

**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

Final 1 Mlce

**Date Report Reqsted:** 07/19/2005

**Time Report Reqsted:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

**C Number:** C88006B  
**Lock Date:** 03/08/2004  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL



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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 2 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47550

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Cecum
\* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx \* Lymph Node, Bronchial
\* Lymph Node, Mandibular \* Lymph Node, Mesenteric \* Nose \* Pancreas
\* Parathyroid Gland \* Pituitary Gland \* Preputial Gland \* Prostate
\* Salivary Glands \* Seminal Vesicle \* Skin \* Spleen
\* Stomach, Forestomach \* Stomach, Glandular \* Thymus \* Trachea
\* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal \* Mammary Gland

OBSERVATIONS

- \* Kidney Cyst
\* Liver Hepatocellular Adenoma Multiple
Tension Lipidosis Mild
[ Hepatocellular Adenoma TGLs = 1,2-6+5 ]
\* Lung Alveolar/Bronchiolar Adenoma
[ Alveolar/Bronchiolar Adenoma TGLs = 4-4 ]
\* Testes Atrophy Mild
\* Thyroid Gland Follicular Cel Adenoma
[ Adenoma TGLs = 3-3 ]



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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 4 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47552

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex Hypertrophy Mild
- \* Harderian Gland Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver Basophilic Focus Tension Lipidosis Mild
- [ Basophilic Focus TGLs = 1-5 ]
- \* Thyroid Gland Follicular Cel Adenoma





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 7 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47555

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Epididymis [ Granuloma Sperm TGLs = 4-8 ] Granuloma Sperm Marked
- \* Eye Cornea Hyperplasia Squamous, Minimal
- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus TGLs = 2-5 Eosinophilic Focus
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 3-6 ]
- \* Nose Olfactory Epi Metaplasia Minimal



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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 8 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 690 HISTO: 47556

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Small, Jejunum
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Thymus
- \* Lymph Node, Mandibular
- \* Lymph Node, Mesenteric
- \* Mammary Gland

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- \* Intestine Large, Colon
- \* Intestine Large, Rectum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum

OBSERVATIONS

- \* Kidney Nephropathy Marked
- \* Liver Hepatocellular Carcinoma Multiple  
[ Hepatocellular Carcinoma TGLs = 1,2-5+12 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)  
Thrombosis Mild  
[ Hepatocellular Carcinoma TGLs = 3-4 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 9

TMT: 1  
DOSE: CONTROL

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 730  
HISTO: 47557

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Adrenal Cortex
- \* Kidney
- \* Liver

[ Hepatocellular Adenoma TGLs = 1-5 ]

- \* Lung

Hypertrophy  
Nephropathy  
Hepatocellular Adenoma

Alveolar/Bronchiolar Adenoma

Mild  
Minimal

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 10 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47558

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 1,2-5+6 ]
- \* Lung Bronchiole Hyperplasia Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Minimal  
Olfactory Epi Metaplasia Minimal





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Species/Strain: MICE/B6C3F1

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ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 13 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 684 HISTO: 47561

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Epididymis \* Intestine Large, Cecum \* Intestine Small, Ileum \* Lung \* Pancreas \* Prostate \* Stomach, Forestomach \* Trachea \* Bone \* Esophagus \* Intestine Large, Colon \* Intestine Small, Jejunum \* Lymph Node, Bronchial \* Parathyroid Gland \* Salivary Glands \* Stomach, Glandular \* Urinary Bladder \* Bone Marrow \* Gallbladder \* Intestine Large, Rectum \* Islets, Pancreatic \* Lymph Node, Mediastinal \* Pituitary Gland \* Seminal Vesicle \* Testes \* Brain \* Heart \* Intestine Small, Duodenum \* Larynx \* Lymph Node, Mesenteric \* Preputial Gland \* Spleen \* Thyroid Gland

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland \* Thymus

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild
\* Eye Degeneration Marked
\* Harderian Gland Adenoma
[ Adenoma TGLs = 1-11 ]
\* Kidney Infarct Mild
Metaplasia Osseous, Minimal
Nephropathy Minimal
\* Liver Basophilic Focus
Hepatocellular Adenoma
[ Hepatocellular Adenoma TGLs = 2-5 ]
\* Nose Glands, Olfactory Epi Hyperplasia Minimal
Olfactory Epi Metaplasia Minimal
\* Skin Inflammation Chronic Active, Marked
[ Inflammation TGLs = 4-12 ]

PRIMARY CAUSE OF DEATH - Skin Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

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Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 14 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47562

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Eosinophilic Focus Infarct Mild
- [ Eosinophilic Focus TGLs = 3-5 ]
- [ Infarct TGLs = 2-5 ]
- \* Lung Alveolar/Bronchiolar Adenoma
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

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Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 15 TMT: 1  
DOSE: CONTROL

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47563

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Epididymis              | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Lung                   |
| * Lymph Node, Bronchial    | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric    | * Nose                   |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Preputial Gland        |
| * Prostate                 | * Salivary Glands         | * Seminal Vesicle           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Testes                 |
| * Thymus                   | * Thyroid Gland           | * Trachea                   | * Urinary Bladder        |

**MISSING**

- |                          |                 |
|--------------------------|-----------------|
| * Lymph Node, Mandibular | * Mammary Gland |
|--------------------------|-----------------|

**OBSERVATIONS**

- |                                 |                  |         |
|---------------------------------|------------------|---------|
| * Kidney                        | Nephropathy      | Minimal |
| * Liver                         | Clear Cell Focus |         |
| [ Clear Cell Focus TGLs = 1-6 ] |                  |         |





TDMS No. 88006 - 04

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ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 17 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 579 HISTO: 47565

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Brain \* Gallbladder \* Intestine Large, Rectum \* Islets, Pancreatic \* Lymph Node, Mediastinal \* Parathyroid Gland \* Salivary Glands \* Stomach, Glandular \* Trachea \* Adrenal Medulla \* Epididymis \* Harderian Gland \* Intestine Small, Duodenum \* Larynx \* Lymph Node, Mesenteric \* Pituitary Gland \* Seminal Vesicle \* Testes \* Urinary Bladder \* Bone \* Esophagus \* Intestine Large, Cecum \* Intestine Small, Ileum \* Lymph Node, Bronchial \* Nose \* Preputial Gland \* Spleen \* Thymus \* Bone Marrow \* Eye \* Intestine Large, Colon \* Intestine Small, Jejunum \* Lymph Node, Mandibular \* Pancreas \* Prostate \* Stomach, Forestomach \* Thyroid Gland

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Heart Artery Inflammation Chronic Active, Moderate
\* Kidney Nephropathy Minimal
\* Liver [ Hepatocellular Adenoma TGLs = 5,6-5+12 ] Hepatocellular Adenoma Multiple
\* Lung [ Alveolar/Bronchiolar Carcinoma TGLs = 2-4 ] Alveolar/Bronchiolar Carcinoma
\* Skin [ Inflammation TGLs = 1,4-8+12 ] Inflammation Chronic Active, Moderate

PRIMARY CAUSE OF DEATH - Lung Alveolar/Bronchiolar Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

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Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 18 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47566

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Epididymis \* Harderian Gland \* Intestine Large, Rectum \* Islets, Pancreatic \* Lymph Node, Mediastinal \* Pituitary Gland \* Skin \* Testes \* Urinary Bladder \* Bone \* Esophagus \* Heart \* Intestine Small, Duodenum \* Larynx \* Lymph Node, Mesenteric \* Preputial Gland \* Spleen \* Thymus \* Bone Marrow \* Eye \* Intestine Large, Cecum \* Intestine Small, Ileum \* Lung \* Nose \* Prostate \* Stomach, Forestomach \* Thyroid Gland \* Brain \* Gallbladder \* Intestine Large, Colon \* Intestine Small, Jejunum \* Lymph Node, Bronchial \* Pancreas \* Salivary Glands \* Stomach, Glandular \* Trachea

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild Hypertrophy Mild
\* Kidney Cyst Minimal Nephropathy Minimal
[ Cyst TGLs = 5-12 ]
\* Liver Clear Cell Focus Multiple Hepatocellular Adenoma Multiple
[ Hepatocellular Adenoma TGLs = 3,4-5+6+12 ]
\* Seminal Vesicle Inflammation Chronic, Moderate
[ Inflammation TGLs = 1-9 ]

TDMS No. 88006 - 04

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Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 19 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47567

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex Hypertrophy Mild
- \* Islets, Pancreatic Carcinoma
- [ Carcinoma TGLs = 2-7 ]
- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Tension Lipidosis Mild
- [ Clear Cell Focus TGLs = 1-6 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 21 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47569

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Nose
- \* Prostate
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Kidney Nephropathy Minimal
- \* Liver Ito Cell Tumor Malignant
- [ Ito Cell Tumor Malignant TGLs = 2-5 ]
- \* Lung Alveolar/Bronchiolar Adenoma
- [ Alveolar/Bronchiolar Adenoma TGLs = 3-4 ]
- \* Skin Cyst Epithelial Inclusion
- [ Cyst Epithelial Inclusion TGLs = 1-6 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 22 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 555 HISTO: 47570

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Epididymis \* Intestine Large, Colon \* Larynx \* Nose \* Preputial Gland \* Skin \* Testes \* Urinary Bladder \* Bone \* Esophagus \* Intestine Large, Rectum \* Lymph Node, Bronchial \* Pancreas \* Prostate \* Spleen \* Thymus \* Bone Marrow \* Eye \* Intestine Small, Duodenum \* Lymph Node, Mediastinal \* Parathyroid Gland \* Salivary Glands \* Stomach, Forestomach \* Thyroid Gland \* Brain \* Heart \* Islets, Pancreatic \* Lymph Node, Mesenteric \* Pituitary Gland \* Seminal Vesicle \* Stomach, Glandular \* Trachea

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder \* Intestine Large, Cecum \* Intestine Small, Ileum \* Intestine Small, Jejunum

OBSERVATIONS

- \* Adrenal Cortex Hypertrophy Mild
\* Harderian Gland Carcinoma
[ Carcinoma TGLs = 3-12 ]
\* Kidney Nephropathy Minimal
\* Liver Clear Cell Focus
Hepatocellular Adenoma
Hepatocellular Carcinoma
[ Hepatocellular Adenoma TGLs = 6-5 ]
[ Hepatocellular Carcinoma TGLs = 5-5 ]
\* Lung Alveolar/Bronchiolar Carcinoma
[ Alveolar/Bronchiolar Carcinoma TGLs = 2-4 ]
Mesentery Fat Necrosis Mild
[ Necrosis TGLs = 4-13 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 23 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 456 HISTO: 47571

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Colon
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx
\* Lung \* Lymph Node, Bronchial \* Lymph Node, Mandibular \* Lymph Node, Mediastinal
\* Lymph Node, Mesenteric \* Nose \* Pancreas \* Parathyroid Gland
\* Pituitary Gland \* Preputial Gland \* Prostate \* Salivary Glands
\* Seminal Vesicle \* Skin \* Stomach, Forestomach \* Testes
\* Thymus \* Thyroid Gland \* Trachea \* Urinary Bladder

MISSING

- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Intestine Large, Cecum \* Intestine Small, Duodenum \* Intestine Small, Ileum

OBSERVATIONS

- \* Kidney Nephropathy Minimal
\* Liver Hemangiosarcoma [ Hemangiosarcoma TGLs = 3-5 ]
\* Spleen Hematopoietic Cell Proliferation Moderate [ Hematopoietic Cell Proliferation TGLs = 2-5 ]
\* Stomach, Glandular Necrosis Mild [ Necrosis TGLs = 4-12 ]

PRIMARY CAUSE OF DEATH - Liver Hemangiosarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 24 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 715 HISTO: 47572

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Epididymis \* Harderian Gland \* Intestine Small, Ileum \* Lymph Node, Mediastinal \* Parathyroid Gland \* Salivary Glands \* Testes \* Bone \* Esophagus \* Intestine Large, Cecum \* Islets, Pancreatic \* Lymph Node, Mesenteric \* Pituitary Gland \* Seminal Vesicle \* Thyroid Gland \* Bone Marrow \* Eye \* Intestine Large, Colon \* Kidney \* Nose \* Preputial Gland \* Skin \* Trachea \* Brain \* Gallbladder \* Intestine Large, Rectum \* Larynx \* Pancreas \* Prostate \* Stomach, Glandular \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial \* Lymph Node, Mandibular \* Mammary Gland \* Thymus

AUTO PRECLUDES DIAG.

- \* Intestine Small, Duodenum \* Intestine Small, Jejunum

OBSERVATIONS

- \* Adrenal Cortex Hypertrophy Mild
\* Heart Hemangiosarcoma
[ Hemangiosarcoma TGLs = 6-5 ]
\* Liver Eosinophilic Focus
Hemangiosarcoma
Hepatocellular Adenoma
Necrosis Moderate
Erythrophagocytosis Mild
[ Eosinophilic Focus Hepatocyte TGLs = 5-5 ]
[ Hemangiosarcoma TGLs = 4-6 ]
[ Hepatocellular Adenoma TGLs = 3-5 ]
\* Lung Alveolar/Bronchiolar Adenoma
Hemangiosarcoma
[ Hemangiosarcoma TGLs = 2-4 ]
\* Spleen Hemangiosarcoma
\* Stomach, Forestomach Ulcer Mild

PRIMARY CAUSE OF DEATH - Spleen Hemangiosarcoma

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 25 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47573

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Heart \* Intestine Large, Cecum \* Intestine Large, Colon
\* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum \* Intestine Small, Jejunum
\* Islets, Pancreatic \* Larynx \* Lymph Node, Bronchial \* Lymph Node, Mediastinal
\* Lymph Node, Mesenteric \* Nose \* Parathyroid Gland \* Pituitary Gland
\* Preputial Gland \* Prostate \* Salivary Glands \* Seminal Vesicle
\* Stomach, Forestomach \* Testes \* Thymus \* Trachea
\* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland Hyperplasia Minimal
\* Kidney Nephropathy Minimal
\* Liver Hemangiosarcoma Focal, Moderate
[ Hemangiosarcoma TGLs = 6-5 ]
[ Vacuolization Cytoplasmic TGLs = 4,5-5 ]
\* Lung Alveolar/Bronchiolar Carcinoma
[ Alveolar/Bronchiolar Carcinoma TGLs = 3-4 ]
\* Pancreas Atrophy Mild
\* Skin Subcut Tiss Hemangiosarcoma
[ Hemangiosarcoma TGLs = 7-6 ]
\* Spleen Hematopoietic Cell Proliferation Mild
[ Hematopoietic Cell Proliferation TGLs = 1-5 ]
\* Stomach, Glandular Hyperplasia Moderate
[ Hyperplasia TGLs = 8-9 ]
\* Thyroid Gland Follicular Cel Hyperplasia Mild





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 28 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47576

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Liver [ Hepatocellular Carcinoma TGLs = 2-12 ] Eosinophilic Focus  
Hepatocellular Carcinoma
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)









TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 32 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 659 HISTO: 47580

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Bone \* Bone Marrow \* Brain
\* Epididymis \* Esophagus \* Eye \* Harderian Gland
\* Heart \* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum
\* Intestine Small, Ileum \* Islets, Pancreatic \* Larynx \* Liver
\* Lung \* Lymph Node, Bronchial \* Lymph Node, Mediastinal \* Lymph Node, Mesenteric
\* Nose \* Pancreas \* Parathyroid Gland \* Pituitary Gland
\* Preputial Gland \* Salivary Glands \* Seminal Vesicle \* Spleen
\* Stomach, Glandular \* Testes \* Thymus \* Thyroid Gland
\* Trachea \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder \* Intestine Large, Cecum \* Intestine Small, Jejunum

OBSERVATIONS

- \* Adrenal Cortex Hypertrophy Mild
\* Kidney Nephropathy Minimal
Renal Tubule Necrosis Minimal
[ Necrosis TGLs = 3-6 ]
\* Prostate Inflammation Suppurative, Marked
\* Skin Inflammation Chronic Active, Moderate
[ Inflammation TGLs = 1-6 ]
\* Stomach, Forestomach Ulcer Moderate

PRIMARY CAUSE OF DEATH - Skin Inflammation



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 34 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 694 HISTO: 47582

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Intestine Large, Colon
- \* Larynx
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Rectum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Harderian Gland
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Small, Ileum
- \* Stomach, Glandular
- \* Gallbladder
- \* Intestine Small, Jejunum
- \* Trachea
- \* Intestine Large, Cecum
- \* Lymph Node, Bronchial
- \* Intestine Small, Duodenum
- \* Lymph Node, Mediastinal

OBSERVATIONS

\* Liver Hemangiosarcoma Necrosis Marked  
 [ Hemangiosarcoma TGLs = 1-5+12 ]

PRIMARY CAUSE OF DEATH - Liver Hemangiosarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 35 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47583

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex
  - \* Kidney
  - \* Liver
  - Hypertrophy
  - Nephropathy
  - Clear Cell Focus
  - Eosinophilic Focus
  - Hepatocellular Adenoma
  - Mixed Cell Focus
  - Mild
  - Minimal
- [ Clear Cell Focus TGLs = 2-5 ]  
 [ Hepatocellular Adenoma TGLs = 3-6 ]  
 [ Mixed Cell Focus TGLs = 1-5 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 36 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 570 HISTO: 47584

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Preputial Gland
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 1,2-13+12 ] Hepatocellular Carcinoma Multiple
- \* Skin [ Inflammation TGLs = 3-12 ] Inflammation Chronic Active, Marked

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 37 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47585

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Prostate
- \* Spleen
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus

MISSING

- \* Mammary Gland

INSUFFICIENT TISSUE

- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Metaplasia Nephropathy Osseous, Minimal Minimal
- \* Liver Basophilic Focus Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 1-6 ]
- \* Testes Atrophy Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 38 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47586

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Adrenal Cortex
- \* Eye
- \* Harderian Gland
- \* Kidney
- \* Liver
- Cornea
- [ Adenoma TGLs = 1-11 ]
- Hypertrophy
- Inflammation
- Adenoma
- Nephropathy
- Clear Cell Focus
- Eosinophilic Focus
- Minimal
- Chronic Active, Mild
- Minimal







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 41 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 683 HISTO: 47589

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Intestine Large, Colon
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Intestine Large, Rectum
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Heart
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Thymus
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Small, Ileum
- \* Gallbladder
- \* Intestine Small, Jejunum
- \* Intestine Large, Cecum
- \* Stomach, Glandular
- \* Intestine Small, Duodenum

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple
- [ Hepatocellular Adenoma TGLs = 4,5-5 ]
- [ Hepatocellular Carcinoma TGLs = 3-12 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 42 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47590

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Cecum
\* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx \* Lymph Node, Bronchial
\* Lymph Node, Mandibular \* Lymph Node, Mesenteric \* Prostate \* Pancreas
\* Pituitary Gland \* Preputial Gland \* Stomach, Forestomach \* Salivary Glands
\* Seminal Vesicle \* Spleen \* Stomach, Glandular
\* Testes \* Thymus \* Trachea \* Urinary Bladder

MISSING

- \* Mammary Gland \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
\* Liver Hepatocellular Adenoma Hepatocellular Carcinoma
[ Hepatocellular Adenoma TGLs = 5-6 ]
[ Hepatocellular Carcinoma TGLs = 4-12 ]
\* Lung Alveolar/Bronchiolar Adenoma Multiple
Alveolar Epith Hyperplasia Minimal
[ Alveolar/Bronchiolar Adenoma TGLs = 2-4 ]
\* Nose Glands, Olfactory Epi Hyperplasia Minimal
Olfactory Epi Metaplasia Minimal
\* Skin Inflammation Chronic Active, Mild
[ Inflammation TGLs = 1-8 ]
\* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 43 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 724 HISTO: 47591

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Cecum
\* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx \* Lung
\* Lymph Node, Bronchial \* Lymph Node, Mediastinal \* Pituitary Gland \* Preputial Gland
\* Pancreas \* Penis \* Salivary Glands \* Seminal Vesicle \* Spleen
\* Prostate \* Salivary Glands \* Stomach, Glandular \* Testes \* Trachea
\* Stomach, Forestomach
\* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland \* Parathyroid Gland \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Minimal
\* Liver Hepatocellular Adenoma Hepatocellular Carcinoma Infarct Moderate
[ Hepatocellular Adenoma TGLs = 5-5 ]
[ Hepatocellular Carcinoma TGLs = 4-12 ]
[ Infarct TGLs = 6,7-6 ]
\* Skin Inflammation Chronic Active, Marked
[ Inflammation TGLs = 1-8+13 ]
\* Thyroid Gland Follicular Cel Hyperplasia Mild

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 44 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 710 HISTO: 47592

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Cecum
\* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx \* Lymph Node, Bronchial
\* Lymph Node, Mediastinal \* Lymph Node, Mesenteric \* Nose \* Pancreas
\* Pituitary Gland \* Preputial Gland \* Prostate \* Salivary Glands
\* Seminal Vesicle \* Skin \* Spleen \* Stomach, Glandular
\* Testes \* Thymus \* Trachea \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland

INSUFFICIENT TISSUE

- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Moderate
\* Liver Hepatocellular Carcinoma [ Hepatocellular Carcinoma TGLs = 1-12 ]
\* Lung Alveolus Infiltration Cellular Histiocyte, Minimal
\* Stomach, Forestomach Epithelium Hyperplasia Mild
[ Hyperplasia TGLs = 4-9 ]
\* Thyroid Gland Follicular Cel Hyperplasia Minimal

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 46 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 486 HISTO: 47594

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Gallbladder \* Harderian Gland \* Heart \* Intestine Large, Cecum
\* Intestine Large, Colon \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum
\* Intestine Small, Jejunum \* Islets, Pancreatic \* Larynx \* Lung
\* Lymph Node, Bronchial \* Lymph Node, Mediastinal \* Pituitary Gland \* Preputial Gland
\* Pancreas \* Parathyroid Gland \* Spleen \* Stomach, Forestomach
\* Salivary Glands \* Seminal Vesicle \* Thymus \* Thyroid Gland
\* Stomach, Glandular \* Testes
\* Trachea

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland

OBSERVATIONS

- \* Adren Cortex Note: One of pair missing.
\* Kidney Pelvis Nephropathy Dilatation Minimal Mild
[ Dilatation TGLs = 5-6 ]
\* Liver Hepatocellular Adenoma Necrosis Multiple Marked
[ Hepatocellular Adenoma TGLs = 3,4-5+6 ]
[ Necrosis TGLs = 2-5 ]
\* Prostate Inflammation Suppurative, Moderate
\* Skin Inflammation Acute, Marked
[ Inflammation TGLs = 1-8 ]
\* Urinary Bladder Inflammation Chronic Active, Mild
[ Inflammation TGLs = 6-9 ]

PRIMARY CAUSE OF DEATH - Skin Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 47 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47595

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex
- \* Gallbladder
- \* Kidney
- \* Liver
- [ Hepatocellular Adenoma TGLs = 1-6 ]
- Hypertrophy
- Degeneration
- Infiltration Cellular
- Nephropathy
- Hepatocellular Adenoma
- Mild
- Hyaline, Mild
- Polymorphnuclr, Moderate
- Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 48 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47596

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Nose
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Moderate
- \* Liver Hepatocellular Adenoma  
[ Hepatocellular Adenoma TGLs = 1-5 ]
- \* Thyroid Gland Follicular Cel Adenoma  
[ Adenoma TGLs = 2-3 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 49 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 635 HISTO: 47597

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Lung
- \* Nose
- \* Preputial Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Harderian Gland
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Salivary Glands
- \* Testes

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Thymus

AUTO PRECLUDES DIAG.

