

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

F1_RD

C Number: C20307
Lock Date: 12/23/2009
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.4.2.1_003
PWG Approval Date: NONE

TDMS No. 20307 - 03

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CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 1

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone Marrow
- * Brain
- * Epididymis
- * Eye
- * Harderian Gland
- * Heart
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Ileum
- * Intestine Small, Jejunum
- * Larynx
- * Liver
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Lymph Node, Mandibular
- * Pancreas
- * Parathyroid Gland
- * Prostate
- * Oral Mucosa
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Salivary Glands
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Spleen
- * Thyroid Gland
- * Tongue
- * Trachea
- * Thymus
- * Urinary Bladder

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- * Blood Vessel

Note: Tissue is present on subsequent slide.

- * Kidney

- * Lung

- * Preputial Gland

- * Skin

Note: Skin, Control is Normal.

Nephropathy

Hemorrhage

Inflammation

Inflammation

Mild

Moderate

Chronic, Mild

Chronic, Minimal

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CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 3

TRT#: 1

SEX: Male

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 3

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Eye | * Harderian Gland | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Liver | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Oral Mucosa | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Skin, Site Of Application | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | |

OBSERVATIONS

- | | | | |
|---|--------------|--------------|------------------|
| * Adren Cortex | | | |
| Note: One Adrenal Gland is missing. | | | |
| * Blood Vessel | | | |
| Note: Tissue located in subsequent slide. | | | |
| * Heart | | Inflammation | Chronic, Mild |
| * Kidney | Renal Tubule | Casts | Minimal |
| | | Nephropathy | Minimal |
| * Larynx | | Inflammation | Neutrophil, Mild |
| * Lung | | Inflammation | Chronic, Minimal |
| * Preputial Gland | | Inflammation | Chronic, Minimal |
| * Skin | | | |
| Note: Skin, Control is Normal. | | | |

TDMS No. 20307 - 03

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 6

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Adren Cortex

Note: One Adrenal Gland is Missing.

- * Kidney

Nephropathy

Minimal

- * Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

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Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 9

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Adren Cortex
 - Note: One Adrenal Gland is Missing.
- * Kidney
 - Nephropathy
 - Mild
- * Lung
 - Inflammation
 - Chronic, Moderate
- * Skin
 - Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection.
 - Note: Skin, Control is Normal.

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

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P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

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Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 10

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney
- * Skin

Nephropathy

Mild

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

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Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 11

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 11

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Eye | * Harderian Gland | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Liver | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Oral Mucosa | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Skin, Site Of Application |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | |
|----------|----------------|-------------------|
| * Heart | Cardiomyopathy | Minimal |
| * Kidney | Nephropathy | Minimal |
| * Lung | Inflammation | Chronic, Moderate |
- Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection.
- * Skin
Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 12

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 12

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Pancreas | * Parathyroid Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Skin, Site Of Application | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Urinary Bladder | | |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | |
|----------|-------------|---------|
| * Kidney | Nephropathy | Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Date Report Requested: 07/27/2011

Test Type: 90-DAY

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

Time Report Requested: 12:19:40

Route: SKIN APPLICATION

CAS Number: 54464-57-2

First Dose M/F: 12/12/06 / 12/13/06

Species/Strain: RATS/F344/N Tac

Lab: MBA

ANIMAL ID: 13

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 13

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|-----------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Skin, Site Of Application | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | |

OBSERVATIONS

- | | | |
|----------|-------------|---------|
| * Kidney | Nephropathy | Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 14

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 14

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lung |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Pancreas | * Parathyroid Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Skin, Site Of Application | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Urinary Bladder | | |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | |
|----------|-------------|---------|
| * Kidney | Nephropathy | Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 15

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 15

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Kidney
- * Larynx
- * Liver
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Lung Inflammation Chronic, Mild
- * Skin
- Note: Skin, Control is Normal.
- * Testes
- Note: One section of testes is present.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 18

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 18

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney
 - * Lung
 - * Skin
- Nephropathy
Inflammation
- Minimal
Chronic, Moderate

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

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First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 19

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 19

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney Nephropathy Minimal
- * Preputial GI
- Note: Inflammatory lesions involves the peripheral adipose tissue and not the actual gland.
- * Skin
- Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 20

TRT#: 2

SEX: Male

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 20

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Oral Mucosa | * Parathyroid Gland |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Skin, Site Of Application | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Testes | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |

OBSERVATIONS

- | | | | |
|---|--------|-----------------------|------------------|
| * Kidney | | Nephropathy | Minimal |
| * Lung | | Inflammation | Chronic, Mild |
| Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection. | | | |
| * Lymph Node, Mesenteric | | Infiltration Cellular | Histiocyte, Mild |
| * Pancreas | Acinus | Atrophy | Mild |
| * Skin | | | |
| Note: Skin, Control is Normal. | | | |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 21

