 : 0	1112M04 : 0	0.0	0.0	4

4MBE : Benzenemethanol, 4-methyl-

Nipple retention: Number of nipple / areolae

With the reproduction developmental toxicity screening test in rats						Days after birth : 13		
Nipple retention of male pups						Species : Rat		
Generation : F0						Unit : No.		
Dose : 4MBE 100 mg/kg								
Dam No.	Sex	Offspring No. :	Nipple retention			Mean	S.D.	n
2101	Male	2101M01 : 0	2101M02 : 0	2101M03 : 0	2101M04 : 0	0.0	0.0	4
2102	Male	2102M01 : 0	2102M02 : 0	2102M03 : 0	2102M04 : 0	0.0	0.0	4
2103	Male	2103M01 : 0	2103M02 : 0	2103M03 : 0	2103M04 : 0	0.0	0.0	4
2104	Male	2104M01 : 0	2104M02 : 0	2104M03 : 0	2104M04 : 0	0.0	0.0	4
2105	Male	2105M01 : 0	2105M02 : 0	2105M03 : 0	2105M04 : 0	0.0	0.0	4
2106	Male	2106M01 : 0	2106M02 : 0	2106M03 : 0	2106M04 : 0	0.0	0.0	4
2107	Male	2107M01 : 0	2107M02 : 0	2107M03 : 0	2107M04 : 0	0.0	0.0	4
2108	Male	2108M01 : 0	2108M02 : 0	2108M03 : 0	2108M04 : 0	0.0	0.0	4
2110	Male	2110M01 : 0	2110M02 : 0	2110M03 : 0	2110M04 : 0	0.0	0.0	4
2111	Male	2111M01 : 0	2111M02 : 0	2111M03 : 0	2111M04 : 0	0.0	0.0	4
2112	Male	2112M01 : 0	2112M02 : 0	2112M03 : 0	2112M04 : 0	0.0	0.0	4

4MBE : Benzenemethanol, 4-methyl-

Nipple retention: Number of nipple / areolae

		Dose : 4MBE 300 mg/kg				Days after birth : 13		
		Unit : No.				Species : Rat		
		Generation : F0				Mean		
Dam No.	Sex	Offspring No. : Nipple retention				S.D.	n	
3101	Male	3101M01 : 0	3101M02 : 0	3101M03 : 0	3101M04 : 0	0.0	0.0	4
3102	Male	3102M01 : 0	3102M02 : 0	3102M03 : 0	3102M04 : 0	0.0	0.0	4
3103	Male	3103M01 : 0	3103M02 : 0	3103M03 : 0	3103M04 : 0	0.0	0.0	4
3104	Male	3104M01 : 0	3104M02 : 0	3104M03 : 0	3104M04 : 0	0.0	0.0	4
3105	Male	3105M01 : 0	3105M02 : 0	3105M03 : 0	3105M04 : 0	0.0	0.0	4
3106	Male	3106M01 : 0	3106M02 : 0	3106M03 : 0	3106M04 : 0	0.0	0.0	4
3107	Male	3107M01 : 0	3107M02 : 0	3107M03 : 0	3107M04 : 0	0.0	0.0	4
3108	Male	3108M01 : 0	3108M02 : 0	3108M03 : 0	3108M04 : 0	0.0	0.0	4
3109	Male	3109M01 : 0	3109M02 : 0	3109M03 : 0	3109M04 : 0	0.0	0.0	4
3110	Male	3110M01 : 0	3110M02 : 0	3110M03 : 0	3110M04 : 0	0.0	0.0	4
3111	Male	3111M01 : 0	3111M02 : 0	3111M03 : 0	3111M04 : 0	0.0	0.0	4
3112	Male	3112M01 : 0	3112M02 : 0	3112M03 : 0	3112M04 : 0	0.0	0.0	4

4MBE : Benzenemethanol, 4-methyl-

Nipple retention: Number of nipple / areolae

			Dose : 4MBE 0 mg/kg	Species : Rat
Animal No.	Number of pups examined		Findings	
	Total	(Male + Female)		
1101	8	(4+4)	NAF	
1102	8	(4+4)	NAF	
1103	8	(4+4)	NAF	
1104	8	(4+4)	NAF	
1105	8	(4+4)	NAF	
1106	8	(4+4)	NAF	
1107	8	(4+4)	NAF	
1108	8	(4+4)	NAF	
1109	8	(4+4)	NAF	
1110	8	(4+4)	NAF	
1111	8	(4+4)	NAF	
1112	8	(4+4)	NAF	