- \* Gallbladder
- \* Intestine Small, Jejunum
- \* Intestine Large, Cecum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild
- \* Kidney Nephropathy Mild
- Pelvis Dilatation Mild
- [ Dilatation TGLs = 2-6 ]
- \* Prostate Inflammation Suppurative, Mild
- \* Seminal Vesicle Inflammation Suppurative, Moderate
- \* Skin Inflammation Chronic Active, Marked
- [ Inflammation TGLs = 3,4-8 ]

PRIMARY CAUSE OF DEATH - Skin Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 50 TMT: 1 DOSE: CONTROL

SEX: Male DISP: Natural Death

DAY ON TEST: 549 HISTO: 47598

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Epididymis \* Esophagus \* Eye
\* Intestine Large, Rectum \* Islets, Pancreatic \* Larynx \* Lung
\* Lymph Node, Bronchial \* Lymph Node, Mandibular \* Lymph Node, Mesenteric \* Nose
\* Pancreas \* Parathyroid Gland \* Pituitary Gland \* Preputial Gland
\* Prostate \* Salivary Glands \* Skin \* Spleen
\* Stomach, Forestomach \* Stomach, Glandular \* Testes \* Thymus
\* Thyroid Gland \* Trachea \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder \* Intestine Large, Cecum \* Intestine Large, Colon \* Intestine Small, Duodenum
\* Intestine Small, Ileum \* Intestine Small, Jejunum \* Seminal Vesicle

OBSERVATIONS

- \* Harderian Gland Adenoma
\* Heart Metaplasia Osseous, Minimal
\* Kidney Nephropathy Mild
\* Liver Hepatocellular Adenoma
Hepatocellular Carcinoma
[ Hepatocellular Adenoma TGLs = 2-12 ]
[ Hepatocellular Carcinoma TGLs = 1-13 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 201 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 729  
HISTO: 47849

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Bone                      | * Bone Marrow            | * Brain                    | * Epididymis              |
| * Esophagus                 | * Eye                    | * Gallbladder              | * Harderian Gland         |
| * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Larynx                    | * Lymph Node, Bronchial  | * Lymph Node, Mandibular   | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric    | * Pancreas               | * Parathyroid Gland        | * Pituitary Gland         |
| * Preputial Gland           | * Prostate               | * Salivary Glands          | * Seminal Vesicle         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Testes                    | * Thymus                 | * Thyroid Gland            | * Trachea                 |
| * Urinary Bladder           |                          |                            |                           |

MISSING

- \* Mammary Gland

OBSERVATIONS

- |                   |   |                           |                    |
|-------------------|---|---------------------------|--------------------|
| * Adrenal Cortex  |   | Hyperplasia               | Mild               |
| * Adrenal Medulla |   | Hyperplasia               | Mild               |
| * Kidney          |   | Nephropathy               | Minimal            |
| * Liver           | [ Hepatocellular Carcinoma TGLs = 1-5+6 ] | Hepatocellular Carcinoma  |                    |
| * Lung            |   | Hepatocellular Carcinoma  | Metastatic (Liver) |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi    | Hyperplasia<br>Metaplasia | Mild<br>Mild       |





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 204 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 348 HISTO: 47852

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Preputial Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Heart Mineralization Mild
- \* Kidney Nephropathy Moderate
- \* Liver Inflammation Granulomatous, Mild  
Mineralization Minimal  
[ Inflammation TGLs = 2,3,4-5+6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Minimal  
Olfactory Epi Atrophy Mild
- \* Pancreas Duct Cyst
- [ Cyst TGLs = 6-12 ]
- Penis Inflammation Suppurative, Marked
- \* Prostate Inflammation Suppurative, Marked
- \* Testes Atrophy Mild
- Urethra Bulboureth GI Hyperplasia Moderate  
Bulboureth GI Inflammation Suppurative, Mild  
[ Hyperplasia TGLs = 7-13 ]
- \* Urinary Bladder Inflammation Chronic Active, Mild  
Transit Epi Hyperplasia Mild

PRIMARY CAUSE OF DEATH - Penis Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 205 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 537 HISTO: 47853

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland

INSUFFICIENT TISSUE

- \* Intestine Large, Rectum

OBSERVATIONS

- |          |   |                           |                      |
|----------|---|---------------------------|----------------------|
| * Kidney | [ Nephropathy TGLs = 1-6 ]                  | Nephropathy               | Marked               |
| * Liver  | [ Hepatocellular Carcinoma TGLs = 2-12+13 ] | Hepatocellular Carcinoma  |                      |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi      | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 207 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 481 HISTO: 47855

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Mammary Gland

OBSERVATIONS

- |          |                       |              |         |
|----------|-----------------------|--------------|---------|
| * Kidney |                       | Nephropathy  | Minimal |
| * Nose   | Glands, Olfactory Epi | Hyperplasia  | Mild    |
|          | Olfactory Epi         | Metaplasia   | Mild    |
| Tooth    |                       | Malformation | Marked  |
|          |                       | Odontoma     |         |

PRIMARY CAUSE OF DEATH - Tooth Malformation



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 209 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 710 HISTO: 47857

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland

OBSERVATIONS

- \* Kidney [ Nephropathy TGLs = 2-6 ] Nephropathy Marked
- \* Liver [ Hepatocellular Carcinoma TGLs = 3-12 ] Hepatocellular Carcinoma
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Stomach, Forestomach Epithelium Ulcer Hyperplasia Mild Mild  
[ Ulcer TGLs = 4-9 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 210 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47858

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland

OBSERVATIONS

- |                  |  |                                       |                      |
|------------------|--|---------------------------------------|----------------------|
| * Adrenal Cortex |  | Hyperplasia<br>Adenoma                | Mild                 |
|                  | Capsule                                |                                       |                      |
| * Kidney         |  | Nephropathy<br>Fibrosis               | Minimal<br>Mild      |
|                  | Capsule                                |                                       |                      |
| * Liver          |  | Basophilic Focus<br>Tension Lipidosis | Mild                 |
| * Nose           | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia             | Moderate<br>Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 211 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47859

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Mild
- \* Liver Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 2-12 ]
- \* Lung Alveolar/Bronchiolar Carcinoma
- [ Alveolar/Bronchiolar Carcinoma TGLs = 3-4 ]
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 1-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Marked
- Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 212 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 704 HISTO: 47860

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Bone \* Bone Marrow \* Brain
\* Epididymis \* Esophagus \* Harderian Gland \* Heart
\* Islets, Pancreatic \* Larynx \* Lymph Node, Mediastinal \* Pancreas
\* Parathyroid Gland \* Pituitary Gland \* Preputial Gland \* Prostate
\* Salivary Glands \* Seminal Vesicle \* Skin \* Testes
\* Thymus \* Thyroid Gland \* Trachea \* Urinary Bladder

MISSING

- \* Gallbladder \* Lymph Node, Bronchial \* Lymph Node, Mandibular \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye \* Intestine Large, Cecum \* Intestine Large, Colon \* Intestine Large, Rectum
\* Intestine Small, Duodenum \* Intestine Small, Ileum \* Intestine Small, Jejunum \* Lymph Node, Mesenteric
\* Stomach, Glandular

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Moderate
\* Kidney Nephropathy Moderate
\* Liver Hepatocellular Adenoma
Hepatocellular Carcinoma Necrosis Moderate
[ Hepatocellular Adenoma TGLs = 3-5 ]
[ Hepatocellular Carcinoma TGLs = 4-12 ]
\* Lung Hepatocellular Carcinoma Metastatic (Liver)
\* Nose Glands, Olfactory Epi Hyperplasia Mild
Peritoneum Hepatocellular Carcinoma Metastatic (Liver)
[ Hepatocellular Carcinoma TGLs = 5-14 ]
\* Spleen Hematopoietic Cell Proliferation Moderate
[ Hematopoietic Cell Proliferation TGLs = 2-5 ]
\* Stomach, Forestomach Epithelium Hyperplasia Mild
[ Hyperplasia TGLs = 6-13 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 213 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 550 HISTO: 47861

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Kidney
- \* Lymph Node, Mandibular
- \* Prostate
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Salivary Glands
- \* Testes
- \* Bone
- \* Esophagus
- \* Lung
- \* Parathyroid Gland
- \* Seminal Vesicle
- \* Thymus
- \* Bone Marrow
- \* Heart
- \* Lymph Node, Bronchial
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland

MISSING

- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Urinary Bladder
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Pancreas
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Pituitary Gland
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Stomach, Glandular

OBSERVATIONS

- \* Harderian Gland
  - \* Liver
    - [ Hepatocellular Adenoma TGLs = 7-5 ]
    - [ Hepatocellular Carcinoma TGLs = 3-12 ]
  - Lymph Node
    - Pancreatic
    - [ Lymphoma Malignant TGLs = 4-15 ]
  - \* Lymph Node, Mesenteric
    - [ Lymphoma Malignant TGLs = 5-14 ]
  - Mesentery
    - Fat
    - [ Necrosis TGLs = 1-13 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Spleen
    - [ Lymphoma Malignant TGLs = 2,6-5 ]
- Adenoma  
Hepatocellular Adenoma  
Hepatocellular Carcinoma
- Lymphoma Malignant
- Lymphoma Malignant
- Necrosis
- Mild
- Hyperplasia  
Metaplasia
- Moderate  
Moderate
- Lymphoma Malignant

\* PROTOCOL REQUIRED TISSUE



**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

**Date Report Requested:** 07/19/2005

**Time Report Requested:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

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**ANIMAL NUM:** 213    **TMT:** 3  
**DOSE:** 100 PPM

**SEX:** Male  
**DISP:** Natural Death

**DAY ON TEST:** 550  
**HISTO:** 47861

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH        - Liver    Hepatocellular Carcinoma

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TDMS No. 88006 - 04  
Test Type: CHRONIC  
Route: RESPIRATORY EXPOSURE WHOLE BODY  
Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA  
ALPHA-METHYLSTYRENE  
CAS Number: 98-83-9  
Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005  
Time Report Requested: 11:42:31  
First Dose M/F: 07/30/01 / 07/30/01  
Lab: BNW

ANIMAL NUM: 215 TMT: 3 SEX: Male DAY ON TEST: 612  
DOSE: 100 PPM DISP: Natural Death HISTO: 47863

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Bone	* Brain	* Epididymis	* Esophagus
* Heart	* Larynx	* Lung	* Lymph Node, Mediastinal
* Parathyroid Gland	* Preputial Gland	* Salivary Glands	* Skin
* Testes	* Thymus	* Thyroid Gland	* Trachea

MISSING

* Lymph Node, Bronchial	* Lymph Node, Mandibular	* Mammary Gland
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AUTO PRECLUDES DIAG.

* Adrenal Cortex	* Adrenal Medulla	* Bone Marrow	* Eye
* Gallbladder	* Harderian Gland	* Intestine Large, Cecum	* Intestine Large, Colon
* Intestine Large, Rectum	* Intestine Small, Duodenum	* Intestine Small, Ileum	* Intestine Small, Jejunum
* Islets, Pancreatic	* Kidney	* Lymph Node, Mesenteric	* Pancreas
* Pituitary Gland	* Prostate	* Seminal Vesicle	* Spleen
* Stomach, Forestomach	* Stomach, Glandular	* Urinary Bladder	

OBSERVATIONS

* Liver	[ Hepatocellular Adenoma TGLs = 1-12 ]	Hepatocellular Adenoma	
* Nose	Glands, Olfactory Epi	Hyperplasia	Moderate
	Olfactory Epi	Metaplasia	Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Adenoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 217 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47865

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- |                  |   |                        |          |
|------------------|---|------------------------|----------|
| * Adrenal Cortex |   | Hyperplasia            | Mild     |
| * Kidney         |   | Nephropathy            | Minimal  |
| * Liver          |   | Hepatocellular Adenoma | Multiple |
|                  | [ Hepatocellular Adenoma TGLs = 1,2-6+5 ] |                        |          |
| * Lung           | Alveolar Epith                            | Hyperplasia            | Minimal  |
| * Nose           | Glands, Olfactory Epi                     | Hyperplasia            | Marked   |
|                  | Olfactory Epi                             | Metaplasia             | Moderate |
| * Thyroid Gland  | Follicular Cel                            | Hyperplasia            | Minimal  |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 218 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47866

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia  
Hypertrophy Mild  
Moderate
- \* Intestine Small, Jejunum Adenoma
- [ Adenoma TGLs = 3-7 ]
- \* Liver Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 2-6 ]
- \* Nose Hyperplasia  
Metaplasia Moderate  
Moderate
- Glands, Olfactory Epi
- Olfactory Epi
- \* Testes Adenoma
- [ Adenoma TGLs = 1-8 ]
- Interstit Cell







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 221 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 464 HISTO: 47869

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 1,2,3-5+6+12 ]
- \* Lung Thrombosis Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 222 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47870

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver [ Hepatocellular Adenoma TGLs = 1-5 ] Hepatocellular Adenoma
- \* Lung Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate  
Olfactory Epi Necrosis Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Mild









TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 227 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 730  
HISTO: 47875

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1-6 ] Hepatocellular Adenoma
- \* Lung Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Epithelium Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 228 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47876

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney
- \* Nose
- Glands, Olfactory Epi
- Olfactory Epi
- Nephropathy
- Hyperplasia
- Metaplasia
- Minimal
- Moderate
- Moderate





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 230 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 345 HISTO: 47878

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Intestine Large, Cecum [ Hemorrhage TGLs = 6-7 ] Hemorrhage Marked
- \* Kidney Capsule [ Fibrosis TGLs = 3-6 ] Fibrosis Mild
- \* Liver [ Basophilic Focus TGLs = 5-5 ] Basophilic Focus
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Mild  
Metaplasia Mild
- \* Stomach, Glandular Mineralization Minimal

PRIMARY CAUSE OF DEATH - Intestine Large, Cecum Hemorrhage



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 232 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47880

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Heart [ Thrombosis TGLs = 1-5 ] Thrombosis Moderate
- \* Kidney [ Nephropathy TGLs = 2-6 ] Nephropathy Moderate
- \* Liver [ Hepatocellular Carcinoma TGLs = 3,5,4-13+12 ] Hepatocellular Carcinoma Multiple
- \* Lung Perivascular Hepatocellular Carcinoma Metastatic (Liver)  
Inflammation Suppurative, Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Mild  
Olfactory Epi Metaplasia Mild
- \* Stomach, Glandular Epithelium Metaplasia Hepatocyte, Moderate  
Hyperplasia Focal, Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 233 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47881

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Intestine Small, Jejunum [ Carcinoma TGLs = 2-12 ] Carcinoma
- \* Kidney Nephropathy Minimal
- \* Liver [ Hepatocellular Adenoma TGLs = 1-6 ] Hepatocellular Adenoma
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Marked Moderate
- \* Spleen Hematopoietic Cell Proliferation Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 236 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47884

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus  
Eosinophilic Focus  
Hepatocellular Adenoma Multiple
- [ Clear Cell Focus TGLs = 2-12 ]  
[ Hepatocellular Adenoma TGLs = 1,3-5 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Marked  
Olfactory Epi Metaplasia Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 237 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 711 HISTO: 47885

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Small, Duodenum
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder
- \* Intestine Small, Jejunum
- \* Intestine Large, Cecum
- \* Intestine Large, Rectum
- \* Intestine Small, Ileum

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus
- \* Liver Hepatocellular Adenoma
- \* Lung Alveolar/Bronchiolar Carcinoma
- Alveolar Epith Hyperplasia Minimal
- Alveolus Infiltration Cellular Histiocyte, Moderate
- [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ]
- \* Nose Inflammation Suppurative, Moderate
- Glands, Olfactory Epi Hyperplasia Mild
- Olfactory Epi Metaplasia Moderate
- Respirat Epith Degeneration Hyaline, Mild

PRIMARY CAUSE OF DEATH - Lung Alveolar/Bronchiolar Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 239 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 675 HISTO: 47887

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Esophagus \* Eye \* Gallbladder
\* Heart \* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Jejunum
\* Larynx \* Lymph Node, Bronchial \* Pituitary Gland \* Preputial Gland
\* Salivary Glands \* Skin \* Thyroid Gland \* Trachea
\* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular \* Mammary Gland \* Parathyroid Gland

OBSERVATIONS

- \* Epididymis Histiocytic Sarcoma
\* Harderian Gland Hyperplasia Minimal
\* Intestine Large, Cecum Histiocytic Sarcoma
\* Intestine Large, Colon Histiocytic Sarcoma
\* Intestine Small, Ileum Histiocytic Sarcoma
\* Islets, Pancreatic Histiocytic Sarcoma
\* Kidney Nephropathy Moderate
[ Nephropathy TGLs = 4-6 ]
\* Liver Hematopoietic Cell Proliferation Minimal
Hepatocellular Adenoma Multiple
Histiocytic Sarcoma
[ Hepatocellular Adenoma TGLs = 5-6 ]
[ Histiocytic Sarcoma TGLs = 6-5 ]
\* Lung Histiocytic Sarcoma
[ Histiocytic Sarcoma TGLs = 1-4 ]
Lymph Node Pancreatic Histiocytic Sarcoma
[ Histiocytic Sarcoma TGLs = 8-12 ]
\* Lymph Node, Mediastinal Histiocytic Sarcoma
\* Lymph Node, Mesenteric Histiocytic Sarcoma
Mesentery Histiocytic Sarcoma
[ Histiocytic Sarcoma TGLs = 9-7 ]
\* Nose Glands, Olfactory Epi Hyperplasia Moderate

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 239 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 675  
HISTO: 47887

ORGAN AND ACCOUNTABLE SITE STATUS

	Olfactory Epi	Metaplasia	Moderate
* Pancreas		Histiocytic Sarcoma	
Peritoneum		Histiocytic Sarcoma	
	[ Histiocytic Sarcoma TGLs = 3,7-13+12 ]		
* Prostate		Histiocytic Sarcoma	
* Seminal Vesicle		Histiocytic Sarcoma	
* Spleen		Histiocytic Sarcoma	
* Stomach, Forestomach		Histiocytic Sarcoma	
* Stomach, Glandular		Histiocytic Sarcoma	
* Testes		Histiocytic Sarcoma	
* Thymus		Histiocytic Sarcoma	

PRIMARY CAUSE OF DEATH - Peritoneum Histiocytic Sarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 240 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47888

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Gallbladder
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Islets, Pancreatic
- \* Kidney
- \* Nose
- \* Thyroid Gland
- Hyperplasia
- Nephropathy
- Glands, Olfactory Epi
- Olfactory Epi
- Follicular Cel
- Hyperplasia
- Metaplasia
- Hyperplasia
- Moderate
- Minimal
- Moderate
- Moderate
- Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 242 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 532 HISTO: 47890

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Prostate
- \* Spleen
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Brain
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Larynx
- \* Preputial Gland
- \* Skin
- \* Trachea

MISSING

- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Adrenal Cortex Histiocytic Sarcoma
- \* Harderian Gland Adenoma
  - [ Adenoma TGLs = 4-11 ]
- \* Heart Histiocytic Sarcoma
- \* Kidney Histiocytic Sarcoma Nephropathy Moderate
  - [ Histiocytic Sarcoma TGLs = 6-6 ]
- \* Liver Hepatocellular Adenoma Histiocytic Sarcoma Multiple
  - [ Hepatocellular Adenoma TGLs = 5-5+13+14 ]
- \* Lung Histiocytic Sarcoma
  - [ Histiocytic Sarcoma TGLs = 2,3-4+12 ]
- Lymph Node Renal Histiocytic Sarcoma
  - [ Histiocytic Sarcoma TGLs = 9-12 ]
- \* Lymph Node, Bronchial Histiocytic Sarcoma
- \* Lymph Node, Mediastinal Histiocytic Sarcoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
  - Olfactory Epi Metaplasia Moderate
- \* Pancreas Histiocytic Sarcoma
- Peritoneum Histiocytic Sarcoma
  - [ Histiocytic Sarcoma TGLs = 7-13 ]

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 242 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 532  
HISTO: 47890

ORGAN AND ACCOUNTABLE SITE STATUS

Skeletal Muscle  
[ Histiocytic Sarcoma TGLs = 8-14 ]

Histiocytic Sarcoma

\* Stomach, Forestomach

Histiocytic Sarcoma

Inflammation

Mild

Ulcer

Moderate

Epithelium

Hyperplasia

Moderate

[ Ulcer TGLs = 10-9 ]

\* Thyroid Gland

Follicular Cel

Hyperplasia

Mild

PRIMARY CAUSE OF DEATH - Peritoneum Histiocytic Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 243 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47891

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Spleen
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Moderate
- \* Liver Hepatocellular Adenoma Multiple  
Hepatocellular Carcinoma  
[ Hepatocellular Adenoma TGLs = 3,4-5+12 ]  
[ Hepatocellular Carcinoma TGLs = 2-13 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- \* Lymph Node, Mesenteric Angiectasis Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Mild  
Olfactory Epi Metaplasia Mild
- \* Skin Inflammation Chronic Active, Marked  
[ Inflammation TGLs = 1-6 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 247 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 726 HISTO: 47895

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild
- \* Adrenal Medulla Hyperplasia Minimal
- \* Kidney Nephropathy Marked
- \* Liver Eosinophilic Focus
- [ Hepatocellular Carcinoma TGLs = 1-12 ]
- Hepatocellular Carcinoma Necrosis Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 248 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 730  
HISTO: 47896

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Kidney [ Cyst TGLs = 4-6 ] Cyst
- \* Liver [ Hepatocellular Adenoma TGLs = 2,3-12+13 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Mild  
Metaplasia Mild
- \* Stomach, Forestomach Inflammation Mild  
Ulcer Mild
- \* Thyroid Gland Follicular Cel Carcinoma
- [ Carcinoma TGLs = 1-3 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 249 TMT: 3 DOSE: 100 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 728 HISTO: 47897

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Bone \* Bone Marrow \* Brain
\* Epididymis \* Esophagus \* Eye \* Gallbladder
\* Harderian Gland \* Heart \* Intestine Large, Cecum \* Intestine Large, Colon
\* Intestine Large, Rectum \* Intestine Small, Duodenum \* Intestine Small, Ileum \* Intestine Small, Jejunum
\* Islets, Pancreatic \* Larynx \* Lymph Node, Mandibular \* Pituitary Gland
\* Preputial Gland \* Prostate \* Salivary Glands \* Seminal Vesicle
\* Skin \* Spleen \* Stomach, Forestomach \* Stomach, Glandular
\* Testes \* Thymus \* Trachea \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial \* Mammary Gland \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
\* Kidney [ Nephropathy TGLs = 7-6 ] Pheochromocytoma Benign Mild
\* Liver [ Hepatocholangiocarcinoma TGLs = 6-12 ] Necrosis Minimal
\* Lung [ Hepatocholangiocarcinoma TGLs = 2-4 ] Hepatocholangiocarcinoma Metastatic (Liver)
Lymph Node Renal Hepatocholangiocarcinoma Metastatic (Liver)
\* Lymph Node, Mediastinal [ Hepatocholangiocarcinoma TGLs = 9-6 ] Hepatocholangiocarcinoma Metastatic (Liver)
\* Lymph Node, Mesenteric [ Hepatocholangiocarcinoma TGLs = 3-12 ] Hepatocholangiocarcinoma Metastatic (Liver)
\* Nose Glands, Olfactory Epi Hyperplasia Mild
Olfactory Epi Metaplasia Mild
\* Pancreas Hepatocholangiocarcinoma Metastatic (Liver)
Peritoneum Hepatocholangiocarcinoma Metastatic (Liver)
[ Hepatocholangiocarcinoma TGLs = 4-13 ]
Skeletal Muscle Hepatocholangiocarcinoma Metastatic (Liver)

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

---

ANIMAL NUM: 249    TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 728  
HISTO: 47897

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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[ Hepatocholangiocarcinoma TGLs = 5-13 ]

\* Thyroid Gland

Follicular Cel

Hyperplasia

Minimal

---

PRIMARY CAUSE OF DEATH    - Liver    Hepatocholangiocarcinoma

---



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 250 TMT: 3  
DOSE: 100 PPM

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 729  
HISTO: 47898

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Kidney
  - \* Liver
  - \* Nose
  - Infarct
  - Hepatocellular Adenoma
  - Hyperplasia
  - Metaplasia
  - Mild
  - Moderate
  - Moderate
- [ Hepatocellular Adenoma TGLs = 1-5 ]
- Glands, Olfactory Epi
- Olfactory Epi

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 401 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47749

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Preputial Gland
- \* Skin
- \* Testes

MISSING

- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Tension Lipidosis Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Atrophy Mild
- Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 403 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47751

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney
  - Infarct
  - Nephropathy
  - Dilatation
  - Adenoma
  - Mild
  - Moderate
  - Mild
- Pelvis
  - Renal Tubule
  - [ Adenoma TGLs = 3-6 ]
  - [ Dilatation TGLs = 5-6 ]
  - [ Nephropathy TGLs = 4-6 ]
- \* Liver
  - Clear Cell Focus
  - Hepatocellular Carcinoma
  - [ Hepatocellular Carcinoma TGLs = 6-12 ]
- \* Lung
  - Alveolar/Bronchiolar Adenoma
  - Hepatocellular Carcinoma
  - [ Alveolar/Bronchiolar Adenoma TGLs = 2,7-4 ]
- \* Nose
  - Glands, Olfactory Epi
  - Olfactory Epi
  - Olfactory Epi
  - Hyperplasia
  - Atrophy
  - Metaplasia
  - Moderate
  - Moderate
  - Moderate
- \* Testes
  - Atrophy
  - Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 404 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 608 HISTO: 47752

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Prostate
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Preputial Gland
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- Lymph Node Lymphoma Malignant
- Iliac Renal Lymphoma Malignant
- Note: Lymph node with no site listed was axillary lymph node.
- [ Lymphoma Malignant TGLs = 7-6 ]
- [ Lymphoma Malignant TGLs = 5,6-12 ]
- [ Lymphoma Malignant TGLs = 9-13 ]
- \* Lymph Node, Mandibular Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-8 ]
- \* Lymph Node, Mediastinal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3-3 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 8-7+13 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 4-5 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