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 21

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 22

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 22

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Renal Tubule

Casts
Nephropathy

Minimal
Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 23

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 23

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Control

Hyperplasia

Minimal

Control

Inflammation

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 24

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 24

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 25

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 25

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 26

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 26

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 27

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 27

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

Note: This is an incident change not related to treatment.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 28

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 28

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 29

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 29

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 30

TRT#: 3

SEX: Male

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 30

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 31

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 31

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 32

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 32

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 33

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 33

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 34

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 34

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 35

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 35

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 36

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 36

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 37

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 37

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 38

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 38

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 39

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 39

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Renal Tubule

Casts
Nephropathy

Minimal
Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 40

TRT#: 4

SEX: Male

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 40

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 41

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 41

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 42

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 42

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 43

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 43

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 44

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 44

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 45

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 45

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 46

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 46

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 47

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 47

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Contol is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 48

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 48

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 49

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 49

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 50

TRT#: 5

SEX: Male

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 50

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 51

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 51

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 52

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 52

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 53

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 53

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 54

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 54

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 55

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 55

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 56

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 56

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 57

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 57

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Renal Tubule

Casts
Nephropathy

Minimal
Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis
Hyperplasia

Minimal
Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 58

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 58

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 59

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 59

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 60

TRT#: 6

SEX: Male

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 60

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Nephropathy

Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 61

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 61

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Eye | * Harderian Gland | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Liver | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Oral Mucosa | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Testes | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |

OBSERVATIONS

- | | | |
|--------------------------------|-----------------------|------------------|
| * Heart | Cardiomyopathy | Minimal |
| * Kidney | Nephropathy | Mild |
| * Lung | Infiltration Cellular | Histiocyte, Mild |
| | Inflammation | Chronic, Mild |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperplasia | Minimal |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 62

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 62

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Oral Mucosa |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Testes | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |

MISSING

- * Preputial Gland

OBSERVATIONS

- | | | |
|--------------------------------|----------------|------------------|
| * Kidney | Nephropathy | Mild |
| * Lung | Inflammation | Chronic, Minimal |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Minimal |
| | Hyperplasia | Mild |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 63

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 63

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney Nephropathy Minimal
- * Skin
- Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperplasia Minimal
- Inflammation Minimal

TDMS No. 20307 - 03

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Date Report Requested: 07/27/2011

Test Type: 90-DAY

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

Time Report Requested: 12:19:40

Route: SKIN APPLICATION

CAS Number: 54464-57-2

First Dose M/F: 12/12/06 / 12/13/06

Species/Strain: RATS/F344/N Tac

Lab: MBA

ANIMAL ID: 64

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 64

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 |
| * Larynx | * Liver | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Oral Mucosa | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | |

MISSING

- * Blood Vessel

OBSERVATIONS

- | | | |
|---|----------------|------------------|
| * Kidney | Nephropathy | Mild |
| * Lung | Inflammation | Chronic, Mild |
| Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection. | | |
| * Preputial Gland | Inflammation | Chronic, Minimal |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Minimal |
| | Hyperplasia | Mild |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 65

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 65

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Epididymis | * Esophagus |
| * Eye | * Harderian Gland | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum |
| * Larynx | * Liver | * Lung | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Oral Mucosa |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | |
|--------------------------------|-----------------------|----------------------------|
| * Heart | Infiltration Cellular | Histiocyte, Focal, Minimal |
| * Kidney | Nephropathy | Mild |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Minimal |
| | Hyperplasia | Minimal |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 66

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 66

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 | * Larynx | * Liver | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Oral Mucosa |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|-----------------------------|--------------------------------|----------------|-----------------------------|
| * Kidney | | Nephropathy | Mild |
| * Lung | | Inflammation | Chronic, Moderate |
| Lymph Node | Mediastinal | Hyperplasia | Lymphoid, Diffuse, Moderate |
| | [Hyperplasia TGLs = 1-19] | | |
| * Skin | Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | | Hyperkeratosis | Minimal |
| | | Hyperplasia | Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 67

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 67

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney Nephropathy Mild
- * Skin
- Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperkeratosis Mild
- Hyperplasia Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 68

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 68

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney Nephropathy Mild
- * Skin
- Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperkeratosis Minimal
- Hyperplasia Minimal

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 69

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 69

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- * Kidney Nephropathy Mild
- * Skin
- Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperkeratosis Minimal
- Hyperplasia Minimal