Dose : 4MBE 0 mg/kg

Species : Rat

4MBE :Benzenemethanol, 4-methyl-
NAF : No abnormal findings

Gross pathological findings in pups on postnatal day 15			Dose : 4MBE 100 mg/kg	Species : Rat
Animal No.	Number of pups examined		Findings	
	Total	(Male + Female)		
2101	8	(4+4)	NAF	
2102	8	(4+4)	NAF	
2103	8	(4+4)	NAF	
2104	8	(4+4)	NAF	
2105	8	(4+4)	NAF	
2106	8	(4+4)	NAF	
2107	8	(4+4)	NAF	
2108	8	(4+4)	NAF	
2110	8	(4+4)	NAF	
2111	8	(4+4)	NAF	
2112	8	(4+4)	NAF	

Dose : 4MBE 100 mg/kg

Species : Rat

4MBE : Benzenemethanol, 4-methyl-

NAF : No abnormal findings

Gross pathological findings in pups on postnatal day 15			Dose : 4MBE 300 mg/kg	Species : Rat
Animal No.	Number of pups examined		Findings	
	Total (Male + Female)			
3101	8	(4+4)	NAF	
3102	8	(4+4)	NAF	
3103	8	(4+4)	NAF	
3104	8	(4+4)	NAF	
3105	8	(4+4)	NAF	
3106	8	(4+4)	NAF	
3107	8	(4+4)	NAF	
3108	8	(4+4)	NAF	
3109	8	(4+4)	NAF	
3110	8	(4+4)	NAF	
3111	8	(4+4)	NAF	
3112	8	(4+4)	NAF	

Dose : 4MBE 300 mg/kg

Species : Rat

4MBE : Benzenemethanol, 4-methyl-

NAF : No abnormal findings

Organ weight

Stage : After culled (F1 males)

Sex : Male

Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
1101M01	32.7	2.4	7.3
1102M01	32.0	3.8	11.9
1103M01	41.1	4.1	10.0
1104M01	33.1	3.3	10.0
1105M01	36.8	4.0	10.9
1106M01	28.3	1.5	5.3
1107M01	36.1	3.7	10.2
1108M01	34.1	4.6	13.5
1109M01	33.4	4.2	12.6
1110M01	36.3	3.2	8.8
1111M01	34.7	3.9	11.2
1112M01	31.2	4.4	14.1
n	12	12	12
Mean	34.2	3.6	10.5
S.D.	3.2	0.9	2.5

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight

Stage : After culled (F1 males)

Sex : Male

Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
2101M01	36.0	2.7	7.5
2102M01	32.4	2.4	7.4
2103M01	35.4	3.4	9.6
2104M01	34.9	4.9	14.0
2105M01	36.2	3.8	10.5
2106M01	30.5	1.3	4.3
2107M01	34.9	3.9	11.2
2108M01	30.2	3.1	10.3
2110M01	36.0	4.9	13.6
2111M01	32.5	2.3	7.1
2112M01	32.2	3.3	10.2
n	11	11	11
Mean	33.7	3.3	9.6
S.D.	2.2	1.1	2.9

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight

Stage : After culled (F1 males)

Sex : Male

Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
3101M01	38.2	3.3	8.6
3102M01	36.1	5.2	14.4
3103M01	34.3	3.4	9.9
3104M01	31.3	2.1	6.7
3105M01	35.6	3.4	9.6
3106M01	32.3	3.3	10.2
3107M01	34.8	3.1	8.9
3108M01	32.5	2.7	8.3
3109M01	32.7	3.2	9.8
3110M01	36.8	1.5	4.1
3111M01	38.8	3.4	8.8
3112M01	32.1	4.3	13.4
n	12	12	12
Mean	34.6	3.2	9.4
S.D.	2.5	0.9	2.7