**Date Report Requested:** 07/19/2005

**Time Report Requested:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

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**ANIMAL NUM:** 404    **TMT:** 5  
**DOSE:** 300 PPM

**SEX:** Male  
**DISP:** Moribund Sacrifice

**DAY ON TEST:** 608  
**HISTO:** 47752

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH       - Lymph Node, Mesenteric    Lymphoma Malignant

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 405 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47753

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney [ Dilatation TGLs = 3-6 ] Pelvis Nephropathy Dilatation Minimal Mild
- \* Liver [ Basophilic Focus TGLs = 2-5 ] Basophilic Focus
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 406 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47754

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Multiple
- [ Clear Cell Focus TGLs = 5-12 ]
- [ Hepatocellular Adenoma TGLs = 3,4,6-6+5 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1,2-5+6 ]
- \* Stomach, Forestomach Epithelium Hyperplasia Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 407 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47755

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Mild
- \* Liver Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 1-5 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 411 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 728 HISTO: 47759

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla \* Epididymis \* Intestine Small, Duodenum \* Lymph Node, Mandibular \* Pituitary Gland \* Seminal Vesicle \* Stomach, Glandular \* Trachea \* Bone \* Esophagus \* Intestine Small, Jejunum \* Lymph Node, Mesenteric \* Preputial Gland \* Skin \* Testes \* Urinary Bladder \* Bone Marrow \* Harderian Gland \* Islets, Pancreatic \* Pancreas \* Prostate \* Spleen \* Thymus \* Brain \* Intestine Large, Colon \* Larynx \* Parathyroid Gland \* Salivary Glands \* Stomach, Forestomach \* Thyroid Gland

MISSING

- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye \* Intestine Small, Ileum \* Gallbladder \* Intestine Large, Cecum \* Intestine Large, Rectum

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild
\* Heart Hepatocholangiocarcinoma Metastatic (Liver)
\* Kidney Nephropathy Mild
\* Liver Eosinophilic Focus Hepatocellular Adenoma Multiple
[ Hepatocholangiocarcinoma TGLs = 5-5+6+12 ]
[ Hepatocholangiocarcinoma TGLs = 5-12 ]
\* Lung Hepatocholangiocarcinoma Metastatic (Liver)
[ Hepatocholangiocarcinoma TGLs = 2,3,6-4 ]
\* Lymph Node, Bronchial Hepatocholangiocarcinoma Metastatic (Liver)
\* Lymph Node, Mediastinal Hepatocholangiocarcinoma Metastatic (Liver)
\* Nose Glands, Olfactory Epi Hyperplasia Moderate
Olfactory Epi Metaplasia Moderate
Pleura Hepatocholangiocarcinoma Metastatic (Liver)
[ Hepatocholangiocarcinoma TGLs = 4-13 ]

\* PROTOCOL REQUIRED TISSUE

**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

**Date Report Requested:** 07/19/2005

**Time Report Requested:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

---

**ANIMAL NUM:** 411    **TMT:** 5  
                          **DOSE:** 300 PPM

**SEX:** Male  
**DISP:** Natural Death

**DAY ON TEST:** 728  
**HISTO:** 47759

---

**ORGAN AND ACCOUNTABLE SITE STATUS**

---

PRIMARY CAUSE OF DEATH        - Liver    Hepatocholangiocarcinoma

---







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 414 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47762

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus
- [ Clear Cell Focus TGLs = 1-5 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Stomach, Glandular Hyperplasia Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 416 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47764

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Fatty Change Mild
- [ Hepatocellular Adenoma TGLs = 1-6 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Spleen Lymphoma Malignant Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3-5 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 418 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47766

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Trachea

MISSING

- \* Mammary Gland

OBSERVATIONS

- |                        |  |  |                                 |
|------------------------|--|--|---------------------------------|
| * Kidney               |  | Nephropathy  | Minimal                         |
| * Liver                |  | Clear Cell Focus<br>Eosinophilic Focus<br>Hepatocellular Adenoma |                                 |
|                        | [ Eosinophilic Focus TGLs = 3-6 ]<br>[ Hepatocellular Adenoma TGLs = 2-5 ] |  |                                 |
| * Lung                 |  | Alveolar/Bronchiolar Adenoma                                     |                                 |
|                        | [ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ]                                |  |                                 |
| * Nose                 | Glands, Olfactory Epi<br>Olfactory Epi<br>Olfactory Epi                    | Hyperplasia<br>Atrophy<br>Metaplasia                             | Moderate<br>Minimal<br>Moderate |
| * Stomach, Forestomach | Epithelium   | Hyperplasia  | Moderate                        |
| * Thyroid Gland        | Follicular Cel   | Hyperplasia  | Minimal                         |









TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 422 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47770

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus  
Hepatocellular Adenoma
- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pancreas Basophilic Focus Mild
- \* Pituitary Gland Pars Distalis Hyperplasia Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 423 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47771

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

INSUFFICIENT TISSUE

- \* Prostate

OBSERVATIONS

- \* Kidney Artery Inflammation Chronic Active, Mild
- \* Liver [ Basophilic Focus TGLs = 3-5 ] Basophilic Focus
- \* Lung Alveolar/Bronchiolar Adenoma
- Mesentery Artery Inflammation Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Skin [ Inflammation TGLs = 1-8 ] Inflammation Chronic Active, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 424 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 383 HISTO: 47772

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Lung
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Harderian Gland
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Large, Rectum
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1,2-5+6 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Moderate
- \* Trachea Metaplasia Moderate
- Necrosis Moderate

PRIMARY CAUSE OF DEATH - UNCERTAIN

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 425 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47773

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Epididymis
- \* Kidney
- \* Liver
- [ Basophilic Focus TGLs = 1-6 ]
- [ Clear Cell Focus TGLs = 3-12 ]
- [ Eosinophilic Focus TGLs = 2-5 ]
- Mesentery
- [ Necrosis TGLs = 4-13 ]
- \* Nose
- Granuloma Sperm
- Nephropathy
- Basophilic Focus
- Clear Cell Focus
- Eosinophilic Focus
- Inflammation
- Necrosis
- Hyperplasia
- Atrophy
- Degeneration
- Metaplasia
- Mild
- Minimal
- Chronic Active, Moderate
- Moderate
- Moderate
- Minimal
- Hyaline, Minimal
- Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 426 TMT: 5  
DOSE: 300 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 710  
HISTO: 47774

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland

OBSERVATIONS

- |                          |                                |                                  |                        |
|--------------------------|--------------------------------|----------------------------------|------------------------|
| * Adrenal Cortex         |                                | Inflammation                     | Chronic Active, Marked |
| * Intestine Large, Cecum |                                | Hemorrhage                       | Moderate               |
|                          | [ Hemorrhage TGLs = 5-7 ]      |                                  |                        |
| * Kidney                 |                                | Nephropathy                      | Mild                   |
| * Liver                  |                                | Necrosis                         | Mild                   |
|                          | Bile Duct                      | Degeneration                     | Hyaline, Moderate      |
|                          | Portal                         | Infiltration Cellular            | Mononuclear CI, Mild   |
|                          | [ Necrosis TGLs = 2,4,3-5+12 ] |                                  |                        |
| * Lung                   | Perivascular                   | Infiltration Cellular            | Mononuclear CI, Mild   |
| * Lymph Node, Mesenteric |                                | Hyperplasia                      | Lymphoid, Marked       |
| * Nose                   | Glands, Olfactory Epi          | Hyperplasia                      | Moderate               |
|                          | Olfactory Epi                  | Metaplasia                       | Moderate               |
| * Spleen                 |                                | Hematopoietic Cell Proliferation | Moderate               |
|                          | [ Hyperplasia TGLs = 1-5 ]     | Hyperplasia                      | Lymphoid, Moderate     |

PRIMARY CAUSE OF DEATH - Intestine Large, Cecum Hemorrhage

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 427 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 728 HISTO: 47775

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney [ Nephropathy TGLs = 4-6 ] Nephropathy Moderate
- \* Liver [ Hepatocellular Carcinoma TGLs = 3-5+12 ] Eosinophilic Focus Hepatocellular Carcinoma Multiple
- \* Lung [ Alveolar/Bronchiolar Adenoma TGLs = 2-13 ] Alveolar/Bronchiolar Adenoma Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Skin [ Inflammation TGLs = 1-13 ] Inflammation Acute, Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 429 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 698 HISTO: 47777

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Heart [ Thrombosis TGLs = 2-5 ] Thrombosis Marked
- \* Kidney Nephropathy Marked
- \* Liver [ Hepatocellular Carcinoma TGLs = 6,7-12+15 ] Hepatocellular Carcinoma Multiple
- \* Lung [ Hepatocellular Carcinoma TGLs = 3,4,5-4+13+14 ] Congestion Chronic, Marked  
Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 430 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47778

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver [ Hepatocellular Carcinoma TGLs = 1-12 ] Hepatocellular Carcinoma
- \* Lung Alveolar Epith Hyperplasia Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 432 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47780

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Cortex
- \* Kidney
- \* Nose
- Tooth
- Glands, Olfactory Epi
- Olfactory Epi
- Hypertrophy
- Nephropathy
- Hyperplasia
- Metaplasia
- Malformation
- Mild
- Minimal
- Moderate
- Moderate
- Marked



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 434 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47782

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Harderian Gland Carcinoma
- \* Islets, Pancreatic Hyperplasia Mild
- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple  
Hepatocellular Carcinoma
- [ Hepatocellular Adenoma TGLs = 1,2-5+6 ]
- [ Hepatocellular Carcinoma TGLs = 3-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Mild  
Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal
- Tooth Malformation Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 435 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47783

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Harderian Gland Hyperplasia Moderate
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 1,2-5 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 436 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47784

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- |                      |                                       |                        |          |
|----------------------|---------------------------------------|------------------------|----------|
| * Adrenal Cortex     |                                       | Hypertrophy            | Minimal  |
| * Kidney             |                                       | Nephropathy            | Minimal  |
| * Liver              |                                       | Basophilic Focus       |          |
|                      |                                       | Clear Cell Focus       |          |
|                      |                                       | Hepatocellular Adenoma |          |
|                      | [ Clear Cell Focus TGLs = 2-5 ]       |                        |          |
|                      | [ Hepatocellular Adenoma TGLs = 1-5 ] |                        |          |
| * Lung               | Bronchiole                            | Adenoma                | Multiple |
| * Nose               | Glands, Olfactory Epi                 | Hyperplasia            | Moderate |
|                      | Olfactory Epi                         | Metaplasia             | Moderate |
| * Stomach, Glandular |                                       | Hyperplasia            | Mild     |
| * Thyroid Gland      | Follicular Cel                        | Hyperplasia            | Mild     |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 437 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47785

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland

OBSERVATIONS

- |                 |                       |             |          |
|-----------------|-----------------------|-------------|----------|
| * Kidney        |                       | Nephropathy | Minimal  |
| * Lung          | Alveolar Epith        | Hyperplasia | Minimal  |
| * Nose          | Glands, Olfactory Epi | Hyperplasia | Moderate |
|                 | Olfactory Epi         | Metaplasia  | Moderate |
| * Thyroid Gland | Follicular Cel        | Hyperplasia | Minimal  |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 438 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47786

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Testes
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Salivary Glands
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 2-11 ] Adenoma
- \* Kidney Inflammation Nephropathy Suppurative, Mild Moderate
- \* Liver [ Hepatocellular Adenoma TGLs = 4-14 ] [ Hepatocellular Carcinoma TGLs = 4-13 ] Hepatocellular Adenoma Hepatocellular Carcinoma
- \* Lung [ Alveolar/Bronchiolar Adenoma TGLs = 3-12 ] Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Marked
- \* Prostate Inflammation Suppurative, Mild
- \* Seminal Vesicle Inflammation Suppurative, Marked
- \* Skin [ Inflammation TGLs = 1-8 ] Inflammation Chronic Active, Marked
- \* Spleen Hematopoietic Cell Proliferation Mild
- \* Stomach, Forestomach Epithelium Hyperplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild
- \* Urinary Bladder Transit Epithe [ Inflammation TGLs = 5-9 ] Inflammation Hyperplasia Chronic Active, Moderate Mild

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 439 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47787

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Multiple
- [ Clear Cell Focus TGLs = 4-5 ]
- [ Hepatocellular Adenoma TGLs = 2,3-12+6 ]
- \* Lung Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 440 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 726 HISTO: 47788

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Stomach, Forestomach
- \* Adrenal Medulla
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Bone
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Prostate
- \* Testes
- \* Bone Marrow
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Seminal Vesicle
- \* Trachea

MISSING

- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Brain
    - Meninges
  - \* Epididymis
    - [ Hemorrhage TGLs = 4-8 ]
  - \* Heart
  - \* Kidney
    - [ Inflammation TGLs = 2-6 ]
  - \* Lung
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Pancreas
  - \* Preputial Gland
  - \* Salivary Glands
  - \* Skin
    - [ Inflammation TGLs = 1-8 ]
  - \* Spleen
  - \* Thyroid Gland
    - Follicular Cel
  - \* Urinary Bladder
    - Transit Epithe
    - [ Hyperplasia TGLs = 3-9 ]
- Necrosis  
Infiltration Cellular  
Hemorrhage  
Inflammation  
Infarct  
Inflammation  
Alveolar/Bronchiolar Adenoma  
Hyperplasia  
Metaplasia  
Necrosis  
Necrosis  
Inflammation  
Inflammation  
Hematopoietic Cell Proliferation  
Hyperplasia  
Hyperplasia
- Mild  
Polymorphnuclr, Mild  
Mild  
Suppurative, Moderate  
Mild  
Suppurative, Moderate  
Moderate  
Moderate  
Mild  
Moderate  
Suppurative, Moderate  
Chronic Active, Marked  
Moderate  
Mild  
Mild

**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

**Date Report Requested:** 07/19/2005

**Time Report Requested:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

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**ANIMAL NUM:** 440    **TMT:** 5  
**DOSE:** 300 PPM

**SEX:** Male  
**DISP:** Moribund Sacrifice

**DAY ON TEST:** 726  
**HISTO:** 47788

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH       - Skin    Inflammation

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 441 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47789

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Infarct TGLs = 2-6 ] Infarct Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Mild  
Olfactory Epi Atrophy Minimal  
Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 442 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47790

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mesenteric
- \* Mammary Gland

OBSERVATIONS

- \* Kidney
- \* Nose
- Glands, Olfactory Epi
- Olfactory Epi
- Nephropathy
- Hyperplasia
- Metaplasia
- Minimal
- Moderate
- Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 443 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47791

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Basophilic Focus  
Hepatocellular Adenoma
- [ Basophilic Focus TGLs = 1-5 ]  
[ Hepatocellular Adenoma TGLs = 2-5 ]
- \* Lung Alveolar/Bronchiolar Carcinoma
- [ Alveolar/Bronchiolar Carcinoma TGLs = 3-4 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 445 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47793

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Gallbladder
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Tension Lipidosis Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- \* Thyroid Gland Olfactory Epi Metaplasia Moderate
- Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 446 TMT: 5 DOSE: 300 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 668 HISTO: 47794

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Bone
- \* Harderian Gland
- \* Lung
- \* Salivary Glands
- \* Trachea
- \* Bone Marrow
- \* Heart
- \* Lymph Node, Bronchial
- \* Skin
- \* Urinary Bladder
- \* Brain
- \* Kidney
- \* Preputial Gland
- \* Testes
- \* Esophagus
- \* Larynx
- \* Prostate
- \* Thyroid Gland

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

AUTO PRECLUDES DIAG.

- \* Adrenal Cortex
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Seminal Vesicle
- \* Thymus
- \* Adrenal Medulla
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Spleen
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Stomach, Forestomach
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Stomach, Glandular

OBSERVATIONS

- \* Epididymis
- \* Liver
- \* Nose
- Granuloma Sperm
- Hepatocellular Adenoma
- Histiocytic Sarcoma
- Hyperplasia
- Metaplasia
- Moderate
- Moderate
- Moderate

[ Hepatocellular Adenoma TGLs = 4-6 ]  
[ Histiocytic Sarcoma TGLs = 3,5-5 ]

PRIMARY CAUSE OF DEATH - Liver Histiocytic Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 448 TMT: 5  
DOSE: 300 PPM

SEX: Male  
DISP: Terminal Sacrifice

DAY ON TEST: 730  
HISTO: 47796

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Forestomach
- Tongue
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Thymus
- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Cortex                      Capsule                      Adenoma
- \* Kidney                                      Nephropathy                      Minimal
- \* Nose                                      Glands, Olfactory Epi                      Hyperplasia                      Moderate
- Olfactory Epi                      Metaplasia                      Moderate
- \* Pancreas                                      Atrophy                                      Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 450 TMT: 5  
DOSE: 300 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 565  
HISTO: 47798

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Heart [ Thrombosis TGLs = 2-5 ] Thrombosis Marked
- \* Kidney [ Nephropathy TGLs = 6-6 ] Inflammation Nephropathy Suppurative, Mild Marked
- \* Liver [ Basophilic Focus TGLs = 7-6 ] [ Hepatocellular Carcinoma TGLs = 4,5-5+12 ] Basophilic Focus Hepatocellular Carcinoma Multiple
- \* Lung Alveolus Thrombosis Infiltration Cellular Minimal Histiocyte, Mild
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Pituitary Gland Pars Intermed [ Adenoma TGLs = 1-9 ] Adenoma
- \* Preputial Gland [ Inflammation TGLs = 3-8 ] Inflammation Chronic Active, Mild
- \* Prostate Inflammation Suppurative, Mild
- \* Stomach, Forestomach Epithelium [ Hyperplasia TGLs = 8-13 ] Hyperplasia Mild

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 450    TMT: 5  
DOSE: 300 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 565  
HISTO: 47798

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH    - Liver    Hepatocellular Carcinoma

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 602 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47650

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver [ Hepatocellular Carcinoma TGLs = 2-6 ] Hepatocellular Carcinoma
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Epithelium Hyperplasia Mild  
[ Hyperplasia TGLs = 3-9 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 603 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47651

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pituitary Gland
- \* Skin
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Pancreas
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver
  - [ Clear Cell Focus TGLs = 2-12 ]
  - [ Hepatocellular Adenoma TGLs = 1-6 ]
- \* Nose
  - Glands, Olfactory Epi
  - Olfactory Epi
- \* Preputial Gland
- \* Thyroid Gland
  - Follicular Cel
- Clear Cell Focus
- Hepatocellular Adenoma
- Hyperplasia
- Metaplasia
- Inflammation
- Hyperplasia
- Moderate
- Moderate
- Chronic Active, Minimal
- Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 605 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 327 HISTO: 47653

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Parathyroid Gland
- \* Seminal Vesicle
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Gallbladder Infiltration Cellular Polymorphnuclr, Mild
- \* Kidney [ Inflammation TGLs = 3-6 ] Papilla Inflammation Suppurative, Mild
- \* Lung Thrombosis Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- Penis Inflammation Suppurative, Moderate
- \* Prostate Inflammation Suppurative, Moderate
- \* Skin [ Inflammation TGLs = 1-8 ] Inflammation Chronic Active, Moderate
- Urethra [ Inflammation TGLs = 4-12 ] Bulboureth GI Inflammation Suppurative, Moderate
- \* Urinary Bladder Infiltration Cellular Polymorphnuclr, Mild

PRIMARY CAUSE OF DEATH - Skin Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 606 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Eye [ Inflammation TGLs = 1-11 ] Cornea Inflammation Chronic Active, Moderate
- \* Harderian Gland [ Carcinoma TGLs = 2-11 ] Adenoma Carcinoma
- \* Kidney Nephropathy Mild
- \* Liver [ Clear Cell Focus TGLs = 6,8,10-5+6 ] [ Eosinophilic Focus TGLs = 7-5 ] [ Hepatocellular Adenoma TGLs = 3,4,5-12+13+5 ] Clear Cell Focus Eosinophilic Focus Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Olfactory Epi Olfactory Epi Hyperplasia Atrophy Metaplasia Moderate Minimal Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 607 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47655

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Testes

MISSING

- \* Mammary Gland

OBSERVATIONS

- |                        |  |                        |                        |
|------------------------|--|------------------------|------------------------|
| * Adrenal Cortex       |  | Hypertrophy            | Mild                   |
| * Heart                | Artery   | Inflammation           | Chronic Active, Mild   |
| * Kidney               |  | Nephropathy            | Minimal                |
| * Liver                |  | Basophilic Focus       |                        |
|                        | [ Hepatocellular Adenoma TGLs = 2,3,4-5+12+6 ] | Hepatocellular Adenoma | Multiple               |
| * Nose                 | Glands, Olfactory Epi                          | Hyperplasia            | Moderate               |
|                        | Olfactory Epi                                  | Metaplasia             | Moderate               |
| * Skin                 |  | Inflammation           | Chronic Active, Marked |
|                        | [ Inflammation TGLs = 1-12 ]                   |                        |                        |
| * Stomach, Forestomach | Epithelium                                     | Hyperplasia            | Minimal                |
|                        | [ Hyperplasia TGLs = 5-9 ]                     |                        |                        |
| * Thyroid Gland        | Follicular Cel                                 | Hyperplasia            | Minimal                |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 608 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47656

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Lung Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Minimal  
Olfactory Epi Metaplasia Moderate





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 610 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47658

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus  
Eosinophilic Focus  
Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 1-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Mild  
Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Squamous Cell Papilloma  
Ulcer Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 611 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 568 HISTO: 47659

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 1-12+13 ] Hepatocellular Carcinoma
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Mild  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma









TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 616 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 540 HISTO: 47664

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Epididymis
- \* Islets, Pancreatic
- \* Parathyroid Gland
- \* Skin
- \* Trachea
- \* Adrenal Medulla
- \* Esophagus
- \* Larynx
- \* Preputial Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Harderian Gland
- \* Lung
- \* Prostate
- \* Testes
- \* Brain
- \* Heart
- \* Pancreas
- \* Salivary Glands
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Pituitary Gland

AUTO PRECLUDES DIAG.