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 70

TRT#: 7

SEX: Male

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 70

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Larynx
- * Liver
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Preputial Gland
- * Prostate
- * Salivary Glands
- * Seminal Vesicle
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Testes
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder

OBSERVATIONS

- * Kidney Nephropathy Mild
- * Lung Inflammation Chronic, Moderate
Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection.
- * Skin
Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperkeratosis Minimal
Hyperplasia Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 71

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 71

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Skin, Site Of Application | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | | |
|--------|--------------|--------------|-------------|
| * Lung | Interstitial | Inflammation | Focal, Mild |
| * Skin | | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 72

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 72

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|--------------------------|----------------------------|-----------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | Ear |
| * Esophagus | * Eye | * Harderian Gland | * Heart |
| * Intestine Large, Cecum | * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum |
| * Intestine Small, Ileum | * Intestine Small, Jejunum | * Kidney | * Larynx |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Salivary Glands | * Skin | * Skin, Site Of Application | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | | |
|---------|--------------|--------------|----------------|
| * Liver | | Inflammation | Chronic, Mild |
| * Lung | Interstitial | Inflammation | Focal, Minimal |
| * Skin | | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 73

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 73

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Kidney | * Larynx | * Lymph Node, Mandibular | * Mammary Gland |
| * Nose | * Oral Mucosa | * Ovary | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Skin | * Skin, Site Of Application |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |
| * Uterus | | | |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|---------------------|
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Liver | Inflammation | Chronic, Moderate |
| * Lung | Inflammation | Chronic, Mild |
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 74

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 74

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Blood Vessel
- * Clitoral Gland
- * Parathyroid Gland

OBSERVATIONS

- * Liver
 - * Skin
- Inflammation
- Chronic, Mild

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Date Report Requested: 07/27/2011

Test Type: 90-DAY

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

Time Report Requested: 12:19:40

Route: SKIN APPLICATION

CAS Number: 54464-57-2

First Dose M/F: 12/12/06 / 12/13/06

Species/Strain: RATS/F344/N Tac

Lab: MBA

ANIMAL ID: 75

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 75

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Lung |
| * Lymph Node, Mandibular | * Mammary Gland | * Nose | * Oral Mucosa |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Skin, Site Of Application | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

MISSING

- * Lymph Node, Mesenteric

OBSERVATIONS

- * Liver
- * Skin

Inflammation

Chronic, Mild

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 76

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 76

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Oral Mucosa | * Ovary | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Skin |
| * Skin, Site Of Application | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Uterus | | | |

INSUFFICIENT TISSUE

- * Urinary Bladder

OBSERVATIONS

- | | | |
|-------------------|--------------|------------------|
| * Harderian Gland | Inflammation | Chronic, Mild |
| * Kidney | Nephropathy | Minimal |
| * Liver | Inflammation | Chronic, Minimal |
| * Lung | Inflammation | Chronic, Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

- * Urin Bladder

Note: The section only contains the bladder wall.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 77

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 77

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Mandibular | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Skin, Site Of Application |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|---------------------|
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 78

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 78

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|-----------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Oral Mucosa | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Skin, Site Of Application | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------|-----------------|--------------|----------------|
| * Kidney | | Nephropathy | Minimal |
| * Liver | | Inflammation | Chronic, Mild |
| * Lung | Interstitialium | Inflammation | Focal, Minimal |
| * Skin | | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 79

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 79

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * 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
- * Kidney
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Salivary Glands
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

MISSING

- * Mammary Gland

OBSERVATIONS

- * Harderian Gland
 - * Lymph Node, Mesenteric
 - * Pituitary Gland
 - * Skin
- Pars Distalis
- Inflammation
Infiltration Cellular
Cyst
- Chronic, Minimal
Histiocyte, Mild
Focal, Multiple, Minimal

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 80

TRT#: 8

SEX: Female

DAY ON TEST: 92

DOSE: untreated

DISP: Terminal Sacrifice

HISTO: 80

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Mandibular | * Nose | * Oral Mucosa |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Skin, Site Of Application | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|---------------------|
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Minimal |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 81

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 81

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone
- * Bone Marrow
- * Brain
- * Clitoral Gland
- * Esophagus
- * Eye
- * Harderian Gland
- * Heart
- * Intestine Large, Cecum
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Ileum
- * Intestine Small, Jejunum
- * Kidney
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Salivary Glands
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

Lymph Node Iliac Hyperplasia Diffuse, Minimal
 [Hyperplasia TGLs = 1-19]
 * Skin
 Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 82