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : After culled (F1 females)
Dose : 4MBE 0 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
1101F01	33.3	5.0	15.0
1102F01	32.3	3.0	9.3
1103F01	34.2	5.5	16.1
1104F01	34.6	4.3	12.4
1105F01	36.0	3.4	9.4
1106F01	29.8	2.2	7.4
1107F01	34.3	4.4	12.8
1108F01	33.2	6.5	19.6
1109F01	34.7	5.0	14.4
1110F01	33.9	3.0	8.8
1111F01	32.2	5.0	15.5
1112F01	29.7	4.4	14.8
n	12	12	12
Mean	33.2	4.3	13.0
S.D.	1.9	1.2	3.6

4MBE :Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : After culled (F1 females)
Dose : 4MBE 100 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
2101F01	31.1	3.4	10.9
2102F01	29.9	1.8	6.0
2103F01	32.1	3.2	10.0
2104F01	35.3	5.1	14.4
2105F01	34.8	4.0	11.5
2106F01	28.3	3.7	13.1
2107F01	36.7	4.6	12.5
2108F01	29.4	3.6	12.2
2110F01	34.2	4.6	13.5
2111F01	29.5	1.4	4.7
2112F01	30.1	2.6	8.6
n	11	11	11
Mean	31.9	3.5	10.7
S.D.	2.8	1.2	3.1

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

Organ weight
Sex : FemaleStage : After culled (F1 females)
Dose : 4MBE 300 mg/kg

Species : Rat

Animal No.	Body weight g	Thyroid-RL	
		AB mg	RE mg/100g
3101F01	36.7	5.2	14.2
3102F01	33.4	3.1	9.3
3103F01	33.6	4.5	13.4
3104F01	29.2	3.9	13.4
3105F01	34.0	4.4	12.9
3106F01	35.4	2.8	7.9
3107F01	33.6	4.4	13.1
3108F01	33.2	5.2	15.7
3109F01	31.0	2.7	8.7
3110F01	35.4	2.8	7.9
3111F01	37.0	5.0	13.5
3112F01	34.6	4.1	11.8
n	12	12	12
Mean	33.9	4.0	11.8
S.D.	2.2	0.9	2.7

4MBE : Benzenemethanol, 4-methyl-

AB : Absolute weight, RE : Relative weight by body weight

信頼性保証書（1/4）

試験番号 : R-1273

試験表題 : Benzenemethanol, 4-methyl- : ラットを用いた経口投与による
反復投与毒性・生殖発生毒性併合試験

本試験は以下に示す基準に従って実施されたことを保証致します。

なお、一部委託部分（血清中ホルモン濃度測定）については試験場所信頼性保証部門により保証されていることを確認致しております。

- 「新規化学物質等に係る試験を実施する試験施設に関する基準」
（平成 23 年 3 月 31 日：薬食発 0331 第 8 号、平成 23・03・29 製局第 6 号、環保企発第 110331010 号）

なお、調査は下記の通り実施し、報告致しました。

試験の調査

項 目	担当者	調 査 日	試験責任者及び 運営管理者への 報告日
試験計画書		2021 年 9 月 30 日	2021 年 9 月 30 日
作業予定表・ コンピュータプロトコール		2021 年 10 月 4 日	2021 年 10 月 4 日
試験計画書変更書 (1)		2021 年 10 月 8 日	2021 年 10 月 8 日
被験物質の安定性確認 (投与期間開始前)		2021 年 10 月 11 日	2021 年 10 月 11 日
試験計画書変更書 (2)		2021 年 10 月 19 日	2021 年 10 月 20 日
調製・保存 (被験物質)		2021 年 10 月 20 日	2021 年 10 月 20 日
被験液の分析		2021 年 10 月 20 日	2021 年 10 月 20 日
群分け		2021 年 10 月 24 日	2021 年 10 月 25 日
膣垢検査		2021 年 10 月 25 日	2021 年 10 月 25 日
投与・一般状態の観察・ 詳細な一般状態の観察		2021 年 10 月 25 日	2021 年 10 月 25 日
交配		2021 年 11 月 9 日	2021 年 11 月 9 日

信頼性保証書 (2/4)