- \* Bone Marrow
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Stomach, Glandular
- \* Eye
- \* Intestine Large, Rectum
- \* Lymph Node, Mediastinal
- \* Thymus
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Seminal Vesicle
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Spleen

INSUFFICIENT TISSUE

- \* Lymph Node, Mesenteric

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 1,2-5+12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Adenoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 617 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47665

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus  
Hepatocellular Adenoma
- [ Eosinophilic Focus TGLs = 3-5 ]
- [ Hepatocellular Adenoma TGLs = 2-12 ]
- \* Lung Alveolar/Bronchiolar Adenoma
- [ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate  
Respirat Epith Hyperplasia Marked
- \* Thyroid Gland Follicular Cel Adenoma
- [ Adenoma TGLs = 4-3 ]





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 619 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 460 HISTO: 47667

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder

MISSING

- \* Gallbladder
- \* Mammary Gland

OBSERVATIONS

- \* Kidney [ Fibrosis TGLs = 2-6 ] Capsule Nephropathy Fibrosis Mild Minimal
- \* Liver [ Hepatocholangiocarcinoma TGLs = 3-5+12 ] Hepatocholangiocarcinoma
- \* Lung Hepatocholangiocarcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Pancreas Hepatocholangiocarcinoma Metastatic (Liver)
- \* Stomach, Forestomach Epithelium [ Hyperplasia TGLs = 4-13 ] Hyperplasia Mild

PRIMARY CAUSE OF DEATH - Liver Hepatocholangiocarcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 621 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 522 HISTO: 47669

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Testes
- \* Bone Marrow
- \* Heart
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Large, Rectum
- \* Pituitary Gland
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Seminal Vesicle
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Urinary Bladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- \* Adren Cortex  
Note: One of pair missing.
- \* Kidney  
Capsule  
[ Hemorrhage TGLs = 2-6+12 ]  
Nephropathy  
Hemorrhage  
Marked  
Marked
- \* Liver  
[ Hepatocellular Carcinoma TGLs = 1-5+13 ]  
Hepatocellular Carcinoma
- \* Nose  
Glands, Olfactory Epi  
Olfactory Epi  
Olfactory Epi  
Hyperplasia  
Atrophy  
Metaplasia  
Moderate  
Moderate  
Moderate
- \* Stomach, Forestomach  
[ Hyperplasia TGLs = 3-9 ]  
Epithelium  
Hyperplasia  
Mild

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

\* PROTOCOL REQUIRED TISSUE



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 623 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47671

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney [ Infarct TGLs = 1-6 ] Infarct Nephropathy Moderate Minimal
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 624 TMT: 7  
DOSE: 600 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 432  
HISTO: 47672

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Mild
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 1,2,3,4-12+5+6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Adenoma





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 626 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 429 HISTO: 47674

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma  
Hepatocellular Carcinoma  
[ Hepatocellular Adenoma TGLs = 3-12 ]  
[ Hepatocellular Carcinoma TGLs = 2-6 ]
- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Adenoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 627 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 715 HISTO: 47675

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Parathyroid Gland
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Preputial Gland
- \* Trachea
- \* Bone
- \* Esophagus
- \* Salivary Glands
- \* Bone Marrow
- \* Heart
- \* Skin

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Prostate
- \* Stomach, Glandular
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Seminal Vesicle
- \* Thymus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Pancreas
- \* Spleen
- \* Urinary Bladder

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 1-12 ] Hepatocellular Carcinoma
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 628 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47676

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Thymus

OBSERVATIONS

- \* Kidney
  - Pelvis
  - [ Dilatation TGLs = 2-6 ]
- \* Liver
  - [ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Lung
- \* Nose
  - Glands, Olfactory Epi
  - Olfactory Epi
- \* Thyroid Gland
  - Follicular Cel
  - Follicular Cel
- Nephropathy
  - Dilatation
- Basophilic Focus
  - Hepatocellular Carcinoma
- Hepatocellular Carcinoma
- Hyperplasia
  - Metaplasia
- Adenoma
  - Hyperplasia

Moderate  
Moderate  
  
Metastatic (Liver)  
Moderate  
Moderate  
  
Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 629 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 605 HISTO: 47677

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder
- \* Seminal Vesicle
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Intestine Small, Jejunum

OBSERVATIONS

- \* Kidney [ Hepatocellular Carcinoma TGLs = 7-6 ] Hepatocellular Carcinoma Nephropathy Metastatic (Liver) Minimal
- \* Liver [ Hepatocellular Carcinoma TGLs = 5,6-13+5+12 ] Hepatocellular Carcinoma Multiple
- \* Lung [ Hepatocellular Carcinoma TGLs = 1,2-4 ] Hepatocellular Carcinoma Metastatic (Liver)
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Stomach, Forestomach Epithelium [ Hyperplasia TGLs = 8-9 ] Ulcer Hyperplasia Focal, Mild Minimal

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 630 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47678

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Kidney
    - Infarct
    - Metaplasia
    - Nephropathy
  - \* Liver
    - Clear Cell Focus
    - Eosinophilic Focus
    - Hepatocellular Adenoma
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Testes
    - Atrophy
- Mild  
Osseous, Mild  
Minimal
- Multiple
- Moderate  
Moderate  
Mild

[ Clear Cell Focus TGLs = 3-13 ]  
 [ Hepatocellular Adenoma TGLs = 1,2,4-5+12+6 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 631 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 730 HISTO: 47679

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney
- \* Liver
- \* Nose
- Infarct
- Clear Cell Focus
- Hepatocellular Carcinoma
- [ Hepatocellular Carcinoma TGLs = 1-5 ]
- Glands, Olfactory Epi
- Olfactory Epi
- Hyperplasia
- Metaplasia
- Mild
- Moderate
- Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 632 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47680

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 2-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Marked  
Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 633 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47681

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland Adenoma
- \* Kidney Nephropathy Mild
- \* Liver Clear Cell Focus  
Hepatocellular Adenoma  
Hepatocellular Carcinoma
- [ Hepatocellular Adenoma TGLs = 2-5 ]
- [ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Lung Alveolar Epith Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Inflammation Mild
- Epithelium Hyperplasia Mild
- [ Hyperplasia TGLs = 3-9 ]





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 635 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47683

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Mammary Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Lung Alveolar/Bronchiolar Adenoma Hyperplasia Mild
  - [ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
  - Olfactory Epi Metaplasia Moderate
- \* Skin Inflammation Chronic Active, Mild
  - [ Inflammation TGLs = 2-8 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 636 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47684

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Thyroid Gland

MISSING

- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
- \* Kidney Infarct Minimal  
Nephropathy Minimal
- \* Liver [ Hepatocellular Adenoma TGLs = 3,4-5+12 ] Hepatocellular Adenoma Multiple
- \* Lung Alveolar Epith Hyperplasia Minimal  
Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 2-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 638 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47686

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland

OBSERVATIONS

- \* Nose                      Glands, Olfactory Epi                      Hyperplasia                      Moderate
- Olfactory Epi                                    Metaplasia                                    Moderate
- \* Thyroid Gland            Follicular Cel                                    Hyperplasia                                    Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 639 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47687

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Mammary Gland

OBSERVATIONS

- \* Harderian Gland [ Carcinoma TGLs = 1-11 ] Carcinoma
- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Eosinophilic Focus Hepatocellular Adenoma Multiple
- [ Clear Cell Focus TGLs = 3-6 ]
- [ Eosinophilic Focus TGLs = 4-5+12 ]
- [ Hepatocellular Adenoma TGLs = 2,4,5-5+12+13 ]
- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Epithelium Hyperplasia Mild
- [ Hyperplasia TGLs = 6-9 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 641 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47689

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus

MISSING

- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 643 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 537 HISTO: 47691

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Heart Alveolar/Bronchiolar Carcinoma Metastatic (Lung)
- \* Kidney Nephropathy Minimal
- Capsule Fibrosis Mild
- Pelvis Dilatation Mild
- [ Fibrosis TGLs = 5-6 ]
- [ Nephropathy TGLs = 4-6 ]
- \* Liver Hepatocellular Carcinoma Necrosis Minimal
- [ Hepatocellular Carcinoma TGLs = 3-13 ]
- \* Lung Alveolar/Bronchiolar Carcinoma Multiple
- [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4+12 ]
- \* Lymph Node, Bronchial Alveolar/Bronchiolar Carcinoma Metastatic (Lung)
- \* Lymph Node, Mediastinal Alveolar/Bronchiolar Carcinoma Metastatic (Lung)
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- Pleura Alveolar/Bronchiolar Carcinoma Metastatic (Lung)
- [ Alveolar/Bronchiolar Carcinoma TGLs = 2-13 ]
- \* Stomach, Forestomach Infiltration Cellular Mast Cell, Marked
- \* Thymus Alveolar/Bronchiolar Carcinoma Metastatic (Lung)

PRIMARY CAUSE OF DEATH - Lung Alveolar/Bronchiolar Carcinoma

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 643 TMT: 7  
DOSE: 600 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 537  
HISTO: 47691

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 644 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 729 HISTO: 47692

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Preputial Gland
- \* Spleen
- \* Trachea
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Prostate
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Thymus

MISSING

- \* Lymph Node, Mandibular
- \* Mammary Gland

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- |  |  |                                 |
|--|--|---------------------------------|
| <ul style="list-style-type: none"> <li>* Kidney</li> <li>* Liver</li> </ul>  | <p>Nephropathy</p> <p>Clear Cell Focus</p> <p>Hepatocellular Adenoma</p> <p>Hepatocellular Carcinoma</p> <p>Mixed Cell Focus</p> | <p>Minimal</p>                  |
| <p>[ Clear Cell Focus TGLs = 6-5 ]</p> <p>[ Hepatocellular Adenoma TGLs = 3-12 ]</p> <p>[ Hepatocellular Carcinoma TGLs = 4-6 ]</p> <p>[ Mixed Cell Focus TGLs = 5-5 ]</p> |  |                                 |
| <ul style="list-style-type: none"> <li>* Lung</li> </ul>   | <p>Alveolar/Bronchiolar Adenoma</p>  |                                 |
| <p>[ Alveolar/Bronchiolar Adenoma TGLs = 2-4 ]</p>   |  |                                 |
| <ul style="list-style-type: none"> <li>* Nose</li> <li>* Skin</li> </ul>   | <p>Glands, Olfactory Epi</p> <p>Olfactory Epi</p> <p>Subcut Tiss</p> <p>Granular Cell Tumor Benign</p>                           | <p>Moderate</p> <p>Moderate</p> |
| <p>[ Granular Cell Tumor Benign TGLs = 1-12 ]</p>  |  |                                 |
| <ul style="list-style-type: none"> <li>* Testes</li> <li>* Thyroid Gland</li> </ul>  | <p>Atrophy</p> <p>Follicular Cel</p> <p>Hyperplasia</p>  | <p>Moderate</p> <p>Minimal</p>  |

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 645 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Moribund Sacrifice

DAY ON TEST: 609 HISTO: 47693

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Preputial Gland
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Epididymis
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Testes

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Moderate
- \* Liver Hepatocellular Carcinoma Multiple  
Necrosis Marked  
[ Hepatocellular Carcinoma TGLs = 3,4,5-5+12+13 ]  
[ Necrosis TGLs = 2-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Inflammation Mild  
Epithelium Hyperplasia Mild  
[ Hyperplasia TGLs = 6-9 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 646 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47694

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Seminal Vesicle
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Epididymis
- \* Heart
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Preputial Gland
- \* Skin
- \* Testes
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Prostate
- \* Spleen
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Pancreas
- \* Salivary Glands
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Gallbladder
- \* Parathyroid Gland
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Mammary Gland

INSUFFICIENT TISSUE

- \* Intestine Large, Rectum

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus Hepatocellular Adenoma Multiple
- [ Hepatocellular Adenoma TGLs = 2,3-5+6 ]
- \* Lung Alveolar/Bronchiolar Adenoma Infiltration Cellular Histiocyte, Moderate
- Alveolus
- [ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ]
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 647    TMT: 7  
DOSE: 600 PPM

SEX: Male  
DISP: Moribund Sacrifice

DAY ON TEST: 705  
HISTO: 47695

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH      - Lymph Node, Mesenteric    Lymphoma Malignant

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 648 TMT: 7 DOSE: 600 PPM

SEX: Male DISP: Natural Death

DAY ON TEST: 635 HISTO: 47696

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Epididymis
- \* Larynx
- \* Pancreas
- \* Salivary Glands
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Lung
- \* Pituitary Gland
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Heart
- \* Lymph Node, Mandibular
- \* Preputial Gland
- \* Testes
- \* Urinary Bladder
- \* Brain
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Prostate
- \* Thymus

MISSING

- \* Adrenal Medulla
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Stomach, Forestomach
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Lymph Node, Mesenteric
- \* Stomach, Glandular
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Seminal Vesicle
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Spleen

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Carcinoma Multiple  
Necrosis Moderate
- [ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

<b>ANIMAL NUM:</b> 650	<b>TMT:</b> 7	<b>SEX:</b> Male	<b>DAY ON TEST:</b> 730
	<b>DOSE:</b> 600 PPM	<b>DISP:</b> Terminal Sacrifice	<b>HISTO:</b> 47698

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                           |                            |
|---------------------------|-----------------------------|---------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                    | * Bone Marrow              |
| * Brain                   | * Epididymis                | * Esophagus               | * Eye                      |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum  | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum  | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Larynx                    | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric   |
| * Pancreas                | * Parathyroid Gland         | * Pituitary Gland         | * Preputial Gland          |
| * Prostate                | * Salivary Glands           | * Seminal Vesicle         | * Skin                     |
| * Spleen                  | * Stomach, Glandular        | * Testes                  | * Thymus                   |
| * Thyroid Gland           | * Trachea                   | * Urinary Bladder         |                            |

MISSING

- |               |                         |                          |                 |
|---------------|-------------------------|--------------------------|-----------------|
| * Gallbladder | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Mammary Gland |
|---------------|-------------------------|--------------------------|-----------------|

OBSERVATIONS

- |                        |   |                                |                      |
|------------------------|---|--------------------------------|----------------------|
| * Kidney               |   | Infarct<br>Nephropathy         | Marked<br>Mild       |
|                        | [ Infarct TGLs = 5-6 ]                        |                                |                      |
| * Liver                |   | Infarct                        | Mild                 |
|                        | [ Infarct TGLs = 4-5 ]                        |                                |                      |
| * Lung                 |   | Alveolar/Bronchiolar Carcinoma |                      |
|                        | [ Alveolar/Bronchiolar Carcinoma TGLs = 3-4 ] |                                |                      |
| Mesentery              | Fat   | Necrosis                       | Mild                 |
|                        | [ Necrosis TGLs = 2-13 ]                      |                                |                      |
| * Nose                 | Glands, Olfactory Epi<br>Olfactory Epi        | Hyperplasia<br>Metaplasia      | Moderate<br>Moderate |
| * Stomach, Forestomach | Epithelium                                    | Inflammation<br>Hyperplasia    | Mild<br>Mild         |
|                        | [ Hyperplasia TGLs = 6-12 ]                   |                                |                      |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 101 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 670 HISTO: 47599

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Nose
- \* Salivary Glands
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Thymus
- \* Uterus

OBSERVATIONS

- \* Brain Necrosis Mild
- \* Kidney Nephropathy Minimal
- \* Liver Basophilic Focus Minimal
- Necrosis Minimal
- Tension Lipidosis Mild
- [ Tension Lipidosis TGLs = 5-5 ]
- \* Pituitary Gland Pars Distalis Adenoma
- \* Skin Subcut Tiss Sarcoma
- [ Sarcoma TGLs = 2-12 ]
- \* Spleen Hematopoietic Cell Proliferation Mild
- Necrosis Mild
- [ Hematopoietic Cell Proliferation TGLs = 1-5 ]
- [ Necrosis TGLs = 3-6 ]

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 103 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47601

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Ovary [ Cyst TGLs = 1-8 ] Cyst
- \* Spleen [ Lymphoma Malignant TGLs = 3-5 ] Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal
- \* Uterus [ Cyst TGLs = 2-9 ] Lymphatic Cyst

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 104 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47602

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Cortex                      Capsule                      Adenoma
- \* Liver                                      [ Hepatocellular Adenoma    TGLs = 1-5 ]                      Hepatocellular Adenoma
- \* Lung                                      Alveolar Epith                      Hyperplasia                      Minimal
- \* Uterus                                      Endometrium                      Hyperplasia                      Cystic, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 105 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47603

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver Clear Cell Focus
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 3-6 ]
- \* Skin Subcut Tiss Sarcoma
- [ Sarcoma TGLs = 1-12 ]





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 107 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47605

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Nose
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Ovary

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 1-5 ] Hepatocellular Carcinoma
- \* Pituitary Gland Pars Distalis Hyperplasia Mild
- \* Spleen [ Lymphoma Malignant TGLs = 2-5 ] Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal
- \* Uterus Endometrium Hyperplasia Cystic, Marked





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 110 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 634  
HISTO: 47608

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Nose
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial

INSUFFICIENT TISSUE

- \* Lymph Node, Mesenteric

OBSERVATIONS

- |   |                                  |                                 |
|---|----------------------------------|---------------------------------|
| * Brain                                 | Inflammation<br>Necrosis         | Suppurative, Mild<br>Mild       |
| * Heart                                 | Inflammation<br>Thrombosis       | Suppurative, Marked<br>Moderate |
| * Kidney                                | Inflammation                     | Suppurative, Mild               |
| * Liver                                 | Hepatocellular Carcinoma         |                                 |
| [ Hepatocellular Carcinoma TGLs = 2-5 ] |                                  |                                 |
| * Ovary                                 | Cystadenoma                      |                                 |
| [ Cystadenoma TGLs = 3-8 ]              |                                  |                                 |
| * Salivary Glands                       | Inflammation                     | Suppurative, Mild               |
| * Spleen                                | Hematopoietic Cell Proliferation | Mild                            |
| * Uterus                                | Inflammation                     | Suppurative, Marked             |
| [ Inflammation TGLs = 1-9 ]             |                                  |                                 |

PRIMARY CAUSE OF DEATH - Heart Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 111 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47609

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Skin
- \* Trachea
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Nose
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Uterus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Salivary Glands
- \* Thymus

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Spleen [ Hematopoietic Cell Proliferation TGLs = 1-5 ] Hematopoietic Cell Proliferation Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 112 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47610

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus

OBSERVATIONS

- \* Liver  
[ Hepatocellular Adenoma TGLs = 3-6 ]  
Hepatocellular Adenoma  
Tension Lipidosis  
Minimal
- Mesentery  
[ Necrosis Fat TGLs = 2-12 ]  
Necrosis  
Moderate
- \* Ovary  
[ Cyst TGLs = 1-8 ]  
Cyst

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 113 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47611

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Nose
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Adrenal Medulla
- \* Heart
- \* Lung
- [ Infiltration Cellular
- Artery
- Alveolus
- TGLs = 1-4 ]
- Pheochromocytoma Benign
- Inflammation
- Infiltration Cellular
- Chronic Active, Moderate
- Histiocyte, Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 114 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 689  
HISTO: 47612

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 2-12 ] Hepatocellular Carcinoma
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- \* Stomach, Glandular Metaplasia Hepatocyte, Moderate  
Necrosis Moderate
- \* Uterus [ Leiomyoma TGLs = 1-9 ] Leiomyoma

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005  
 Time Report Requested: 11:42:31  
 First Dose M/F: 07/30/01 / 07/30/01  
 Lab: BNW

<b>ANIMAL NUM:</b> 115	<b>TMT:</b> 2	<b>SEX:</b> Female	<b>DAY ON TEST:</b> 149
	<b>DOSE:</b> CONTROL	<b>DISP:</b> Natural Death	<b>HISTO:</b> 47613

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

* Bone	* Clitoral Gland	* Esophagus	* Intestine Large, Cecum
* Intestine Large, Rectum	* Islets, Pancreatic	* Parathyroid Gland	* Skin
* Thyroid Gland			

**OBSERVATIONS**

* Adrenal Cortex		Lymphoma Malignant
* Adrenal Medulla		Lymphoma Malignant
* Bone Marrow		Lymphoma Malignant
* Brain		Lymphoma Malignant
* Eye		Lymphoma Malignant
* Gallbladder		Lymphoma Malignant
* Harderian Gland		Lymphoma Malignant
* Heart		Lymphoma Malignant
* Intestine Large, Colon		Lymphoma Malignant
* Intestine Small, Duodenum		Lymphoma Malignant
* Intestine Small, Ileum		Lymphoma Malignant
* Intestine Small, Jejunum		Lymphoma Malignant
* Kidney		Lymphoma Malignant
* Larynx		Lymphoma Malignant
* Liver		Lymphoma Malignant
* Lung		Lymphoma Malignant
Lymph Node	Iliac	Lymphoma Malignant
	Renal	Lymphoma Malignant
	[ Lymphoma Malignant	TGLs = 3-6 ]
	[ Lymphoma Malignant	TGLs = 4-12 ]
* Lymph Node, Bronchial		Lymphoma Malignant
* Lymph Node, Mandibular		Lymphoma Malignant
	[ Lymphoma Malignant	TGLs = 1-8 ]
* Lymph Node, Mediastinal		Lymphoma Malignant
	[ Lymphoma Malignant	TGLs = 6-3 ]
* Lymph Node, Mesenteric		Lymphoma Malignant
	[ Lymphoma Malignant	TGLs = 5-7 ]

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 115 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Natural Death

DAY ON TEST: 149  
HISTO: 47613

ORGAN AND ACCOUNTABLE SITE STATUS

* Mammary Gland	Lymphoma Malignant
* Nose	Lymphoma Malignant
* Ovary	Lymphoma Malignant
* Pancreas	Lymphoma Malignant
* Pituitary Gland	Lymphoma Malignant
* Salivary Glands	Lymphoma Malignant
* Spleen	Lymphoma Malignant
[ Lymphoma Malignant TGLs = 7-5 ]	
* Stomach, Forestomach	Lymphoma Malignant
* Stomach, Glandular	Lymphoma Malignant
* Thymus	Lymphoma Malignant
* Trachea	Lymphoma Malignant
* Urinary Bladder	Lymphoma Malignant
* Uterus	Lymphoma Malignant

PRIMARY CAUSE OF DEATH - Lymph Node, Mesenteric Lymphoma Malignant

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 116 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47514

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Salivary Glands
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Nose
- \* Skin
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Ovary
- \* Stomach, Forestomach
- \* Uterus

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Pituitary Gland Pars Distalis Adenoma  
[ Adenoma TGLs = 1-9 ]
- \* Spleen Lymphoma Malignant  
[ Lymphoma Malignant TGLs = 2,3-5+6 ]
- \* Thymus Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 117 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47615

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Harderian Gland [ Carcinoma TGLs = 1-11 ] Carcinoma
- \* Kidney Infarct Mild
- \* Lung Alveolar Epith Hyperplasia Minimal
- \* Pituitary Gland Pars Distalis Hyperplasia Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 118 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47616

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Bone                   | * Bone Marrow              | * Brain                   |
| * Esophagus                 | * Eye                    | * Gallbladder              | * Harderian Gland         |
| * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Larynx                    | * Liver                  | * Lymph Node, Bronchial    | * Lymph Node, Mandibular  |
| * Lymph Node, Mediastinal   | * Lymph Node, Mesenteric | * Mammary Gland            | * Nose                    |
| * Pancreas                  | * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         |
| * Skin                      | * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Thymus                    | * Thyroid Gland          | * Trachea                  | * Urinary Bladder         |

MISSING

- \* Clitoral Gland

OBSERVATIONS

- |                   |                     |                         |         |
|-------------------|---------------------|-------------------------|---------|
| * Adrenal Medulla |                     | Pheochromocytoma Benign |         |
| * Kidney          |                     | Nephropathy             | Minimal |
| * Lung            | Alveolar Epith      | Hyperplasia             | Mild    |
| * Ovary           |                     | Cyst                    |         |
|                   | [ Cyst TGLs = 2-8 ] |                         |         |
| * Uterus          |                     | Fibrosis                | Mild    |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 119 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47617

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Nose
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

OBSERVATIONS

\* Thyroid Gland                      Follicular Cel                      Hyperplasia                      Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 120 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47618

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Gallbladder
- \* Lymph Node, Mediastinal

OBSERVATIONS

- |                   |  |                           |                    |
|-------------------|--|---------------------------|--------------------|
| * Kidney          |  | Nephropathy               | Minimal            |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Minimal<br>Minimal |
| * Pituitary Gland | Pars Distalis                          | Hyperplasia               | Mild               |
| * Thyroid Gland   | Follicular Cel                         | Hyperplasia               | Minimal            |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 121 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47619

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Lung Alveolar Epith Hyperplasia Mild  
[ Hyperplasia TGLs = 1-4 ]
- Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 2-12 ]
- \* Pituitary Gland Pars Distalis Hyperplasia Minimal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 122 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47620

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Parathyroid Gland
- \* Spleen
- \* Trachea

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Liver Tension Lipidosis Mild
- \* Thyroid Gland Follicular Cel Adenoma
- [ Adenoma TGLs = 1-3 ]
- \* Uterus Polyp Stromal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 123 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 621  
HISTO: 47621

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Nose
- Peripheral Nerve
- Spinal Cord
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

OBSERVATIONS

- \* Bone Marrow Histiocytic Sarcoma
- \* Spleen Hematopoietic Cell Proliferation Mild  
Lymphoma Malignant
- [ Hematopoietic Cell Proliferation TGLs = 1-5 ]
- [ Lymphoma Malignant TGLs = 2-6 ]
- \* Stomach, Forestomach Epithelium Hyperplasia Mild  
[ Hyperplasia TGLs = 3-9 ]
- \* Uterus Endometrium Hyperplasia Cystic, Marked

PRIMARY CAUSE OF DEATH - UNCERTAIN



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 125 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 707  
HISTO: 47623

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Liver
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Nose
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- \* Intestine Small, Jejunum      Peyer's Patch      Hyperplasia      Marked  
    [ Hyperplasia    TGLs = 3-14 ]
- \* Kidney      Nephropathy      Minimal
- \* Lung      Alveolus      Infiltration Cellular      Histiocyte, Mild
- \* Ovary      Cyst      Cyst
- [ Cyst    TGLs = 2-8 ]
- \* Pituitary Gland      Pars Distalis      Hyperplasia      Moderate
- \* Skin      Subcut Tiss      Sarcoma
- [ Sarcoma    TGLs = 1-12+13 ]

PRIMARY CAUSE OF DEATH      - Skin Subcut Tiss Sarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 126 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47624

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- |                   |                     |             |          |
|-------------------|---------------------|-------------|----------|
| * Eye             | Cornea              | Necrosis    | Minimal  |
| * Harderian Gland |                     | Hyperplasia | Minimal  |
| * Kidney          |                     | Nephropathy | Minimal  |
| * Ovary           |                     | Cyst        |          |
|                   | [ Cyst TGLs = 1-8 ] |             |          |
| * Thyroid Gland   | Follicular Cel      | Hyperplasia | Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 127 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47625

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Ovary
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
  - \* Pituitary Gland Pars Distalis Hyperplasia Minimal
  - \* Skin Subcut Tiss Sarcoma
- [ Sarcoma TGLs = 1-12 ]









TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 131 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47629

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Brain \* Gallbladder \* Intestine Small, Duodenum \* Kidney \* Mammary Gland \* Pituitary Gland \* Stomach, Glandular \* Adrenal Medulla \* Clitoral Gland \* Intestine Large, Cecum \* Intestine Small, Ileum \* Larynx \* Nose \* Salivary Glands \* Trachea \* Bone \* Esophagus \* Intestine Large, Colon \* Intestine Small, Jejunum \* Lung \* Ovary \* Skin \* Urinary Bladder \* Bone Marrow \* Eye \* Intestine Large, Rectum \* Islets, Pancreatic \* Lymph Node, Mandibular \* Pancreas \* Stomach, Forestomach \* Uterus

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 1-11 ] Adenoma
\* Heart Mineralization Minimal
\* Liver Eosinophilic Focus Hepatocellular Adenoma Lymphoma Malignant Multiple
[ Eosinophilic Focus TGLs = 7-13 ]
[ Hepatocellular Adenoma TGLs = 3,4,8,5,6-6+12+5 ]
\* Lymph Node, Bronchial Lymphoma Malignant
\* Lymph Node, Mediastinal Lymphoma Malignant
\* Lymph Node, Mesenteric Lymphoma Malignant
\* Spleen Lymphoma Malignant
[ Lymphoma Malignant TGLs = 2-5 ]
\* Thymus Lymphoma Malignant
\* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 132 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1,2,3-5+12+6 ] Hepatocellular Adenoma Multiple

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 133 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47631

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
  - \* Liver Eosinophilic Focus  
Hepatocellular Adenoma
  - \* Nose Olfactory Epi Degeneration Hyaline, Mild
- [ Eosinophilic Focus TGLs = 1-5 ]  
[ Hepatocellular Adenoma TGLs = 2-6 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 134 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Natural Death

DAY ON TEST: 705  
HISTO: 47632

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Uterus
- \* Bone
- \* Esophagus
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Bone Marrow
- \* Eye
- \* Liver
- \* Mammary Gland
- \* Stomach, Forestomach

MISSING

- \* Lymph Node, Bronchial

AUTO PRECLUDES DIAG.

- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Larynx
- \* Trachea
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Nose
- \* Urinary Bladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Stomach, Glandular

OBSERVATIONS

- \* Lung Alveolus Infiltration Cellular Histiocyte, Mild
- \* Ovary [ Cyst TGLs = 2-8 ] Cyst
- \* Skin [ Hemangiosarcoma Subcut Tiss TGLs = 1-12 ] Hemangiosarcoma
- \* Spleen [ Hematopoietic Cell Proliferation TGLs = 3-5 ] Hematopoietic Cell Proliferation Moderate
- \* Thyroid Gland [ Adenoma Follicular Cel TGLs = 4-3 ] Adenoma

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Hemangiosarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 135 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 537  
HISTO: 47633

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Nose
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Ovary
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 4-5+13 ]
- \* Lung Lymphoma Malignant
- Lymph Node Renal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 5-13 ]
- \* Lymph Node, Mediastinal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-3 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3-12 ]
- \* Pancreas Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 2-12 ]
- \* Uterus Hyperplasia Cystic, Marked
- [ Hyperplasia Endometrium TGLs = 6-9 ]

PRIMARY CAUSE OF DEATH - Lymph Node, Mesenteric Lymphoma Malignant

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 136 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 481 HISTO: 47634

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Uterus

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Clitoral Gland [ Squamous Cell Carcinoma TGLs = 1-12 ] Squamous Cell Carcinoma
- \* Kidney Nephropathy Minimal
- \* Liver Clear Cell Focus
- \* Ovary Cyst
- \* Spleen [ Cyst TGLs = 2-8 ] Hematopoietic Cell Proliferation Moderate
- [ Hematopoietic Cell Proliferation TGLs = 3-5 ]

PRIMARY CAUSE OF DEATH - Clitoral Gland Squamous Cell Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 137 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- |                   |                |                    |         |
|-------------------|----------------|--------------------|---------|
| * Adrenal Cortex  |                | Hyperplasia        | Mild    |
| * Kidney          |                | Nephropathy        | Minimal |
| * Liver           |                | Basophilic Focus   |         |
| * Lung            | Alveolar Epith | Hyperplasia        | Mild    |
| * Pituitary Gland | Pars Distalis  | Hyperplasia        | Minimal |
| * Spleen          |                | Lymphoma Malignant |         |
| * Thyroid Gland   | Follicular Cel | Hyperplasia        | Minimal |
| * Uterus          |                | Angiectasis        | Marked  |
- [ Angiectasis TGLs = 1-9 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 138 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Natural Death

DAY ON TEST: 725 HISTO: 47636

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Adrenal Medulla \* Bone \* Bone Marrow
\* Brain \* Clitoral Gland \* Esophagus \* Eye
\* Harderian Gland \* Intestine Large, Colon \* Islets, Pancreatic \* Larynx
\* Lung \* Mammary Gland \* Nose \* Ovary
\* Pancreas \* Pituitary Gland \* Salivary Glands \* Stomach, Forestomach
\* Trachea \* Urinary Bladder \* Uterus

MISSING

- \* Lymph Node, Mandibular \* Parathyroid Gland

AUTO PRECLUDES DIAG.

- \* Gallbladder \* Intestine Large, Cecum \* Intestine Large, Rectum \* Intestine Small, Duodenum
\* Intestine Small, Ileum

OBSERVATIONS

- \* Heart Mineralization Minimal
\* Intestine Small, Jejunum Lymphoma Malignant
[ Lymphoma Malignant TGLs = 9-12 ]
\* Kidney Inflammation Suppurative, Mild
Lymphoma Malignant
\* Liver Hepatocellular Adenoma Multiple
Lymphoma Malignant
[ Hepatocellular Adenoma TGLs = 5,6-6+5 ]
Lymph Node Iliac Lymphoma Malignant
Renal Lymphoma Malignant
[ Lymphoma Malignant TGLs = 7-12 ]
[ Lymphoma Malignant TGLs = 8-13 ]
\* Lymph Node, Bronchial Lymphoma Malignant
\* Lymph Node, Mediastinal Lymphoma Malignant
[ Lymphoma Malignant TGLs = 1-3 ]
\* Lymph Node, Mesenteric Lymphoma Malignant
Mesentery Lymphoma Malignant
[ Lymphoma Malignant TGLs = 10-13 ]
\* Skin Subcut Tiss Sarcoma

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 138 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Natural Death

DAY ON TEST: 725  
HISTO: 47636

ORGAN AND ACCOUNTABLE SITE STATUS

	[ Sarcoma TGLs = 2-12 ]		
* Spleen		Lymphoma Malignant	
	[ Lymphoma Malignant TGLs = 3,4-5 ]		
* Stomach, Glandular		Necrosis	Minimal
	[ Necrosis TGLs = 11-9 ]		
* Thymus		Lymphoma Malignant	
* Thyroid Gland	Follicular Cel	Hyperplasia	Mild

PRIMARY CAUSE OF DEATH - Lymph Node, Mesenteric Lymphoma Malignant

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 139 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47637

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Parathyroid Gland
- \* Spleen
- \* Trachea

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Nose
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pancreas
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 140 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47638

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Nose
- \* Skin
- \* Thymus

OBSERVATIONS

- \* Ovary [ Cyst TGLs = 1-8 ] Cyst
- \* Pituitary Gland Pars Intermed Hypertrophy Mild
- \* Uterus [ Polyp Stromal TGLs = 2-9 ] Hemangiosarcoma Polyp Stromal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 141 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47639

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Nose
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Kidney Nephropathy Mild
- \* Liver Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 2-5 ]
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-5 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 142 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47640

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Ovary
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Mammary Gland
- \* Skin
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Nose
- \* Stomach, Glandular

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- \* Harderian Gland
  - \* Kidney
  - \* Liver
    - [ Hepatocellular Adenoma TGLs = 5-6 ]
  - \* Lung
    - [ Lymphoma Malignant TGLs = 6-4 ]
  - \* Lymph Node, Mandibular
  - \* Lymph Node, Mediastinal
    - [ Lymphoma Malignant TGLs = 2-3 ]
  - \* Lymph Node, Mesenteric
  - \* Pancreas
    - Duct
    - [ Cyst TGLs = 3-12 ]
  - \* Pituitary Gland
    - Pars Distalis
    - [ Adenoma TGLs = 1-9 ]
  - \* Salivary Glands
  - \* Spleen
    - [ Lymphoma Malignant TGLs = 4-5 ]
  - \* Stomach, Forestomach
  - \* Thymus
- Lymphoma Malignant
  - Lymphoma Malignant
  - Hepatocellular Adenoma
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Adenoma
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant
  - Lymphoma Malignant

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 142    TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47640

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Urinary Bladder

Lymphoma Malignant

\* Uterus

Lymphoma Malignant



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 143 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47641

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Nose
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Parathyroid Gland

OBSERVATIONS

- \* Lung [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ] Alveolar/Bronchiolar Carcinoma
- \* Ovary Cyst

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 144 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47642

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Kidney
- \* Liver
- \* Nose
- [ Hepatocellular Adenoma TGLs = 1-6 ]
- Glands, Olfactory Epi
- Olfactory Epi
- Metaplasia
- Hepatocellular Adenoma
- Hyperplasia
- Atrophy
- Osseous, Minimal
- Minimal
- Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 146 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 633  
HISTO: 47644

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Nose
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Clitoral Gland
- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Ovary
- Cyst

PRIMARY CAUSE OF DEATH - UNCERTAIN

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 147 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47645

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Kidney
- \* Nose
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Ovary
- \* Skin
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular

INSUFFICIENT TISSUE

- \* Clitoral Gland

OBSERVATIONS

- \* Heart Lymphoma Malignant
- \* Liver Lymphoma Malignant
- \* Lung Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Pancreas Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-5 ]
- \* Thyroid Gland Follicular Cel Adenoma
- \* Uterus Endometrium Adenoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 149 TMT: 2  
DOSE: CONTROL

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47647

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Mammary Gland
- \* Pituitary Gland
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Nose
- \* Salivary Glands
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Ovary
- \* Skin
- \* Trachea
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Bone Marrow Lymphoma Malignant
- \* Gallbladder Lymphoma Malignant
- \* Heart Hemangiosarcoma
- \* Kidney Lymphoma Malignant
- \* Liver Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-5 ]
- \* Lung Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 2-5 ]
- \* Stomach, Forestomach Epithelium Hyperplasia Moderate
- [ Hyperplasia TGLs = 3-9 ]
- \* Urinary Bladder Lymphoma Malignant

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 150 TMT: 2 DOSE: CONTROL

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47648

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex \* Clitoral Gland \* Harderian Gland \* Intestine Large, Rectum \* Islets, Pancreatic \* Lymph Node, Bronchial \* Pancreas \* Skin \* Thymus \* Bone \* Esophagus \* Heart \* Intestine Small, Duodenum \* Kidney \* Lymph Node, Mandibular \* Parathyroid Gland \* Spleen \* Thyroid Gland \* Bone Marrow \* Eye \* Intestine Large, Cecum \* Intestine Small, Ileum \* Larynx \* Lymph Node, Mesenteric \* Pituitary Gland \* Stomach, Forestomach \* Trachea \* Brain \* Gallbladder \* Intestine Large, Colon \* Intestine Small, Jejunum \* Lung \* Mammary Gland \* Salivary Glands \* Stomach, Glandular \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Minimal
\* Liver Basophilic Focus Hemangiosarcoma
[ Hemangiosarcoma TGLs = 2-6 ]
Mesentery Fat Necrosis Mild
[ Necrosis TGLs = 1-6 ]
\* Nose Glands, Olfactory Epi Hyperplasia Minimal
Olfactory Epi Degeneration Hyaline, Minimal
Olfactory Epi Metaplasia Minimal
\* Ovary Cyst Cyst
[ Cyst TGLs = 5-8 ]
\* Uterus Endometrium Angiectasis Marked
Hyperplasia Cystic, Marked
[ Angiectasis TGLs = 4-9 ]
[ Hyperplasia TGLs = 3-9 ]





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 302 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47900

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                  |  |                           |                      |
|------------------|--|---------------------------|----------------------|
| * Adrenal Cortex |  | Hypertrophy               | Mild                 |
| * Liver          | [ Hepatocellular Adenoma TGLs = 1-5 ]  | Hepatocellular Adenoma    |                      |
| * Nose           | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 303 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47901

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus
- [ Eosinophilic Focus TGLs = 1-5 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Distalis Hyperplasia Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 305 TMT: 4 DOSE: 100 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47903

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal

INSUFFICIENT TISSUE

- \* Thymus

OBSERVATIONS

- |                        |   |                          |          |
|------------------------|---|--------------------------|----------|
| * Kidney               |   | Infarct                  | Mild     |
|                        |   | Nephropathy              | Minimal  |
| * Liver                | [ Hepatocellular Carcinoma TGLs = 1-6 ] | Hepatocellular Carcinoma |          |
| * Nose                 | Glands, Olfactory Epi                   | Hyperplasia              | Moderate |
|                        | Olfactory Epi                           | Metaplasia               | Moderate |
| * Pituitary Gland      | Pars Distalis                           | Hyperplasia              | Moderate |
| * Stomach, Forestomach |   | Angiectasis              | Minimal  |
|                        | [ Angiectasis TGLs = 2-9 ]              |                          |          |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 306 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47904

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Lymph Node, Bronchial  |
| * Lymph Node, Mandibular   | * Lymph Node, Mediastinal | * Mammary Gland             | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        |
| * Skin                     | * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     |
| * Thymus                   | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |                          |   |                                   |                  |
|--------------------------|---|-----------------------------------|------------------|
| * Kidney                 |   | Lymphoma Malignant<br>Nephropathy | Minimal          |
| * Liver                  | [ Hepatocellular Adenoma TGLs = 2-12 ]      | Hepatocellular Adenoma            |                  |
| * Lung                   | [ Alveolar/Bronchiolar Adenoma TGLs = 3-4 ] | Alveolar/Bronchiolar Adenoma      |                  |
| * Lymph Node, Mesenteric |   | Lymphoma Malignant                |                  |
| * Nose                   | Glands, Olfactory Epi<br>Olfactory Epi      | Hyperplasia<br>Metaplasia         | Moderate<br>Mild |
| * Thyroid Gland          | Follicular Cel                              | Hyperplasia                       | Mild             |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 307 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 269  
HISTO: 47905

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Spleen
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Bone
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Trachea

MISSING

- \* Parathyroid Gland

OBSERVATIONS

* Brain	Artery, Meninges	Inflammation	Chronic Active, Moderate
* Heart	Artery	Inflammation	Chronic Active, Marked
* Larynx	Artery	Inflammation	Chronic Active, Marked
* Nose	Glands, Olfactory Epi Olfactory Epi	Hyperplasia Metaplasia	Moderate Mild
* Pancreas	Artery	Inflammation	Chronic Active, Moderate
* Stomach, Glandular	Artery	Inflammation	Chronic Active, Moderate
* Thyroid Gland		Inflammation	Chronic Active, Moderate
* Urinary Bladder	Artery	Inflammation	Chronic Active, Moderate

PRIMARY CAUSE OF DEATH - Heart Artery Inflammation

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 308 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47906

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- |          |  |                           |                      |
|----------|--|---------------------------|----------------------|
| * Kidney |  | Nephropathy               | Minimal              |
| * Liver  | [ Hepatocellular Carcinoma TGLs = 1,2-5+12 ] | Hepatocellular Carcinoma  | Multiple             |
| * Lung   |  | Hepatocellular Carcinoma  | Metastatic (Liver)   |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi       | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary  | [ Thrombosis TGLs = 3-8 ]                    | Angiectasis<br>Thrombosis | Marked<br>Marked     |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 309 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47907

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Gallbladder
- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 2-5 ] Hepatocellular Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Ovary [ Cyst TGLs = 1-8 ] Cyst





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 312 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 537  
HISTO: 47910

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Bone                   | * Bone Marrow              | * Brain                   |
| * Esophagus                 | * Eye                    | * Gallbladder              | * Harderian Gland         |
| * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Larynx                    | * Lymph Node, Bronchial  | * Lymph Node, Mediastinal  | * Lymph Node, Mesenteric  |
| * Mammary Gland             | * Ovary                  | * Pancreas                 | * Parathyroid Gland       |
| * Salivary Glands           | * Skin                   | * Stomach, Forestomach     | * Stomach, Glandular      |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- |                  |                          |                   |          |
|------------------|--------------------------|-------------------|----------|
| * Clitoral Gland | * Lymph Node, Mandibular | * Pituitary Gland | * Thymus |
|------------------|--------------------------|-------------------|----------|

OBSERVATIONS

- |                   |  |                                  |                    |
|-------------------|--|----------------------------------|--------------------|
| * Adrenal Medulla |  | Hyperplasia                      | Minimal            |
| * Kidney          |  | Nephropathy                      | Mild               |
| * Liver           |  | Basophilic Focus                 |                    |
|                   | [ Hepatocellular Carcinoma TGLs = 1-12 ] | Hepatocellular Carcinoma         |                    |
| * Lung            |  | Hepatocellular Carcinoma         | Metastatic (Liver) |
| * Nose            | Glands, Olfactory Epi                    | Hyperplasia                      | Moderate           |
|                   | Olfactory Epi                            | Metaplasia                       | Moderate           |
| * Spleen          |  | Hematopoietic Cell Proliferation | Mild               |

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 313 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47911

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Liver
    - [ Eosinophilic Focus TGLs = 3-5 ]
    - [ Hepatocellular Adenoma TGLs = 2-6 ]
    - [ Hepatocellular Carcinoma TGLs = 1-5 ]
  - \* Lung
    - Hepatocellular Carcinoma
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Ovary
    - Cyst
- Eosinophilic Focus  
Hepatocellular Adenoma  
Hepatocellular Carcinoma
- Metastatic (Liver)  
Moderate  
Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 314 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 523  
HISTO: 47912

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Liver                  |
| * Lung                     | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric    | * Mammary Gland          |
| * Ovary                    | * Pancreas                | * Parathyroid Gland         | * Pituitary Gland        |
| * Salivary Glands          | Spinal Cord               | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Thymus                  | * Thyroid Gland             | * Trachea                |
| * Uterus                   |                           |                             |                          |

MISSING

- |                         |                          |
|-------------------------|--------------------------|
| * Lymph Node, Bronchial | * Lymph Node, Mandibular |
|-------------------------|--------------------------|

OBSERVATIONS

- |                   |  |                             |                                 |
|-------------------|--|-----------------------------|---------------------------------|
| * Kidney          |  | Nephropathy                 | Minimal                         |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia   | Mild<br>Mild                    |
| * Skin            |  | Inflammation                | Acute, Moderate                 |
| * Urinary Bladder | Epidermis                              | Hyperplasia<br>Inflammation | Mild<br>Chronic Active, Minimal |

PRIMARY CAUSE OF DEATH - UNCERTAIN

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 315 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47913

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |  |                        |          |
|--|------------------------|----------|
| * Adrenal Cortex                                 | Hyperplasia            | Mild     |
| * Harderian Gland                                | Adenoma                |          |
| [ Adenoma TGLs = 1-11 ]                          |                        |          |
| * Intestine Small, Ileum                         | Carcinoma              |          |
| [ Carcinoma TGLs = 5-14 ]                        |                        |          |
| * Kidney   | Nephropathy            | Minimal  |
| * Liver  | Eosinophilic Focus     |          |
|  | Hepatocellular Adenoma | Multiple |
| [ Hepatocellular Adenoma TGLs = 2,3,4-12+13+14 ] |                        |          |
| * Nose   | Glands, Olfactory Epi  | Moderate |
|  | Olfactory Epi          | Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 316 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 705  
HISTO: 47914

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Gallbladder
- \* Intestine Small, Duodenum
- \* Larynx
- \* Salivary Glands
- \* Thymus
- \* Brain
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial

INSUFFICIENT TISSUE

- \* Clitoral Gland

OBSERVATIONS

- \* Bone Marrow Histiocytic Sarcoma
- \* Harderian Gland Adenoma  
Histiocytic Sarcoma  
[ Adenoma TGLs = 8-11 ]
- \* Heart Histiocytic Sarcoma
- \* Kidney Histiocytic Sarcoma  
Infarct Marked  
[ Histiocytic Sarcoma TGLs = 7-6 ]
- \* Liver Histiocytic Sarcoma  
[ Histiocytic Sarcoma TGLs = 3,4-5+12+13 ]
- \* Lung Histiocytic Sarcoma  
Lymph Node Lumbar Histiocytic Sarcoma  
Renal Histiocytic Sarcoma  
[ Histiocytic Sarcoma TGLs = 5-14 ]  
[ Histiocytic Sarcoma TGLs = 6-15 ]
- \* Lymph Node, Mandibular Histiocytic Sarcoma
- \* Lymph Node, Mediastinal Histiocytic Sarcoma
- \* Lymph Node, Mesenteric Histiocytic Sarcoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate

\* PROTOCOL REQUIRED TISSUE



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 316 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 705  
HISTO: 47914

ORGAN AND ACCOUNTABLE SITE STATUS

* Ovary	Olfactory Epi	Metaplasia	Moderate
* Pituitary Gland	Pars Distalis	Histiocytic Sarcoma	
* Spleen		Adenoma	
	[ Hematopoietic Cell Proliferation TGLs = 2-5 ]	Hematopoietic Cell Proliferation	Marked
* Uterus		Histiocytic Sarcoma	
	[ Histiocytic Sarcoma TGLs = 1-9 ]		

PRIMARY CAUSE OF DEATH - Liver Histiocytic Sarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 317 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47915

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Ovary
- \* Spleen
- \* Trachea

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |   |  |                           |                  |
|---|--|---------------------------|------------------|
| * Nose                                      | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Mild |
| * Pituitary Gland<br>[ Adenoma TGLs = 1-9 ] | Pars Distalis                          | Adenoma                   |                  |
| * Thyroid Gland                             | Follicular Cel                         | Hyperplasia               | Mild             |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 318 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47916

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Ovary
- \* Skin
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Stomach, Forestomach
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Salivary Glands
- \* Trachea

OBSERVATIONS

- \* Adrenal Medulla Pheochromocytoma Benign
- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Carcinoma Malignant
- [ Hepatocellular Carcinoma TGLs = 6-12 ]
- Lymph Node Lumbar Lymphoma Malignant
- Renal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 5-6 ]
- [ Lymphoma Malignant TGLs = 4-12 ]
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-8 ]
- \* Lymph Node, Mediastinal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 2-3 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 7-7 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Atrophy Minimal
- Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Distalis Hyperplasia Minimal
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3-5 ]
- \* Thymus Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 319 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47917

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                 |
| * Liver                    | * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal  | * Lymph Node, Mesenteric  | * Mammary Gland             | * Pancreas               |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

OBSERVATIONS

- |         |  |                           |                      |
|---------|--|---------------------------|----------------------|
| * Nose  | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary | [ Cyst TGLs = 1-8 ]                    | Cyst                      |                      |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 320 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47918

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                           |
|----------------------------|---------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow             |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                     |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum  |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum  |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                  |
| * Liver                    | * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Pancreas                  | * Pituitary Gland         |
| * Salivary Glands          | * Skin                    | * Spleen                    | * Stomach, Forestomach    |
| * Stomach, Glandular       | * Trachea                 | * Urinary Bladder           | * Uterus                  |

MISSING

- |                          |                     |          |
|--------------------------|---------------------|----------|
| * Lymph Node, Mandibular | * Parathyroid Gland | * Thymus |
|--------------------------|---------------------|----------|

OBSERVATIONS

- |                 |   |   |                                      |
|-----------------|---|---|--------------------------------------|
| * Nose          | Glands, Olfactory Epi<br>Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Degeneration<br>Metaplasia | Moderate<br>Hyaline, Minimal<br>Mild |
| * Ovary         |   | Cyst                                      |                                      |
| * Thyroid Gland | Follicular Cel  | Hyperplasia                               | Mild                                 |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 321 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47919

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                          |                            |                           |                             |
|--------------------------|----------------------------|---------------------------|-----------------------------|
| * Adrenal Medulla        | * Bone                     | * Bone Marrow             | * Brain                     |
| * Clitoral Gland         | * Esophagus                | * Eye                     | * Heart                     |
| * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    |
| * Larynx                 | * Liver                    | * Lung                    | * Lymph Node, Bronchial     |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric   | * Mammary Gland           | * Pancreas                  |
| * Parathyroid Gland      | * Pituitary Gland          | * Salivary Glands         | * Skin                      |
| * Spleen                 | * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    |
| * Thyroid Gland          | * Trachea                  | * Urinary Bladder         | * Uterus                    |

MISSING

- \* Lymph Node, Mediastinal

INSUFFICIENT TISSUE

- \* Gallbladder
- \* Nose

OBSERVATIONS

- |                     |             |         |
|---------------------|-------------|---------|
| * Adrenal Cortex    | Hyperplasia | Mild    |
| * Harderian Gland   | Hyperplasia | Minimal |
| * Ovary             | Cyst        |         |
| [ Cyst TGLs = 1-8 ] |             |         |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 323 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47921