項 目	担当者	調 査 日	試験責任者及び 運営管理者への 報告日
試験計画書変更書 (3)		2021 年 11 月 26 日	2021 年 11 月 26 日
機能検査・握力測定・ 自発運動量測定		2021 年 11 月 29 日	2021 年 11 月 29 日
尿検査 (尿量・色調・定性・沈渣)		2021 年 11 月 30 日	2021 年 11 月 30 日
分娩・哺育観察		2021 年 11 月 30 日	2021 年 12 月 2 日
摂水量測定		2021 年 12 月 1 日	2021 年 12 月 2 日
試験計画書変更書 (4)		2021 年 12 月 3 日	2021 年 12 月 3 日
哺育児数調整		2021 年 12 月 6 日	2021 年 12 月 6 日
採血・剖検 (雄)		2021 年 12 月 6 日	2021 年 12 月 6 日
採血 (生後 4 日出生児)		2021 年 12 月 6 日	2021 年 12 月 6 日
乳頭及び乳輪数の観察		2021 年 12 月 13 日	2021 年 12 月 14 日
剖検 (生後 13 日出生児)		2021 年 12 月 13 日	2021 年 12 月 14 日
病理組織学検査 (切り出し)		2021 年 12 月 13 日	2021 年 12 月 14 日
剖検 (母動物)		2021 年 12 月 15 日	2021 年 12 月 15 日
被験物質の安定性確認 (投与期間終了後)		2021 年 12 月 28 日	2021 年 12 月 28 日
試験計画書変更書 (5)		2022 年 2 月 1 日	2022 年 2 月 2 日
試験計画書変更書 (6)		2022 年 2 月 1 日	2022 年 2 月 2 日
生データ		2022 年 3 月 7 日	
		2022 年 3 月 8 日	
		2022 年 3 月 9 日	
		2022 年 3 月 10 日	
		2022 年 3 月 11 日	
		2022 年 3 月 12 日	
		2022 年 3 月 13 日	
		2022 年 3 月 14 日	
		2022 年 3 月 15 日	
		2022 年 3 月 22 日	2022 年 3 月 22 日

信頼性保証書 (3/4)

項 目	担当者	調 査 日	試験責任者及び 運営管理者への 報告日
図・表・付表		2022 年 3 月 7 日	
		2022 年 3 月 8 日	
		2022 年 3 月 9 日	
		2022 年 3 月 10 日	
		2022 年 3 月 11 日	
		2022 年 3 月 14 日	
		2022 年 3 月 15 日	
		2022 年 3 月 16 日	2022 年 3 月 17 日
改善確認		2022 年 3 月 18 日	2022 年 3 月 18 日
最終報告書草案		2022 年 3 月 12 日	
		2022 年 3 月 13 日	
		2022 年 3 月 14 日	
		2022 年 3 月 18 日	2022 年 3 月 18 日
改善確認		2022 年 3 月 20 日	2022 年 3 月 22 日
最終報告書		2022 年 3 月 23 日	2022 年 3 月 23 日

信頼性保証書 (4/4)

プロセス調査

項 目	試験番号	担当者	調 査 日	試験責任者及び 運営管理者への 報告日
動物入荷	B-8892		2021 年 8 月 11 日	2021 年 8 月 11 日
検疫・馴化	B-8892		2021 年 8 月 11 日	2021 年 8 月 11 日
	B-8892		2021 年 8 月 17 日	2021 年 8 月 17 日
体重・摂餌量測定	R-1269		2021 年 9 月 7 日	2021 年 9 月 7 日
	R-1270		2021 年 10 月 5 日	2021 年 10 月 5 日
尿検査	B-8879		2021 年 10 月 16 日	2021 年 10 月 19 日
(電解質・浸透圧)	B-8877		2021 年 11 月 5 日	2021 年 11 月 5 日
生体試料の発送	B-8914		2021 年 11 月 15 日	2021 年 11 月 16 日
血液学検査・凝固系 検査・血液化学検査	B-8846		2021 年 10 月 19 日	2021 年 10 月 20 日
病理組織学検査	B-8751		2021 年 10 月 11 日	2021 年 10 月 12 日
(包埋・薄切・染色・ 鏡検)	B-8751		2021 年 10 月 12 日	2021 年 10 月 12 日
	B-8751		2021 年 10 月 14 日	2021 年 10 月 14 日
	B-8817		2021 年 10 月 29 日	2021 年 11 月 1 日

2022年 3 月 23 日

株式会社ボゾリサーチセンター
主信頼性保証部門