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Lung                   |
| * Lymph Node, Bronchial    | * Lymph Node, Mandibular  | * Lymph Node, Mediastinal   | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Ovary                   | * Pancreas                  | * Parathyroid Gland      |
| * Salivary Glands          | * Ovary                   | * Spleen                    | * Stomach, Forestomach   |
| * Stomach, Glandular       | * Skin                    | * Thyroid Gland             | * Trachea                |
| * Urinary Bladder          | * Thymus                  |                             |                          |
|                            | * Uterus                  |                             |                          |

OBSERVATIONS

- |                   |                                       |                        |          |
|-------------------|---------------------------------------|------------------------|----------|
| * Kidney          |                                       | Nephropathy            | Minimal  |
| * Liver           |                                       | Hepatocellular Adenoma |          |
|                   | [ Hepatocellular Adenoma TGLs = 2-6 ] |                        |          |
| * Nose            | Glands, Olfactory Epi                 | Hyperplasia            | Moderate |
|                   | Olfactory Epi                         | Metaplasia             | Moderate |
| * Pituitary Gland | Pars Distalis                         | Adenoma                |          |
|                   | [ Adenoma TGLs = 1-9 ]                |                        |          |





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

---

ANIMAL NUM: 324 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47922

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

* Thyroid Gland	Follicular Cel	Hyperplasia	Minimal
* Urinary Bladder		Lymphoma Malignant	
* Uterus	Endometrium	Lymphoma Malignant	
[ Hyperplasia	TGLs = 2-12 ]	Hyperplasia	Cystic, Marked



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 326 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47924

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                 |
| * Liver                    | * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal  | * Lymph Node, Mesenteric  | * Mammary Gland             | * Ovary                  |
| * Pancreas                 | * Parathyroid Gland       | * Salivary Glands           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           |                          |

OBSERVATIONS

- |                   |  |                           |                      |
|-------------------|--|---------------------------|----------------------|
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Pituitary Gland | Pars Distalis                          | Hyperplasia               | Mild                 |
| * Uterus          | Endometrium                            | Hyperplasia               | Cystic, Marked       |
|                   | [ Hyperplasia TGLs = 1-9 ]             |                           |                      |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 327 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47925

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Trachea

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                 |   |                                      |                                 |
|-----------------|---|--------------------------------------|---------------------------------|
| * Nose          | Glands, Olfactory Epi<br>Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Atrophy<br>Metaplasia | Moderate<br>Minimal<br>Moderate |
| * Ovary         |   | Angiectasis                          | Moderate                        |
| * Thyroid Gland | Follicular Cel  | Hyperplasia                          | Minimal                         |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 328 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47926

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Ovary
- \* Skin
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Pancreas
- \* Spleen
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Uterus

MISSING

- \* Lymph Node, Mandibular
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 4,6,5,7-5+6+12 ] Hepatocellular Adenoma Multiple
- \* Lung [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ] Alveolar/Bronchiolar Carcinoma
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- Mesentery Fat Necrosis [ Necrosis TGLs = 2-12 ] Necrosis Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Thymus Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 329 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47927

ORGAN AND ACCOUNTABLE SITE STATUS

* Salivary Glands		Lymphoma Malignant	
* Spleen		Lymphoma Malignant	
	[ Lymphoma Malignant TGLs = 6-5 ]		
* Thymus		Lymphoma Malignant	
* Urinary Bladder		Lymphoma Malignant	
* Uterus	Endometrium	Hyperplasia	Cystic, Marked
	[ Hyperplasia TGLs = 7-9 ]		



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 330 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47928

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- |                   |                                 |                  |          |
|-------------------|---------------------------------|------------------|----------|
| * Kidney          |                                 | Nephropathy      | Minimal  |
| * Liver           |                                 | Clear Cell Focus |          |
|                   | [ Clear Cell Focus TGLs = 1-6 ] |                  |          |
| * Nose            | Glands, Olfactory Epi           | Hyperplasia      | Mild     |
|                   | Olfactory Epi                   | Metaplasia       | Moderate |
| * Pituitary Gland | Pars Distalis                   | Hyperplasia      | Mild     |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 331 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47929

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                   | * Bone Marrow              |
| * Brain                   | * Clitoral Gland            | * Esophagus              | * Eye                      |
| * Gallbladder             | * Harderian Gland           | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Kidney                    | * Larynx                 | * Liver                    |
| * Lymph Node, Mandibular  | * Lymph Node, Mediastinal   | * Lymph Node, Mesenteric | * Mammary Gland            |
| * Parathyroid Gland       | * Salivary Glands           | * Stomach, Forestomach   | * Stomach, Glandular       |
| * Trachea                 | * Urinary Bladder           | * Uterus                 |                            |

OBSERVATIONS

- |                         |  |                           |                      |
|-------------------------|--|---------------------------|----------------------|
| * Heart                 |  | Sarcoma                   | Metastatic (Skin)    |
| * Lung                  |  | Sarcoma                   | Metastatic (Skin)    |
| * Lymph Node, Bronchial |  | Sarcoma                   | Metastatic (Skin)    |
| * Nose                  | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary                 |  | Angiectasis<br>Thrombosis | Marked<br>Marked     |
|                         | [ Angiectasis TGLs = 2-8 ]             |                           |                      |
| * Pancreas              |  | Basophilic Focus          | Mild                 |
| * Pituitary Gland       | Pars Distalis                          | Hyperplasia               | Mild                 |
| * Skin                  | Subcut Tiss                            | Sarcoma                   |                      |
|                         | [ Sarcoma TGLs = 1,5,6-12+13+6 ]       |                           |                      |
| * Spleen                |  | Hyperplasia               | Lymphoid, Marked     |
|                         | [ Hyperplasia TGLs = 3-5 ]             |                           |                      |
| * Thymus                |  | Sarcoma                   | Metastatic (Skin)    |
| * Thyroid Gland         |  | Sarcoma                   | Metastatic (Skin)    |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 332 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47930

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Harderian Gland [ Adenoma TGLs = 3-11 ] Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver [ Hepatocellular Adenoma TGLs = 2-12 ] Hepatocellular Adenoma
- Lymph Node Renal Hyperplasia Lymphoid, Moderate  
[ Hyperplasia TGLs = 4-12 ]
- \* Lymph Node, Bronchial Hyperplasia Lymphoid, Moderate
- \* Lymph Node, Mesenteric Hyperplasia Lymphoid, Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Degeneration Hyaline, Minimal  
Olfactory Epi Metaplasia Moderate
- \* Ovary Cyst
- \* Spleen [ Hyperplasia TGLs = 1-5 ] Hyperplasia Lymphoid, Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 333 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 725  
HISTO: 47931

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Liver
    - Basophilic Focus
    - Hepatocellular Adenoma
    - Infarct
    - [ Hepatocellular Adenoma TGLs = 3-5 ]
    - [ Infarct TGLs = 2-12 ]
  - \* Lung
    - Alveolar/Bronchiolar Carcinoma
    - Infiltration Cellular
    - [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
    - Olfactory Epi
    - Hyperplasia
    - Atrophy
    - Metaplasia
  - \* Thyroid Gland
    - Follicular Cel
    - Hyperplasia
- Marked
- Histiocyte, Marked
- Moderate
- Mild
- Moderate
- Mild

PRIMARY CAUSE OF DEATH - Lung Alveolar/Bronchiolar Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 334 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 726  
HISTO: 47932

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Heart [ Thrombosis TGLs = 3-5 ] Thrombosis Moderate
- \* Kidney Nephropathy Moderate
- \* Liver Eosinophilic Focus  
Hepatocellular Adenoma  
Hepatocellular Carcinoma  
[ Eosinophilic Focus TGLs = 4-5 ]  
[ Hepatocellular Adenoma TGLs = 2-6 ]  
[ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Lung Perivascular Inflammation Chronic Active, Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Intermed Hyperplasia Mild

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 335 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47933

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 1-5 ]
- \* Lung Alveolar Epith Hyperplasia Minimal
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 2-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Mild
- Olfactory Epi Metaplasia Mild
- \* Thyroid Gland Follicular Cel Hyperplasia Mild



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 337 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Natural Death

DAY ON TEST: 497  
HISTO: 47935

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                         |                          |                           |                   |
|-------------------------|--------------------------|---------------------------|-------------------|
| * Adrenal Cortex        | * Adrenal Medulla        | * Bone                    | * Bone Marrow     |
| * Brain                 | * Clitoral Gland         | * Esophagus               | * Harderian Gland |
| * Heart                 | * Islets, Pancreatic     | * Kidney                  | * Larynx          |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Mammary Gland   |
| * Ovary                 | * Pancreas               | * Pituitary Gland         | * Salivary Glands |
| * Skin                  | * Spleen                 | * Stomach, Forestomach    | * Thymus          |
| * Thyroid Gland         | * Trachea                | * Uterus                  |                   |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mesenteric | * Parathyroid Gland |
|--------------------------|---------------------|

AUTO PRECLUDES DIAG.

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Eye                     | * Gallbladder               | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Stomach, Glandular      | * Urinary Bladder           |                          |                            |

OBSERVATIONS

- |         |  |                           |                  |
|---------|--|---------------------------|------------------|
| * Liver |  | Necrosis                  | Mild             |
| * Lung  |  | Thrombosis                | Mild             |
| * Nose  | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Mild |

PRIMARY CAUSE OF DEATH - UNCERTAIN





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 339 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47937

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 1-12 ]
    - [ Hepatocellular Carcinoma TGLs = 2-5 ]
  - \* Lung
    - [ Hepatocellular Carcinoma TGLs = 3-4 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Uterus
    - Endometrium
    - [ Hyperplasia TGLs = 4-9 ]
- Hepatocellular Adenoma  
Hepatocellular Carcinoma
- Hepatocellular Carcinoma
- Metastatic (Liver)
- Hyperplasia  
Metaplasia
- Moderate  
Moderate  
Cystic, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 340 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47938

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Islets, Pancreatic Hyperplasia Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Mild
- \* Spleen Hyperplasia Hyperplasia Lymphoid, Moderate  
[ Hyperplasia TGLs = 1-5 ]
- \* Uterus Endometrium Hyperplasia Cystic, Marked  
[ Hyperplasia TGLs = 2-9 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 342 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 556  
HISTO: 47940

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                           |
|----------------------------|---------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow             |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                     |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum  |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum  |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Liver                   |
| * Lung                     | * Lymph Node, Bronchial   | * Lymph Node, Mandibular    | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Ovary                     | * Pancreas                |
| * Parathyroid Gland        | * Salivary Glands         | * Skin                      | * Spleen                  |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland           |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                           |

OBSERVATIONS

- |                   |   |                           |                      |
|-------------------|---|---------------------------|----------------------|
| * Kidney          | [ Nephropathy TGLs = 5-6 ]              | Nephropathy               | Marked               |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi  | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Pituitary Gland | [ Adenoma TGLs = 3-9 ]<br>Pars Distalis | Adenoma                   |                      |

PRIMARY CAUSE OF DEATH - Kidney Nephropathy



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 344 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47942

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 2-5 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Ovary
    - [ Cyst TGLs = 1-8 ]
  - \* Pituitary Gland
    - Pars Distalis
  - \* Uterus
    - Endometrium
- Eosinophilic Focus  
Hepatocellular Adenoma  
Tension Lipidosis
- Mild
- Hyperplasia  
Metaplasia  
Cyst
- Moderate  
Moderate
- Hyperplasia  
Hyperplasia
- Mild  
Cystic, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 345 TMT: 4 DOSE: 100 PPM

SEX: Female DISP: Natural Death

DAY ON TEST: 668 HISTO: 47943

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Salivary Glands
- \* Trachea
- \* Bone
- \* Larynx
- \* Ovary
- \* Skin
- \* Uterus
- \* Brain
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach

MISSING

- \* Clitoral Gland
- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Thymus

AUTO PRECLUDES DIAG.

- \* Bone Marrow
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Stomach, Glandular
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Urinary Bladder
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Kidney
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Pituitary Gland

OBSERVATIONS

- \* Heart Hepatocellular Carcinoma Metastatic (Liver)
- \* Liver Hepatocellular Carcinoma Multiple Marked  
[ Hepatocellular Carcinoma TGLs = 4-5+12 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)  
[ Hepatocellular Carcinoma TGLs = 2-4 ]
- Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 5-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Spleen Hematopoietic Cell Proliferation Moderate  
[ Hematopoietic Cell Proliferation TGLs = 3-5 ]

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 346 TMT: 4 DOSE: 100 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47944

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Clitoral Gland
- \* Gallbladder
- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Lung [ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ] Alveolar/Bronchiolar Adenoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 347 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47945

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Clitoral Gland
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver [ Hepatocellular Carcinoma TGLs = 2-5 ] Hepatocellular Carcinoma
- \* Lung [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ] Alveolar Epith Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Minimal  
Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Distalis Adenoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 349 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47947

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

OBSERVATIONS

- \* Lung [ Alveolar/Bronchiolar Carcinoma TGLs = 1-4 ] Alveolar/Bronchiolar Carcinoma
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Mild Mild
- \* Ovary Luteoma
- \* Skin Cyst Epithelial Inclusion Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 350 TMT: 4  
DOSE: 100 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47948

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                   |   |                                  |                      |
|-------------------|---|----------------------------------|----------------------|
| * Adrenal Medulla |   | Hyperplasia                      | Mild                 |
| * Bone Marrow     |   | Hyperplasia                      | Reticulum Cell, Mild |
| * Kidney          |   | Nephropathy                      | Minimal              |
| Mesentery         | Fat   | Necrosis                         | Mild                 |
|                   | [ Necrosis TGLs = 4-12 ]                        |                                  |                      |
| * Nose            | Glands, Olfactory Epi                           | Hyperplasia                      | Moderate             |
|                   | Olfactory Epi                                   | Metaplasia                       | Mild                 |
| * Spleen          |   | Hematopoietic Cell Proliferation | Mild                 |
|                   | [ Hematopoietic Cell Proliferation TGLs = 3-5 ] |                                  |                      |
| * Uterus          | Endometrium                                     | Angiectasis                      | Moderate             |
|                   |   | Hyperplasia                      | Cystic, Marked       |
|                   | [ Angiectasis TGLs = 1-9 ]                      |                                  |                      |
|                   | [ Hyperplasia TGLs = 2-12 ]                     |                                  |                      |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 501 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47799

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus

MISSING

- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Medulla
- \* Kidney
- \* Liver
- \* Nose
- [ Hepatocellular Adenoma TGLs = 1,2-5+6 ]
- Glands, Olfactory Epi
- Olfactory Epi
- Pheochromocytoma Benign
- Metaplasia
- Hepatocellular Adenoma
- Hyperplasia
- Metaplasia
- Osseous, Minimal
- Multiple
- Moderate
- Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 503 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47801

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

OBSERVATIONS

- \* Harderian Gland Adenoma
- \* Intestine Small, Jejunum Peyer's Patch Hyperplasia TGLs = 5-12 ] Mild
- \* Liver [ Hepatocellular Adenoma TGLs = 3,4-6+5 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Atrophy Minimal  
Olfactory Epi Metaplasia Moderate
- \* Ovary [ Cyst TGLs = 1-8 ] Cyst



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 504 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47802

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Spleen
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- |                        |   |                         |                |
|------------------------|---|-------------------------|----------------|
| * Kidney               |   | Infarct                 | Minimal        |
|                        |   | Nephropathy             | Minimal        |
| * Liver                | [ Hepatocellular Adenoma TGLs = 2-5+6 ] | Hepatocellular Adenoma  | Multiple       |
| * Nose                 | Glands, Olfactory Epi                   | Hyperplasia             | Moderate       |
|                        | Olfactory Epi                           | Metaplasia              | Moderate       |
| * Ovary                |   | Cyst                    |                |
| * Pituitary Gland      | Pars Distalis                           | Hyperplasia             | Moderate       |
| * Stomach, Forestomach |   | Squamous Cell Papilloma |                |
|                        | [ Squamous Cell Papilloma TGLs = 3-9 ]  |                         |                |
| * Uterus               | Endometrium                             | Hyperplasia             | Cystic, Marked |







TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 508 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47806

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Liver                  |
| * Lymph Node, Bronchial    | * Lymph Node, Mandibular  | * Lymph Node, Mediastinal   | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Ovary                   | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Salivary Glands         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |          |                       |             |          |
|----------|-----------------------|-------------|----------|
| * Kidney |                       | Infarct     | Mild     |
| * Lung   | Alveolar Epith        | Hyperplasia | Mild     |
| * Nose   | Glands, Olfactory Epi | Hyperplasia | Moderate |
|          | Olfactory Epi         | Metaplasia  | Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 509 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47807

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Skin
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Uterus
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Thyroid Gland

MISSING

- \* Gallbladder

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Harderian Gland Adenoma
- [ Adenoma TGLs = 2-11 ]
- \* Kidney Lymphoma Malignant
- \* Liver Angiectasis Moderate
- Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 5-8 ]
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 6-7 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Lymphoma Malignant
- \* Pancreas Lymphoma Malignant
- \* Salivary Glands Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3,4-5 ]
- \* Thymus Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-3 ]

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 510 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 702 HISTO: 47808

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

INSUFFICIENT TISSUE

- \* Ovary

OBSERVATIONS

* Kidney		Nephropathy	Minimal
* Liver		Eosinophilic Focus Hepatocholangiocarcinoma	
	[ Eosinophilic Focus TGLs = 6-5 ] [ Hepatocholangiocarcinoma TGLs = 7-12 ]		
* Lung		Hepatocholangiocarcinoma	Metastatic (Liver)
	[ Hepatocholangiocarcinoma TGLs = 2,5,3,4-4+6+13 ]		
* Lymph Node, Bronchial		Hepatocholangiocarcinoma Histiocytic Sarcoma	Metastatic (Liver)
* Lymph Node, Mediastinal		Hepatocholangiocarcinoma Histiocytic Sarcoma	Metastatic (Liver)
* Nose	Glands, Olfactory Epi Olfactory Epi	Hyperplasia Metaplasia	Moderate Marked
* Pituitary Gland	Pars Intermed	Adenoma	
Skeletal Muscle		Hepatocholangiocarcinoma	Metastatic (Liver)
	[ Hepatocholangiocarcinoma TGLs = 8-13 ]		

\* PROTOCOL REQUIRED TISSUE

**TDMS No.** 88006 - 04

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** GRUMBEIN, S.

**Date Report Requested:** 07/19/2005

**Time Report Requested:** 11:42:31

**First Dose M/F:** 07/30/01 / 07/30/01

**Lab:** BNW

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**ANIMAL NUM:** 510    **TMT:** 6  
**DOSE:** 300 PPM

**SEX:** Female  
**DISP:** Moribund Sacrifice

**DAY ON TEST:** 702  
**HISTO:** 47808

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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PRIMARY CAUSE OF DEATH        - Liver    Hepatocholangiocarcinoma

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 511 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47809

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1,2-6+5 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 512 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47810

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Ovary
- \* Skin
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Adrenal Cortex Hyperplasia Mild
- \* Adrenal Medulla Hyperplasia Mild
- \* Kidney Lymphoma Malignant Nephropathy Minimal
- \* Liver Hepatocellular Adenoma [ Hepatocellular Adenoma TGLs = 2-6 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pancreas Atrophy Mild
- \* Spleen Lymphoma Malignant [ Lymphoma Malignant TGLs = 1-5 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 513 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47811

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Stomach, Glandular
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pituitary Gland
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mediastinal
- \* Salivary Glands
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Skin
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Parathyroid Gland

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Minimal
- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Carcinoma
- [ Hepatocellular Carcinoma TGLs = 7-5 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- [ Hepatocellular Carcinoma TGLs = 2,4,11,12,3-4+12 ]
- Lymph Node Deep Cervical Lymphoma Malignant
- Renal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 1-6 ]
- [ Lymphoma Malignant TGLs = 8-12 ]
- \* Lymph Node, Mandibular Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 9-7+13 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Mild
- Olfactory Epi Metaplasia Moderate
- \* Ovary Cyst
- [ Cyst TGLs = 5-8 ]
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 6-5 ]
- \* Stomach, Forestomach Epithelium Hyperplasia Mild
- [ Hyperplasia TGLs = 13-9 ]

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 513 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47811

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Thyroid Gland Follicular Cel Adenoma  
[ Adenoma TGLs = 10-3 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 515 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47813

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus

MISSING

- \* Gallbladder
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Adrenal Medulla
- \* Liver
- \* Nose
- \* Ovary
- Glands, Olfactory Epi
- Olfactory Epi
- Pheochromocytoma Benign
- Basophilic Focus
- Hyperplasia
- Metaplasia
- Cyst
- Moderate
- Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 516 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 656 HISTO: 47814

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pituitary Gland
- \* Thymus
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Mammary Gland
- \* Salivary Glands
- \* Thyroid Gland
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea

OBSERVATIONS

- \* Adrenal Cortex Necrosis Marked
- \* Adrenal Medulla Necrosis Marked
- \* Kidney Amyloid Deposition Marked  
Lymphoma Malignant
- [ Amyloid Deposition TGLs = 9-6 ]
- [ Lymphoma Malignant TGLs = 10-6 ]
- \* Lung Hemorrhage Marked  
Lymphoma Malignant
- [ Hemorrhage TGLs = 7,8-4 ]
- Lymph Node Iliac Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 11-6 ]
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mandibular Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Ovary Cyst
- [ Cyst TGLs = 4-8 ]
- \* Skin Necrosis Mild
- [ Necrosis TGLs = 1-12 ]
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 5,6-5 ]
- \* Urinary Bladder Lymphoma Malignant

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 516    TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 656  
HISTO: 47814

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**ORGAN AND ACCOUNTABLE SITE STATUS**

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\* Uterus                                      Endometrium                                      Hyperplasia                                      Cystic, Marked  
[ Hyperplasia    TGLs = 3-9 ]

---

PRIMARY CAUSE OF DEATH                      - Kidney    Amyloid Deposition

---



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 517 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47815

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Mammary Gland
- \* Pituitary Gland
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Ovary
- \* Salivary Glands
- \* Thyroid Gland
- \* Bone
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Pancreas
- \* Skin
- \* Trachea
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder

INSUFFICIENT TISSUE

- \* Clitoral Gland

OBSERVATIONS

- \* Bone Marrow Lymphoma Malignant
- \* Lung Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Spleen Lymphoma Malignant
- \* Stomach, Forestomach Mineralization Minimal  
[ Mineralization TGLs = 1-9 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 518 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47816

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                 |  |                        |                |
|-----------------|--|------------------------|----------------|
| * Kidney        |  | Infarct                | Mild           |
|                 |  | Nephropathy            | Minimal        |
| * Liver         |  | Hepatocellular Adenoma | Multiple       |
|                 | [ Hepatocellular Adenoma TGLs = 1,2-12+5 ] |                        |                |
| * Lung          | Alveolar Epith                             | Hyperplasia            | Moderate       |
| * Nose          | Glands, Olfactory Epi                      | Hyperplasia            | Moderate       |
|                 | Olfactory Epi                              | Metaplasia             | Moderate       |
| * Thyroid Gland | Follicular Cel                             | Hyperplasia            | Mild           |
| * Uterus        | Endometrium                                | Hyperplasia            | Cystic, Marked |
|                 | [ Hyperplasia TGLs = 3-9 ]                 |                        |                |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 519 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47817

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Eosinophilic Focus TGLs = 2-5 ] Eosinophilic Focus
- Mesentery [ Necrosis TGLs = 3-6 ] Fat Necrosis Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland [ Adenoma TGLs = 1-9 ] Pars Intermed Adenoma
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 520 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 719 HISTO: 47818

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Thymus

MISSING

- \* Gallbladder

OBSERVATIONS

- |                   |   |                                  |          |
|-------------------|---|----------------------------------|----------|
| * Harderian Gland |   | Necrosis                         | Mild     |
| * Heart           |   | Mineralization                   | Minimal  |
| * Kidney          |   | Nephropathy                      | Minimal  |
| * Liver           |   | Hematopoietic Cell Proliferation | Marked   |
|                   | [ Histiocytic Sarcoma TGLs = 1,3,4-5+12+6 ]     | Histiocytic Sarcoma              |          |
| * Lung            |   | Hyperplasia                      | Moderate |
| * Nose            | Glands, Olfactory Epi                           | Metaplasia                       | Moderate |
|                   | Olfactory Epi                                   | Cyst                             |          |
| * Ovary           | [ Cyst TGLs = 5-8 ]                             |                                  |          |
| * Salivary Glands |   | Atrophy                          | Mild     |
|                   |   | Necrosis                         | Mild     |
| * Spleen          |   | Hematopoietic Cell Proliferation | Marked   |
|                   | [ Hematopoietic Cell Proliferation TGLs = 2-5 ] |                                  |          |
| * Uterus          |   | Polyp Stromal                    |          |

PRIMARY CAUSE OF DEATH - Liver Histiocytic Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 522 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47820

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver
  - Clear Cell Focus
  - Hepatocellular Adenoma
  - Hepatocellular Carcinoma
  - [ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Nose
  - Glands, Olfactory Epi
  - Olfactory Epi
  - Hyperplasia
  - Metaplasia
  - Moderate
  - Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 523 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47821

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1-6 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Mild Mild
- \* Spleen [ Hyperplasia TGLs = 2-5 ] Hyperplasia Lymphoid, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 524 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47822

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Bone
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Salivary Glands
- \* Trachea
- \* Bone Marrow
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Skin
- \* Uterus

MISSING

- \* Clitoral Gland

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- \* Heart [ Lymphoma Malignant TGLs = 4-12 ] Lymphoma Malignant
- \* Kidney Lymphoma Malignant
- \* Liver Hepatocellular Adenoma Multiple  
Lymphoma Malignant  
[ Hepatocellular Adenoma TGLs = 2,5-5+6 ]  
[ Lymphoma Malignant TGLs = 1,3-5 ]
- \* Lung Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Moderate  
Olfactory Epi Moderate
- \* Ovary Cyst
- \* Spleen Lymphoma Malignant
- \* Thymus Lymphoma Malignant
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal
- \* Urinary Bladder Lymphoma Malignant

\* PROTOCOL REQUIRED TISSUE



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 525 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 663 HISTO: 47823

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Parathyroid Gland

OBSERVATIONS

- \* Lung
  - Alveolus
    - [ Alveolar/Bronchiolar Adenoma TGLs = 2-12 ]
    - [ Alveolar/Bronchiolar Carcinoma TGLs = 1,3-12+4 ]
    - [ Infiltration Cellular TGLs = 4-4 ]
  - Alveolar/Bronchiolar Adenoma
  - Alveolar/Bronchiolar Carcinoma
  - Infiltration Cellular
- Mesentery
  - Fat
    - [ Necrosis TGLs = 6-6 ]
  - Necrosis
- \* Nose
  - Glands, Olfactory Epi
  - Olfactory Epi
  - Hyperplasia
  - Metaplasia
- \* Uterus
  - Endometrium
    - [ Hyperplasia TGLs = 5-9 ]
  - Hyperplasia

PRIMARY CAUSE OF DEATH - Lung Alveolar/Bronchiolar Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 526 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47824

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lung
- \* Lymph Node, Mesenteric
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                   |  |                           |                      |
|-------------------|--|---------------------------|----------------------|
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary           |  | Cyst                      |                      |
| * Pituitary Gland | Pars Distalis                          | Hyperplasia               | Moderate             |
| * Spleen          |  | Lymphoma Malignant        |                      |
| * Uterus          |  | Polyp Stromal             |                      |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 528 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47826

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder

OBSERVATIONS

- \* Liver
- \* Lung
- \* Nose
- \* Pituitary Gland
- \* Spleen
- [ Lymphoma Malignant TGLs = 1-5 ]
- Clear Cell Focus
- Bronchiole Hyperplasia
- Glands, Olfactory Epi Hyperplasia
- Olfactory Epi Metaplasia
- Pars Distalis Adenoma
- Lymphoma Malignant
- Mild
- Moderate
- Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 529 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47827

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Parathyroid Gland

INSUFFICIENT TISSUE

- \* Larynx

OBSERVATIONS

- |                          |                                      |                       |                       |
|--------------------------|--------------------------------------|-----------------------|-----------------------|
| * Adrenal Cortex         |                                      | Hypertrophy           | Mild                  |
| * Adrenal Medulla        |                                      | Hyperplasia           | Minimal               |
| * Lung                   | Alveolus                             | Infiltration Cellular | Histiocyte, Minimal   |
|                          | [ Infiltration Cellular TGLs = 1-4 ] |                       |                       |
| * Lymph Node, Mesenteric |                                      | Infiltration Cellular | Plasma Cell, Moderate |
| * Nose                   | Glands, Olfactory Epi                | Hyperplasia           | Moderate              |
|                          | Olfactory Epi                        | Metaplasia            | Moderate              |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 530 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47828

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Parathyroid Gland

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- |                   |  |                              |          |
|-------------------|--|------------------------------|----------|
| * Harderian Gland |  | Hyperplasia                  | Mild     |
| * Liver           | [ Lymphoma Malignant TGLs = 2-6 ]            | Lymphoma Malignant           |          |
| * Lung            | [ Alveolar/Bronchiolar Adenoma TGLs = 3-12 ] | Alveolar/Bronchiolar Adenoma |          |
| * Nose            | Glands, Olfactory Epi                        | Hyperplasia                  | Moderate |
|                   | Olfactory Epi                                | Metaplasia                   | Moderate |
| * Ovary           | [ Cyst TGLs = 1-8 ]                          | Cyst                         |          |
| * Thyroid Gland   | C Cell                                       | Hyperplasia                  | Minimal  |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 531 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47829

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Ovary
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver
- \* Lung [ Alveolar/Bronchiolar Adenoma TGLs = 1-12 ]
- \* Nose
- \* Pituitary Gland
- \* Uterus
- Eosinophilic Focus
- Alveolar/Bronchiolar Adenoma
- Glands, Olfactory Epi
- Olfactory Epi
- Pars Distalis
- Endometrium
- Hyperplasia
- Metaplasia
- Hyperplasia
- Hyperplasia
- Moderate
- Moderate
- Mild
- Cystic, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 532 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 705 HISTO: 47830

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

INSUFFICIENT TISSUE

- \* Clitoral Gland

OBSERVATIONS

- \* Kidney [ Histiocytic Sarcoma TGLs = 4-6 ] Histiocytic Sarcoma
- \* Liver [ Histiocytic Sarcoma TGLs = 3-5 ] Histiocytic Sarcoma
- \* Lung Histiocytic Sarcoma
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Ovary Angiectasis TGLs = 1-8 ] Angiectasis Moderate
- \* Spleen Hematopoietic Cell Proliferation Moderate
- \* Uterus Endometrium Histiocytic Sarcoma Cystic, Marked  
[ Histiocytic Sarcoma TGLs = 5-9 ] Hyperplasia TGLs = 2-12 ]

PRIMARY CAUSE OF DEATH - Uterus Histiocytic Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 533 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47831

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea

OBSERVATIONS

- |                 |                                       |                        |          |
|-----------------|---------------------------------------|------------------------|----------|
| * Kidney        |                                       | Infarct                | Minimal  |
| * Liver         | [ Hepatocellular Adenoma TGLs = 1-5 ] | Hepatocellular Adenoma |          |
| * Nose          | Glands, Olfactory Epi                 | Hyperplasia            | Moderate |
|                 | Olfactory Epi                         | Metaplasia             | Moderate |
| * Thyroid Gland | Follicular Cel                        | Hyperplasia            | Minimal  |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 534 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47832

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                           |
|----------------------------|---------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow             |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                     |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum  |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum  |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                  |
| * Liver                    | * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Ovary                     | * Pancreas                |
| * Salivary Glands          | * Skin                    | * Spleen                    | * Stomach, Forestomach    |
| * Stomach, Glandular       | * Thymus                  | * Thyroid Gland             | * Trachea                 |
| * Urinary Bladder          |                           |                             |                           |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mandibular | * Parathyroid Gland |
|--------------------------|---------------------|

OBSERVATIONS

- |                   |  |                           |                      |
|-------------------|--|---------------------------|----------------------|
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Pituitary Gland | Pars Distalis                          | Hyperplasia               | Mild                 |
| * Uterus          | Endometrium                            | Hyperplasia               | Cystic, Marked       |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 535 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47833

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

INSUFFICIENT TISSUE

- \* Lymph Node, Mesenteric

OBSERVATIONS

- \* Liver
    - [ Basophilic Focus TGLs = 3-6 ]
    - [ Hepatocellular Adenoma TGLs = 1-12 ]
  - \* Lung
    - [ Alveolar/Bronchiolar Adenoma TGLs = 2-4 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Stomach, Forestomach
    - Epithelium
    - [ Hyperplasia TGLs = 4-9 ]
- Basophilic Focus  
Hepatocellular Adenoma
- Alveolar/Bronchiolar Adenoma
- Hyperplasia  
Metaplasia  
Hyperplasia
- Moderate  
Moderate  
Minimal



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 537 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47835

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Intestine Small, Jejunum [ Carcinoma TGLs = 3-7 ] Carcinoma
- \* Liver [ Hepatocellular Adenoma TGLs = 2-6 ] [ Hepatocellular Carcinoma TGLs = 1-12 ] Hepatocellular Adenoma  
Hepatocellular Carcinoma
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Ovary Cystadenoma
- \* Pituitary Gland Pars Distalis Adenoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 538 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 649 HISTO: 47836

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Kidney
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Ileum
- \* Larynx
- \* Ovary
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Jejunum
- \* Lung
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Intestine Large, Rectum [ Leiomyosarcoma TGLs = 4-12 ] Leiomyosarcoma
- \* Liver [ Necrosis TGLs = 3-6 ] Necrosis Mild
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Pituitary Gland Pars Distalis Adenoma [ Adenoma TGLs = 1-9 ] Adenoma
- \* Spleen [ Hematopoietic Cell Proliferation TGLs = 2-5 ] Hematopoietic Cell Proliferation Marked
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

PRIMARY CAUSE OF DEATH - Intestine Large, Rectum Leiomyosarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 539 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 719 HISTO: 47837

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Mammary Gland
- \* Skin
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Pancreas
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Pituitary Gland
- \* Urinary Bladder
- \* Brain
- \* Harderian Gland
- \* Intestine Small, Duodenum
- \* Larynx
- \* Salivary Glands
- \* Uterus

MISSING

- \* Parathyroid Gland

INSUFFICIENT TISSUE

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Bone Marrow Lymphoma Malignant
- \* Gallbladder Lymphoma Malignant
- \* Heart Lymphoma Malignant
- \* Kidney Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 5-6 ]
- \* Liver Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 4-5 ]
- \* Lung Lymphoma Malignant
- \* Lymph Node, Bronchial Lymphoma Malignant
- \* Lymph Node, Mediastinal Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 3-3+4 ]
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Lymphoma Malignant
- \* Spleen Lymphoma Malignant
- \* Stomach, Forestomach Lymphoma Malignant
- \* Stomach, Glandular Lymphoma Malignant

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

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ANIMAL NUM: 539 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 719  
HISTO: 47837

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**ORGAN AND ACCOUNTABLE SITE STATUS**

---

\* Thymus

Lymphoma Malignant

\* Thyroid Gland

Inflammation

Chronic Active, Moderate

[ Inflammation TGLs = 2-3 ]

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PRIMARY CAUSE OF DEATH - Lymph Node, Mesenteric Lymphoma Malignant

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TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 540 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Accidently Killed

DAY ON TEST: 309 HISTO: 47838

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal

OBSERVATIONS

- |         |                       |                   |               |
|---------|-----------------------|-------------------|---------------|
| * Bone  | Maxilla               | Necrosis          | Marked        |
| * Liver |                       | Tension Lipidosis | Mild          |
| * Nose  | Glands, Olfactory Epi | Hyperplasia       | Mild          |
|         | Glands                | Inflammation      | Acute, Marked |
|         | Olfactory Epi         | Atrophy           | Mild          |

PRIMARY CAUSE OF DEATH - Bone Maxilla Necrosis

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 541 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47839

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Clitoral Gland

OBSERVATIONS

- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Cyst
- [ Cyst TGLs = 1-8 ]
- \* Spleen Lymphoma Malignant
- [ Lymphoma Malignant TGLs = 2-5 ]

TDMS No. 88006 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005  
 Time Report Requested: 11:42:31  
 First Dose M/F: 07/30/01 / 07/30/01  
 Lab: BNW

ANIMAL NUM: 542 TMT: 6 SEX: Female DAY ON TEST: 416  
 DOSE: 300 PPM DISP: Natural Death HISTO: 47840

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                           |                          |                          |                           |
|---------------------------|--------------------------|--------------------------|---------------------------|
| * Adrenal Cortex          | * Adrenal Medulla        | * Bone                   | * Bone Marrow             |
| * Brain                   | * Clitoral Gland         | * Esophagus              | * Gallbladder             |
| * Harderian Gland         | * Heart                  | * Intestine Large, Colon | * Intestine Large, Rectum |
| * Islets, Pancreatic      | * Kidney                 | * Larynx                 | * Lymph Node, Mandibular  |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland          | * Ovary                   |
| * Pancreas                | * Pituitary Gland        | * Salivary Glands        | * Skin                    |
| * Spleen                  | * Stomach, Forestomach   | * Stomach, Glandular     | * Thymus                  |
| * Thyroid Gland           | * Trachea                | * Urinary Bladder        | * Uterus                  |

**MISSING**

- |                         |                     |
|-------------------------|---------------------|
| * Lymph Node, Bronchial | * Parathyroid Gland |
|-------------------------|---------------------|

**AUTO PRECLUDES DIAG.**

- |                            |                          |                             |                          |
|----------------------------|--------------------------|-----------------------------|--------------------------|
| * Eye                      | * Intestine Large, Cecum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum |                          |                             |                          |

**OBSERVATIONS**

- |         |   |                                     |                      |
|---------|---|-------------------------------------|----------------------|
| * Liver |   | Hepatocellular Carcinoma<br>Infarct | Moderate             |
|         | [ Hepatocellular Carcinoma TGLs = 1-12 ]<br>[ Infarct TGLs = 2-13 ] |                                     |                      |
| * Lung  |   | Hepatocellular Carcinoma            | Metastatic (Liver)   |
| * Nose  | Glands, Olfactory Epi<br>Olfactory Epi                              | Hyperplasia<br>Metaplasia           | Moderate<br>Moderate |

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 543 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47841

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thyroid Gland

MISSING

- \* Clitoral Gland
- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple  
[ Hepatocellular Adenoma TGLs = 6,7-12+5 ]
- Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 1-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Ovary Cyst Cystadenoma  
[ Cyst TGLs = 2-8 ]  
[ Cystadenoma TGLs = 3-8 ]
- \* Stomach, Glandular Metaplasia Hepatocyte, Marked
- \* Uterus Polyp Stromal  
[ Polyp Stromal TGLs = 4-9 ]





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 546 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47844

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 2,3-5 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Uterus
    - Endometrium
    - [ Hyperplasia TGLs = 1-12 ]
- Eosinophilic Focus  
Hepatocellular Adenoma  
Tension Lipidosis
- Multiple  
Minimal
- Hyperplasia  
Metaplasia
- Moderate  
Moderate
- Hyperplasia
- Cystic, Marked

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 547 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47845

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Esophagus
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus

MISSING

- \* Gallbladder
- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Bone Marrow Inflammation Granulomatous, Marked
- \* Eye Cornea Inflammation Chronic Active, Minimal
- \* Harderian Gland Adenoma
- [ Adenoma TGLs = 4-11 ]
- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus Hepatocellular Adenoma Multiple
- [ Eosinophilic Focus TGLs = 5-12 ]
- [ Hepatocellular Adenoma TGLs = 2,3-5+13 ]
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 1-12 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 548 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 670  
HISTO: 47846

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                 |
| * Liver                    | * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal  | * Lymph Node, Mesenteric  | * Mammary Gland             | * Ovary                  |
| * Pancreas                 | * Salivary Glands         | * Skin                      | Spinal Cord              |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                   |                       |             |          |
|-------------------|-----------------------|-------------|----------|
| * Nose            | Glands, Olfactory Epi | Hyperplasia | Moderate |
|                   | Olfactory Epi         | Metaplasia  | Moderate |
| * Pituitary Gland | Pars Distalis         | Adenoma     |          |

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 549 TMT: 6  
DOSE: 300 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47847

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea

- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder

- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Uterus

- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

* Adrenal Cortex		Hyperplasia	Mild
* Kidney		Infarct	Mild
* Nose	Glands, Olfactory Epi Olfactory Epi	Hyperplasia Metaplasia	Moderate Moderate
* Ovary		Cystadenoma	
* Pituitary Gland	Pars Distalis	Angiectasis	Minimal
* Skin		Infiltration Cellular	Mixed Cell, Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 550 TMT: 6 DOSE: 300 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47848

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |          |  |                           |                      |
|----------|--|---------------------------|----------------------|
| * Kidney |  | Infarct                   | Minimal              |
| * Liver  | [ Hepatocellular Adenoma TGLs = 1-6 ]  | Hepatocellular Adenoma    |                      |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary  | [ Cyst TGLs = 2-8 ]                    | Cyst                      |                      |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 701 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47699

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea

OBSERVATIONS

- \* Liver Basophilic Focus
- \* Lung Inflammation
- \* Nose Alveolar Epith Hyperplasia
- \* Thyroid Gland Glands, Olfactory Epi Hyperplasia
- \* Uterus Olfactory Epi Metaplasia
- Endometrium Hyperplasia
- [ Hyperplasia TGLs = 1-9 ] Cystic, Marked
- Granulomatous, Mild
- Marked
- Moderate
- Moderate
- Mild

TDMS No. 88006 - 04  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: MICE/B6C3F1

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005  
 Time Report Requested: 11:42:31  
 First Dose M/F: 07/30/01 / 07/30/01  
 Lab: BNW

ANIMAL NUM: 702 TMT: 8 SEX: Female DAY ON TEST: 709  
 DOSE: 600 PPM DISP: Moribund Sacrifice HISTO: 47700

**ORGAN AND ACCOUNTABLE SITE STATUS**

**NORMAL**

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Adrenal Medulla           | * Bone                   | * Bone Marrow              |
| * Brain                   | * Esophagus                 | * Eye                    | * Gallbladder              |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Larynx                    | * Lymph Node, Bronchial  | * Lymph Node, Mandibular   |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Ovary                  | * Pancreas                 |
| * Pituitary Gland         | * Salivary Glands           | * Skin                   | * Stomach, Forestomach     |
| * Stomach, Glandular      | * Thyroid Gland             | * Trachea                | * Urinary Bladder          |

**MISSING**

- |                  |                           |                     |
|------------------|---------------------------|---------------------|
| * Clitoral Gland | * Lymph Node, Mediastinal | * Parathyroid Gland |
|------------------|---------------------------|---------------------|

**INSUFFICIENT TISSUE**

- \* Thymus

**OBSERVATIONS**

- |          |   |  |                      |
|----------|---|--|----------------------|
| * Kidney |   | Infarct<br>Nephropathy                             | Minimal<br>Mild      |
| * Liver  |   | Hepatocellular Adenoma<br>Hepatocellular Carcinoma | Multiple             |
|          | [ Hepatocellular Adenoma TGLs = 3,5-5+6 ]<br>[ Hepatocellular Carcinoma TGLs = 2-5+12 ] |  |                      |
| * Lung   |   | Hepatocellular Carcinoma                           | Metastatic (Liver)   |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi  | Hyperplasia<br>Metaplasia                          | Moderate<br>Moderate |
| * Spleen |   | Hematopoietic Cell Proliferation                   | Mild                 |
|          | [ Hematopoietic Cell Proliferation TGLs = 1-5 ]   |  |                      |
| * Uterus |   | Angiectasis  | Moderate             |
|          | [ Angiectasis TGLs = 4-9 ]  |  |                      |

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 703 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47701

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Eosinophilic Focus Tension Lipidosis Mild
- \* Nose Glands, Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 704 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47702

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

* Kidney		Nephropathy	Minimal
* Liver		Hepatocellular Adenoma Hepatocellular Carcinoma	Multiple
	[ Hepatocellular Adenoma TGLs = 3-5+6 ] [ Hepatocellular Carcinoma TGLs = 3-12 ]		
* Lung		Hepatocellular Carcinoma	Metastatic (Liver)
	[ Hepatocellular Carcinoma TGLs = 1-4 ]		
* Nose	Glands, Olfactory Epi Olfactory Epi	Hyperplasia Metaplasia	Moderate Moderate
* Spleen		Hematopoietic Cell Proliferation	Moderate
	[ Hematopoietic Cell Proliferation TGLs = 2-5 ]		
* Thyroid Gland	Follicular Cel	Hyperplasia	Minimal

\* PROTOCOL REQUIRED TISSUE





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 706 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47704

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Trachea

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Carcinoma TGLs = 3-6 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Pituitary Gland
    - Pars Distalis
    - [ Hyperplasia TGLs = 1-9 ]
  - \* Thyroid Gland
    - Follicular Cel
  - \* Uterus
    - Endometrium
    - [ Hyperplasia TGLs = 2-9 ]
- Eosinophilic Focus  
Hepatocellular Carcinoma
- Hyperplasia  
Metaplasia
- Hyperplasia
- Hyperplasia
- Hyperplasia
- Moderate  
Moderate  
Marked
- Mild  
Cystic, Marked



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 708 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47706

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Lung                   |
| * Lymph Node, Bronchial    | * Lymph Node, Mandibular  | * Lymph Node, Mediastinal   | * Lymph Node, Mesenteric |
| * Mammary Gland            | * Ovary                   | * Pancreas                  | * Parathyroid Gland      |
| * Pituitary Gland          | * Salivary Glands         | * Skin                      | * Spleen                 |
| * Stomach, Forestomach     | * Stomach, Glandular      | * Thymus                    | * Thyroid Gland          |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                          |

OBSERVATIONS

- |          |   |                        |          |
|----------|---|------------------------|----------|
| * Kidney |   | Nephropathy            | Minimal  |
| * Liver  |   | Basophilic Focus       |          |
|          |   | Hepatocellular Adenoma | Multiple |
|          | [ Hepatocellular Adenoma TGLs = 1,2-5+6 ] |                        |          |
| * Nose   | Glands, Olfactory Epi                     | Hyperplasia            | Marked   |
|          | Olfactory Epi                             | Metaplasia             | Moderate |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 709 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47707

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus

MISSING

- \* Clitoral Gland
- \* Lymph Node, Mandibular
- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 1-5 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Thyroid Gland
    - Follicular Cel
- Clear Cell Focus  
Hepatocellular Adenoma
- Hyperplasia  
Metaplasia
- Hyperplasia
- Moderate  
Moderate  
Minimal

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 710 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47708

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Urinary Bladder

MISSING

- \* Thymus

OBSERVATIONS

- \* Liver Hepatocellular Adenoma Multiple
- Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 2-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Distalis Adenoma
- [ Adenoma TGLs = 1-9 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 711 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47709

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Thymus
- \* Uterus

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Harderian Gland [ Carcinoma TGLs = 1-11 ] Carcinoma
- \* Kidney Nephropathy Minimal
- \* Liver Basophilic Focus
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Epithelium Hyperplasia Basal Cell, Moderate
- [ Hyperplasia TGLs = 2-9 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 712 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47710

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- \* Adrenal Medulla Hyperplasia Mild
- \* Harderian Gland Hyperplasia Mild
- \* Kidney Nephropathy Moderate
- \* Liver Eosinophilic Focus Multiple
- [ Hepatocellular Adenoma TGLs = 2,6-5 ]
- [ Hepatocellular Carcinoma TGLs = 1-12 ]
- \* Lung Hepatocellular Carcinoma Metastatic (Liver)
- [ Hepatocellular Carcinoma TGLs = 3,5-4 ]
- Mesentery Fat Necrosis Mild
- [ Necrosis TGLs = 4-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Hepatocellular Carcinoma Metastatic (Liver)
- \* Stomach, Forestomach Inflammation Mild
- Epithelium Hyperplasia Mild
- [ Hyperplasia TGLs = 7-9 ]

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 713 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 712 HISTO: 47711

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Glandular
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Spleen
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Parathyroid Gland

INSUFFICIENT TISSUE

- \* Pituitary Gland

OBSERVATIONS

- |                   |                              |                    |                   |
|-------------------|------------------------------|--------------------|-------------------|
| * Adrenal Medulla |                              | Hyperplasia        | Minimal           |
| * Liver           |                              | Eosinophilic Focus |                   |
| * Lung            |                              | Sarcoma            | Metastatic (Skin) |
| * Nose            | Glands, Olfactory Epi        | Hyperplasia        | Moderate          |
|                   | Olfactory Epi                | Metaplasia         | Moderate          |
| * Skin            | Subcut Tiss                  | Sarcoma            | Multiple          |
|                   | [ Sarcoma TGLs = 3,4-12+13 ] |                    |                   |
| * Thyroid Gland   | Follicular Cel               | Hyperplasia        | Moderate          |
| * Uterus          | Endometrium                  | Hyperplasia        | Cystic, Marked    |
|                   | [ Hyperplasia TGLs = 1-9 ]   |                    |                   |

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 714 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47712

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Kidney Nephropathy Moderate
- \* Liver Eosinophilic Focus Multiple
- Hepatocellular Adenoma TGLs = 2,3,6-5+12+6 ] Multiple
- Hepatocellular Carcinoma TGLs = 4,5-5+12 ] Multiple
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Cystadenoma
- [ Cystadenoma TGLs = 1-8 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 715 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47713

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Brain Infiltration Cellular Mononuclear CI, Minimal
- \* Liver Clear Cell Focus Hepatocellular Adenoma
- [ Hepatocellular Adenoma TGLs = 1-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 716 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47714

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- \* Liver  
[ Hepatocellular Adenoma TGLs = 2,3-6+5 ]  
Eosinophilic Focus  
Hepatocellular Adenoma  
Multiple
- \* Lung  
[ Alveolar/Bronchiolar Adenoma TGLs = 1-4 ]  
Alveolar/Bronchiolar Adenoma
- \* Nose  
Glands, Olfactory Epi  
Olfactory Epi  
Olfactory Epi  
Hyperplasia  
Atrophy  
Metaplasia  
Moderate  
Minimal  
Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 717 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47715

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 4-6 ] Hepatocellular Adenoma
- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary [ Cyst TGLs = 2-8 ] Cyst

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 718 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47716

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

OBSERVATIONS

- \* Intestine Small, Jejunum      Peyers Patch      Hyperplasia      Marked  
    [ Hyperplasia    TGLs = 1-7 ]
- \* Kidney      Nephropathy      Minimal
- \* Liver      Clear Cell Focus
- \* Lung      Alveolar/Bronchiolar Adenoma
- \* Nose      Glands, Olfactory Epi      Hyperplasia      Moderate  
    Olfactory Epi      Metaplasia      Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 719 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47717

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 2-5+6 ] Hepatocellular Adenoma Multiple
- \* Lung Alveolar Epith Hyperplasia Moderate
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Ovary Cystadenoma
- \* Pituitary Gland Pars Distalis Hyperplasia Moderate
- [ Hyperplasia TGLs = 1-9 ]

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 720 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47718

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mandibular
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver [ Hepatocellular Adenoma TGLs = 1,2-12+5 ] Hepatocellular Adenoma Multiple
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 721 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47719

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 2,3-6+5 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Uterus
    - Endometrium
    - [ Hyperplasia TGLs = 1-9 ]
- Clear Cell Focus  
Eosinophilic Focus  
Hepatocellular Adenoma
- Multiple
- Hyperplasia  
Metaplasia
- Moderate  
Moderate
- Hyperplasia
- Cystic, Moderate



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 722 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 731  
HISTO: 47720

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                           |                             |                          |                            |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex          | * Bone                      | * Bone Marrow            | * Brain                    |
| * Clitoral Gland          | * Esophagus                 | * Eye                    | * Gallbladder              |
| * Harderian Gland         | * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Islets, Pancreatic      | * Kidney                    | * Larynx                 | * Liver                    |
| * Lung                    | * Lymph Node, Bronchial     | * Lymph Node, Mandibular | * Lymph Node, Mediastinal  |
| * Lymph Node, Mesenteric  | * Mammary Gland             | * Ovary                  | * Pancreas                 |
| * Parathyroid Gland       | * Pituitary Gland           | * Salivary Glands        | * Skin                     |
| * Spleen                  | * Stomach, Forestomach      | * Stomach, Glandular     | * Thymus                   |
| * Trachea                 | * Urinary Bladder           | * Uterus                 |                            |

OBSERVATIONS

- |                   |                       |             |          |
|-------------------|-----------------------|-------------|----------|
| * Adrenal Medulla |                       | Hyperplasia | Mild     |
| * Nose            | Glands, Olfactory Epi | Hyperplasia | Moderate |
|                   | Olfactory Epi         | Metaplasia  | Moderate |
| * Thyroid Gland   | Follicular Cel        | Hyperplasia | Minimal  |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 723 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47721

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Mammary Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Clitoral Gland
- \* Lymph Node, Mandibular
- \* Parathyroid Gland

OBSERVATIONS

- \* Liver
    - [ Hepatocellular Adenoma TGLs = 4-5 ]
    - [ Hepatocellular Carcinoma TGLs = 3.-12 ]
  - \* Lung
    - [ Sarcoma TGLs = 1-4 ]
  - Mesentery
    - Fat
    - [ Necrosis TGLs = 2-12 ]
  - \* Nose
    - Glands, Olfactory Epi
    - Olfactory Epi
  - \* Ovary
  - \* Skin
    - Subcut Tiss
    - [ Sarcoma TGLs = 5-13 ]
- Hepatocellular Adenoma  
Hepatocellular Carcinoma
- Sarcoma
- Necrosis
- Hyperplasia  
Metaplasia  
Cyst
- Sarcoma
- Metastatic (Skin)
- Mild
- Moderate  
Moderate





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 726 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47724

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                           |
|----------------------------|---------------------------|-----------------------------|---------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow             |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                     |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum  |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum  |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Kidney                    | * Larynx                  |
| * Liver                    | * Lung                    | * Lymph Node, Mandibular    | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric   | * Mammary Gland           | * Ovary                     | * Pancreas                |
| * Parathyroid Gland        | * Pituitary Gland         | * Salivary Glands           | * Skin                    |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                  |
| * Trachea                  | * Urinary Bladder         | * Uterus                    |                           |

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- |                 |                       |             |          |
|-----------------|-----------------------|-------------|----------|
| * Nose          | Glands, Olfactory Epi | Hyperplasia | Moderate |
|                 | Olfactory Epi         | Metaplasia  | Moderate |
| * Thyroid Gland | Follicular Cel        | Hyperplasia | Minimal  |





TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 729 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 677  
HISTO: 47727

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular

MISSING

- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Mild
- \* Liver [ Hepatocellular Carcinoma TGLs = 3-12 ] Hepatocellular Carcinoma
- \* Lung [ Hepatocellular Carcinoma TGLs = 2-4 ] Alveolar/Bronchiolar Carcinoma  
Hepatocellular Carcinoma Metastatic (Liver)
- Mesentery Fat Necrosis Mild  
[ Necrosis TGLs = 4-6 ]
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Stomach, Forestomach Ulcer Minimal
- \* Thyroid Gland Follicular Cel Hyperplasia Minimal

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 730 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47728

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- |                   |   |                        |          |
|-------------------|---|------------------------|----------|
| * Adrenal Cortex  |   | Hypertrophy            | Mild     |
| * Harderian Gland |   | Hyperplasia            | Minimal  |
| * Liver           |   | Eosinophilic Focus     |          |
|                   | [ Hepatocellular Adenoma TGLs = 1,2-5+6 ] | Hepatocellular Adenoma | Multiple |
| * Nose            | Glands, Olfactory Epi                     | Hyperplasia            | Moderate |
|                   | Olfactory Epi                             | Metaplasia             | Moderate |
| * Uterus          |   | Angiectasis            | Marked   |
|                   | [ Angiectasis TGLs = 3-12 ]               | Thrombosis             | Marked   |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 732 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47730

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                             |                          |                            |                           |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * Adrenal Cortex            | * Adrenal Medulla        | * Bone                     | * Bone Marrow             |
| * Brain                     | * Esophagus              | * Eye                      | * Harderian Gland         |
| * Heart                     | * Intestine Large, Cecum | * Intestine Large, Colon   | * Intestine Large, Rectum |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic      |
| * Larynx                    | * Lymph Node, Bronchial  | * Lymph Node, Mediastinal  | * Lymph Node, Mesenteric  |
| * Mammary Gland             | * Pancreas               | * Salivary Glands          | * Skin                    |
| * Spleen                    | * Stomach, Forestomach   | * Stomach, Glandular       | * Thymus                  |
| * Thyroid Gland             | * Trachea                | * Urinary Bladder          | * Uterus                  |

MISSING

- |                          |                     |
|--------------------------|---------------------|
| * Lymph Node, Mandibular | * Parathyroid Gland |
|--------------------------|---------------------|

INSUFFICIENT TISSUE

- |                  |               |
|------------------|---------------|
| * Clitoral Gland | * Gallbladder |
|------------------|---------------|

OBSERVATIONS

- |                   |  |                           |                      |
|-------------------|--|---------------------------|----------------------|
| * Kidney          |  | Nephropathy               | Mild                 |
| * Liver           | [ Hepatocellular Carcinoma TGLs = 1-12 ] | Hepatocellular Carcinoma  |                      |
| * Lung            |  | Hepatocellular Carcinoma  | Metastatic (Liver)   |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi   | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary           | [ Cyst TGLs = 2-8 ]                      | Cyst                      |                      |
| * Pituitary Gland | Pars Distalis                            | Hyperplasia               | Mild                 |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 733 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Natural Death

DAY ON TEST: 523 HISTO: 47731

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Intestine Large, Colon
- \* Lung
- \* Ovary
- \* Skin
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Intestine Large, Rectum
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone Marrow
- \* Gallbladder
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mandibular
- \* Pituitary Gland

AUTO PRECLUDES DIAG.

- \* Eye
- \* Intestine Small, Jejunum
- \* Intestine Large, Cecum
- \* Intestine Small, Duodenum
- \* Intestine Small, Ileum

OBSERVATIONS

- \* Heart [ Necrosis TGLs = 4-5 ] Necrosis Thrombosis Moderate Mild
- \* Kidney [ Nephropathy TGLs = 2-6 ] Nephropathy Marked
- \* Liver [ Necrosis TGLs = 3-6 ] Necrosis Moderate
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate

PRIMARY CAUSE OF DEATH - Heart Necrosis

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 734 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 464  
HISTO: 47732

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Skin
- \* Thymus
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- |             |  |                                    |                               |
|-------------|--|------------------------------------|-------------------------------|
| * Esophagus |  | Inflammation                       | Suppurative, Mild             |
| * Kidney    |  | Nephropathy                        | Minimal                       |
| * Larynx    |  | Inflammation                       | Suppurative, Marked           |
| * Liver     |  | Hepatocellular Adenoma<br>Necrosis | Mild                          |
|             | [ Hepatocellular Adenoma TGLs = 5-6 ]  |                                    |                               |
| * Nose      |  | Inflammation<br>Thrombosis         | Suppurative, Marked<br>Marked |
|             | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia          | Moderate<br>Moderate          |
| * Ovary     |  | Cyst                               |                               |
| * Trachea   |  | Inflammation                       | Suppurative, Marked           |
| * Uterus    |  | Necrosis                           | Marked                        |

PRIMARY CAUSE OF DEATH - Nose Inflammation

Animal Note: TGL 1 = NCL (No Corresponding Lesion)

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 735 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47733

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mandibular
- \* Ovary
- \* Skin
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus

MISSING

- \* Gallbladder

OBSERVATIONS

- |                   |  |  |                             |
|-------------------|--|--|-----------------------------|
| * Kidney          |  | Metaplasia<br>Nephropathy                | Osseous, Minimal<br>Minimal |
| * Liver           |  | Hepatoblastoma<br>Hepatocellular Adenoma | Multiple                    |
|                   | [ Hepatocellular Adenoma TGLs = 2-12 ] |  |                             |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi | Hyperplasia<br>Metaplasia                | Moderate<br>Moderate        |
| Oviduct           |  | Hyperplasia                              | Moderate                    |
| * Pituitary Gland | Pars Distalis                          | Hyperplasia                              | Mild                        |
| * Spleen          |  | Lymphoma Malignant                       |                             |
|                   | [ Lymphoma Malignant TGLs = 1-12 ]     |  |                             |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 736 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47734

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Ovary
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Pancreas
- \* Stomach, Glandular
- \* Uterus
- \* Bone
- \* Esophagus
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Salivary Glands
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Skin
- \* Trachea

MISSING

- \* Parathyroid Gland
- \* Pituitary Gland

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- |                           |                                    |                    |          |
|---------------------------|------------------------------------|--------------------|----------|
| * Harderian Gland         |                                    | Hyperplasia        | Mild     |
| * Kidney                  |                                    | Nephropathy        | Minimal  |
| * Liver                   |                                    | Lymphoma Malignant |          |
|                           | [ Lymphoma Malignant TGLs = 1-5 ]  |                    |          |
| Lymph Node                | Lumbar Pancreatic                  | Lymphoma Malignant |          |
|                           | [ Lymphoma Malignant TGLs = 3-12 ] | Lymphoma Malignant |          |
|                           | [ Lymphoma Malignant TGLs = 4-13 ] |                    |          |
| * Lymph Node, Bronchial   |                                    | Lymphoma Malignant |          |
| * Lymph Node, Mediastinal |                                    | Lymphoma Malignant |          |
| * Lymph Node, Mesenteric  |                                    | Lymphoma Malignant |          |
| * Nose                    | Glands, Olfactory Epi              | Hyperplasia        | Moderate |
|                           | Olfactory Epi                      | Metaplasia         | Moderate |
| * Spleen                  |                                    | Lymphoma Malignant |          |
|                           | [ Lymphoma Malignant TGLs = 2-12 ] |                    |          |
| * Thymus                  |                                    | Lymphoma Malignant |          |

\* PROTOCOL REQUIRED TISSUE

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 737 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 645 HISTO: 47735

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Thymus

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

* Kidney		Nephropathy	Minimal
* Liver		Eosinophilic Focus Hepatocellular Carcinoma	
	[ Hepatocellular Carcinoma TGLs = 3-14 ]		
* Lung		Hepatocellular Carcinoma Hyperplasia	Metastatic (Liver) Minimal
	Alveolar Epith [ Hepatocellular Carcinoma TGLs = 1-4 ]		
* Nose		Glands, Olfactory Epi Olfactory Epi	Moderate Moderate
* Skin		Subcut Tiss	
	[ Sarcoma TGLs = 4-12+13 ]		
* Uterus		Endometrium	Cystic, Marked
	[ Hyperplasia TGLs = 2-9 ]		

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

CONTRIBUTORY CAUSE OF DEATH - Skin Subcut Tiss Sarcoma



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 738 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47736

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus

MISSING

- \* Lymph Node, Mandibular

OBSERVATIONS

- \* Harderian Gland Adenoma
- \* Kidney Nephropathy Minimal
- \* Liver Hepatocellular Adenoma Multiple
- [ Hepatocellular Adenoma TGLs = 2,3,4,5-12+5+6 ]
- [ Hepatocellular Carcinoma TGLs = 6-13 ]
- \* Lung Bronchiole Hyperplasia Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate
- Olfactory Epi Metaplasia Moderate
- \* Uterus Histiocytic Sarcoma
- [ Histiocytic Sarcoma TGLs = 1-9 ]



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 740 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47738

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Ovary
- \* Skin
- \* Thyroid Gland
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea

MISSING

- \* Lymph Node, Mediastinal

OBSERVATIONS

- |                   |   |  |                      |
|-------------------|---|--|----------------------|
| * Harderian Gland |   | Hyperplasia                                    | Minimal              |
| * Kidney          |   | Nephropathy                                    | Moderate             |
| * Liver           |   | Hepatocellular Carcinoma<br>Mitotic Alteration | Marked               |
|                   | [ Hepatocellular Carcinoma TGLs = 2-12 ]<br>[ Mitotic Alteration TGLs = 3-5 ] |  |                      |
| * Lung            |   | Hepatocellular Carcinoma                       | Metastatic (Liver)   |
| * Nose            | Glands, Olfactory Epi<br>Olfactory Epi  | Hyperplasia<br>Metaplasia                      | Moderate<br>Moderate |
| * Pituitary Gland | Pars Distalis   | Hyperplasia                                    | Moderate             |
| * Spleen          |   | Lymphoma Malignant                             |                      |
|                   | [ Lymphoma Malignant TGLs = 1-5 ]   |  |                      |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 742 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 731 HISTO: 47740

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mandibular
- \* Ovary
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Lymph Node, Mediastinal
- \* Pancreas
- \* Skin
- \* Thymus

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Thyroid Gland Follicular Cel Hyperplasia Mild

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 743 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 684  
HISTO: 47741

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus
- \* Uterus

MISSING

- \* Lymph Node, Bronchial

OBSERVATIONS

- |                  |  |                           |                      |
|------------------|--|---------------------------|----------------------|
| * Adrenal Cortex |  | Hyperplasia               | Mild                 |
| * Kidney         |  | Nephropathy               | Mild                 |
| * Liver          | [ Hepatocellular Carcinoma TGLs = 1-12 ] | Hepatocellular Carcinoma  |                      |
| * Nose           | Glands, Olfactory Epi<br>Olfactory Epi   | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary          | [ Cyst TGLs = 2-8 ]                      | Cyst                      |                      |

PRIMARY CAUSE OF DEATH - Liver Hepatocellular Carcinoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 744 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Moribund Sacrifice

DAY ON TEST: 694 HISTO: 47742

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Mammary Gland
- \* Pituitary Gland
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Ovary
- \* Salivary Glands
- \* Thyroid Gland
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mesenteric
- \* Parathyroid Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial

INSUFFICIENT TISSUE

- \* Clitoral Gland

OBSERVATIONS

- |  |   |                                 |
|--|---|---------------------------------|
| * Kidney   | Nephropathy   | Minimal                         |
| * Liver<br>[ Hepatocellular Adenoma TGLs = 2-5 ] | Hepatocellular Adenoma                                  |                                 |
| * Lung   | Fibrosarcoma  | Metastatic (Skin)               |
| * Lymph Node, Mediastinal                        | Fibrosarcoma  | Metastatic (Skin)               |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi<br>Olfactory Epi | Moderate<br>Minimal<br>Moderate |
| * Skin<br>[ Fibrosarcoma TGLs = 1-12 ]           | Subcut Tiss<br>Fibrosarcoma                             |                                 |
| * Spleen   | Hematopoietic Cell Proliferation                        | Marked                          |

PRIMARY CAUSE OF DEATH - Skin Subcut Tiss Fibrosarcoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 745 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 732 HISTO: 47743

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Islets, Pancreatic
- \* Lung
- \* Salivary Glands
- \* Thymus
- \* Uterus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Kidney
- \* Mammary Gland
- \* Skin
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Pancreas
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Liver
- \* Pituitary Gland
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Intestine Small, Jejunum [ Lymphoma Malignant ] Peyers Patch TGLs = 5-13 Lymphoma Malignant
- \* Lymph Node, Mandibular [ Lymphoma Malignant ] TGLs = 1-12 Lymphoma Malignant
- \* Lymph Node, Mesenteric Lymphoma Malignant
- \* Nose Glands, Olfactory Epi Olfactory Epi Hyperplasia Metaplasia Moderate Moderate
- \* Ovary [ Cyst TGLs = 2-8 ] Cyst
- \* Spleen [ Lymphoma Malignant ] TGLs = 3,4-5 Lymphoma Malignant



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 746 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Moribund Sacrifice

DAY ON TEST: 527  
HISTO: 47744

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Adrenal Medulla
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Bone
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lung
- \* Ovary
- \* Spleen
- \* Trachea
- \* Bone Marrow
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Stomach, Forestomach
- \* Urinary Bladder

MISSING

- \* Clitoral Gland
- \* Lymph Node, Bronchial
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland

OBSERVATIONS

- \* Kidney Nephropathy Minimal
- \* Liver Tension Lipidosis Minimal
- \* Nose Glands, Olfactory Epi Hyperplasia Moderate  
Olfactory Epi Metaplasia Moderate
- \* Pituitary Gland Pars Distalis Adenoma  
[ Adenoma TGLs = 2-9 ]
- \* Thyroid Gland Follicular Cel Hyperplasia Moderate

PRIMARY CAUSE OF DEATH - Pituitary Gland Pars Distalis Adenoma

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 747 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 732  
HISTO: 47745

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Gallbladder
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lung
- \* Mammary Gland
- \* Skin
- \* Thymus
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Bronchial
- \* Pancreas
- \* Spleen
- \* Thyroid Gland
- \* Bone
- \* Esophagus
- \* Heart
- \* Intestine Small, Duodenum
- \* Kidney
- \* Lymph Node, Mandibular
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Trachea
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Salivary Glands
- \* Stomach, Glandular
- \* Urinary Bladder

MISSING

- \* Lymph Node, Mediastinal

INSUFFICIENT TISSUE

- \* Parathyroid Gland

OBSERVATIONS

- |          |   |                           |                      |
|----------|---|---------------------------|----------------------|
| * Liver  |   | Tension Lipidosis         | Mild                 |
| * Nose   | Glands, Olfactory Epi<br>Olfactory Epi    | Hyperplasia<br>Metaplasia | Moderate<br>Moderate |
| * Ovary  |   | Cyst                      |                      |
| * Uterus | Endometrium<br>[ Hyperplasia TGLs = 1-9 ] | Hyperplasia               | Cystic, Marked       |

TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 748 TMT: 8 DOSE: 600 PPM

SEX: Female DISP: Terminal Sacrifice

DAY ON TEST: 733 HISTO: 47746

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- \* Adrenal Cortex
- \* Brain
- \* Harderian Gland
- \* Intestine Large, Rectum
- \* Islets, Pancreatic
- \* Lymph Node, Mediastinal
- \* Parathyroid Gland
- \* Spleen
- \* Trachea
- \* Adrenal Medulla
- \* Clitoral Gland
- \* Heart
- \* Intestine Small, Duodenum
- \* Larynx
- \* Lymph Node, Mesenteric
- \* Pituitary Gland
- \* Stomach, Forestomach
- \* Urinary Bladder
- \* Bone
- \* Esophagus
- \* Intestine Large, Cecum
- \* Intestine Small, Ileum
- \* Lymph Node, Bronchial
- \* Mammary Gland
- \* Salivary Glands
- \* Stomach, Glandular
- \* Uterus
- \* Bone Marrow
- \* Eye
- \* Intestine Large, Colon
- \* Intestine Small, Jejunum
- \* Lymph Node, Mandibular
- \* Pancreas
- \* Skin
- \* Thymus

INSUFFICIENT TISSUE

- \* Gallbladder

OBSERVATIONS

- |                 |   |  |                      |
|-----------------|---|--|----------------------|
| * Kidney        |   | Nephropathy  | Minimal              |
| * Liver         |   | Hepatocellular Adenoma<br>Hepatocellular Carcinoma |                      |
|                 | [ Hepatocellular Adenoma TGLs = 1-12 ]<br>[ Hepatocellular Carcinoma TGLs = 2-5 ] |  |                      |
| * Lung          |   | Hepatocellular Carcinoma                           | Metastatic (Liver)   |
| * Nose          | Glands, Olfactory Epi<br>Olfactory Epi  | Hyperplasia<br>Metaplasia                          | Moderate<br>Moderate |
| * Ovary         |   | Tubulostromal Adenoma                              |                      |
| * Thyroid Gland | Follicular Cel  | Hyperplasia  | Minimal              |



TDMS No. 88006 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: GRUMBEIN, S.

Date Report Requested: 07/19/2005

Time Report Requested: 11:42:31

First Dose M/F: 07/30/01 / 07/30/01

Lab: BNW

ANIMAL NUM: 750 TMT: 8  
DOSE: 600 PPM

SEX: Female  
DISP: Terminal Sacrifice

DAY ON TEST: 733  
HISTO: 47748

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- |                            |                           |                             |                          |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex           | * Adrenal Medulla         | * Bone                      | * Bone Marrow            |
| * Brain                    | * Clitoral Gland          | * Esophagus                 | * Eye                    |
| * Gallbladder              | * Harderian Gland         | * Heart                     | * Intestine Large, Cecum |
| * Intestine Large, Colon   | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Islets, Pancreatic      | * Larynx                    | * Lymph Node, Bronchial  |
| * Lymph Node, Mandibular   | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric    | * Mammary Gland          |
| * Ovary                    | * Pancreas                | * Salivary Glands           | * Skin                   |
| * Spleen                   | * Stomach, Forestomach    | * Stomach, Glandular        | * Thymus                 |
| * Thyroid Gland            | * Trachea                 | * Urinary Bladder           | * Uterus                 |

MISSING

- \* Parathyroid Gland

OBSERVATIONS

- |                   |                                       |                              |                  |
|-------------------|---------------------------------------|------------------------------|------------------|
| * Kidney          |                                       | Metaplasia                   | Osseous, Minimal |
| * Liver           | [ Hepatocellular Adenoma TGLs = 2-5 ] | Hepatocellular Adenoma       | Multiple         |
| * Lung            |                                       | Alveolar/Bronchiolar Adenoma |                  |
| Mesentery         | Fat                                   | Necrosis                     | Mild             |
|                   | [ Necrosis TGLs = 1-6 ]               |                              |                  |
| * Nose            | Glands, Olfactory Epi                 | Hyperplasia                  | Moderate         |
|                   | Olfactory Epi                         | Atrophy                      | Minimal          |
|                   | Olfactory Epi                         | Metaplasia                   | Moderate         |
| * Pituitary Gland | Pars Distalis                         | Hyperplasia                  | Mild             |

\*\*\* END OF REPORT \*\*\*