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 82

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone
- * Bone Marrow
- * Brain
- * Clitoral Gland
- * Esophagus
- * Eye
- * Harderian Gland
- * Intestine Large, Cecum
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Ileum
- * Intestine Small, Jejunum
- * Kidney
- * Larynx
- * Liver
- * Lymph Node, Mandibular
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Salivary Glands
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

OBSERVATIONS

- * Heart Cardiomyopathy Minimal
- * Lung Inflammation Chronic, Minimal
- * Lymph Node, Mesenteric Infiltration Cellular Histiocyte, Mild
- * Skin
- Note: Skin, Control is Normal.
- * Uterus
- Note: TGL 1-15, no microscopic correlation for dilated uterus.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 83

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 83

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Larynx | * Liver | * Lung | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Oral Mucosa | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Skin, Site Of Application | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Uterus | | |

MISSING

- * Urinary Bladder

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|------------------|
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Kidney | Inflammation | Chronic, Minimal |
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Date Report Requested: 07/27/2011

Test Type: 90-DAY

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

Time Report Requested: 12:19:40

Route: SKIN APPLICATION

CAS Number: 54464-57-2

First Dose M/F: 12/12/06 / 12/13/06

Species/Strain: RATS/F344/N Tac

Lab: MBA

ANIMAL ID: 84

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 84

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|-----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Skin, Site Of Application |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Tongue | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|--------|--------------|--------------|----------------|
| * Lung | Interstitial | Inflammation | Focal, Minimal |
| * Skin | | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 85

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 85

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone Marrow
- * Brain
- * Clitoral Gland
- * Esophagus
- * Eye
- * Harderian Gland
- * Heart
- * Intestine Large, Cecum
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Jejunum
- * Kidney
- * Larynx
- * Lung
- * Lymph Node, Mandibular
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Salivary Glands
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- * Liver Inflammation Chronic, Mild
- * Lymph Node, Mesenteric Infiltration Cellular Histiocyte, Minimal
- * Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 87

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 87

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Bone Marrow
- * Eye
- * Intestine Large, Colon
- * Intestine Small, Jejunum
- * Mammary Gland
- * Pancreas
- * Skin, Site Of Application
- * Thymus
- * Urinary Bladder
- * Adrenal Medulla
- * Brain
- * Harderian Gland
- * Intestine Large, Rectum
- * Kidney
- * Nose
- * Parathyroid Gland
- * Spleen
- * Thyroid Gland
- * Uterus
- * Blood Vessel
- * Clitoral Gland
- * Heart
- * Intestine Small, Duodenum
- * Larynx
- * Oral Mucosa
- * Salivary Glands
- * Stomach, Forestomach
- * Tongue
- * Bone
- * Esophagus
- * Intestine Large, Cecum
- * Intestine Small, Ileum
- * Lymph Node, Mandibular
- * Ovary
- * Skin
- * Stomach, Glandular
- * Trachea

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- * Liver
 - * Lung
 - * Lymph Node, Mesenteric
 - * Skin
- Inflammation
- Chronic, Minimal
- Inflammation
- Chronic, Moderate
- Mineralization
- Minimal
- Infiltration Cellular
- Histiocyte, Minimal

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 88

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 88

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone
- * Bone Marrow
- * Brain
- * Clitoral Gland
- * Esophagus
- * Eye
- * Harderian Gland
- * Heart
- * Intestine Large, Cecum
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Ileum
- * Intestine Small, Jejunum
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Salivary Glands
- * Skin
- * Skin, Site Of Application
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- * Kidney
 - Inflammation
 - Chronic, Minimal
 - Mineralization
 - Minimal
- * Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 89

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 89

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Oral Mucosa | * Ovary |
| * Pancreas | * Parathyroid Gland | * Salivary Glands | * Skin |
| * Skin, Site Of Application | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Urinary Bladder | * Uterus | | |

INSUFFICIENT TISSUE

- * Pituitary Gland

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|------------------|
| * Liver | Inflammation | Chronic, Mild |
| * Lung | Inflammation | Chronic, Mild |
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 90

TRT#: 9

SEX: Female

DAY ON TEST: 92

DOSE: vehicle

DISP: Terminal Sacrifice

HISTO: 90

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Kidney | * Larynx | * Lung | * Lymph Node, Mandibular |
| * Mammary Gland | * Nose | * Oral Mucosa | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Skin, Site Of Application | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | |
|--------------------------|-----------------------|------------------|
| * Clitoral Gland | Inflammation | Chronic, Minimal |
| * Liver | Inflammation | Chronic, Minimal |
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | |

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 91

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 91

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 92

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 92

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 93

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 93

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 94

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 94

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 95

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 95

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 96

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 96

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 97

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 97

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 98

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 98

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Moderate

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 99

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 99

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 100

TRT#: 10

SEX: Female

DAY ON TEST: 92

DOSE: 6.25%

DISP: Terminal Sacrifice

HISTO: 100

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 101

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 101

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 102

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 102

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 103

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 103

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 104

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 104

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 105

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 105

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 106

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 106

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 107

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 107

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 108

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 108

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 109

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 109

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 110

TRT#: 11

SEX: Female

DAY ON TEST: 92

DOSE: 12.5%

DISP: Terminal Sacrifice

HISTO: 110

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 111

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 111

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 112

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 112

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

OBSERVATIONS

Kidney

Mineralization

Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 113

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 113

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 114

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 114

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Mild

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 115

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 115

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 116

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 116

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 117

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 117

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Mild

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 118

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 118

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Mineralization

Minimal

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 119

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 119

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 120

TRT#: 12

SEX: Female

DAY ON TEST: 92

DOSE: 25%

DISP: Terminal Sacrifice

HISTO: 120

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Inflammation

Chronic, Minimal

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 121

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 121

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 122

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 122

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 123

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 123

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 124

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 124

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 125

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 125

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Mild

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 126

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 126

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Liver

* Skin

* Skin, Site Of Application

OBSERVATIONS

Kidney

Pelvis

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 127

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 127

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 128

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 128

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

Liver

* Skin

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Mild

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 129

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 129

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

* Skin, Site Of Application

OBSERVATIONS

Liver

Inflammation

Chronic, Mild

* Skin

Note: Skin, Control is Normal.

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 130

TRT#: 13

SEX: Female

DAY ON TEST: 92

DOSE: 50%

DISP: Terminal Sacrifice

HISTO: 130

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

Kidney

* Skin

OBSERVATIONS

Liver

Inflammation

Chronic, Minimal

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 131

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 131

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Mandibular | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

OBSERVATIONS

- | | | |
|--------------------------------|-----------------------|------------------|
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Mild |
| | Hyperplasia | Mild |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 133

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 133

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Mandibular | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

OBSERVATIONS

- | | | |
|--------------------------------|-----------------------|------------------|
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Mild |
| | Hyperplasia | Mild |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 134

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 134

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|----------------------------|---------------------------|-----------------------------|--------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * Bone |
| * Bone Marrow | * Brain | * Clitoral Gland | * Esophagus |
| * Eye | * Harderian Gland | * Heart | * Intestine Large, Cecum |
| * Intestine Large, Colon | * Intestine Large, Rectum | * Intestine Small, Duodenum | * Intestine Small, Ileum |
| * Intestine Small, Jejunum | * Kidney | * Larynx | * Lung |
| * Lymph Node, Mandibular | * Mammary Gland | * Nose | * Oral Mucosa |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Tongue |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|--|---------------|-----------------------|----------------------|
| * Liver | | Inflammation | Chronic, Minimal |
| * Lymph Node, Mesenteric | | Infiltration Cellular | Histiocyte, Mild |
| * Skin | | | |
| Note: Skin, Control is Normal. | | | |
| * Skin, Site of Application | Dermis | Inflammation | Suppurative, Minimal |
| | Hair Follicle | Necrosis | Mild |
| Note: THERE IS NOTABLE KARYORRHEXIS OF FIBROCYTES IN THE SUPERFICIAL DERMIS IN THE ABSENCE OF INFLAMMATION OR EVIDENCE OF REPAIR. DERMAL COLLAGEN IS INTACT. | | | |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 135

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 135

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

- * Liver Inflammation Chronic, Minimal
- * Lung Interstitium Inflammation Focal, Minimal
- * Skin
- Note: Skin, Control is Normal.
- * Skin, Site of Application Hyperkeratosis Mild
- Hyperplasia Moderate

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 136

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 136

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Minimal

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 137

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 137

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Larynx | * Lymph Node, Mandibular | * Mammary Gland | * Nose |
| * Oral Mucosa | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Tongue | * Trachea | * Urinary Bladder | * Uterus |

OBSERVATIONS

- | | | |
|---|-----------------------|----------------------|
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Kidney | Mineralization | Mild |
| * Liver | Inflammation | Chronic, Mild |
| * Lung | Inflammation | Chronic, Moderate |
| Note: The angiocentric pattern of inflammation is suggestive of possible rat respiratory virus infection. | | |
| * Lymph Node, Mesenteric | Infiltration Cellular | Histiocyte, Moderate |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Mild |
| | Hyperplasia | Mild |

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 138

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 138

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- * Adrenal Cortex
- * Adrenal Medulla
- * Blood Vessel
- * Bone
- * Bone Marrow
- * Brain
- * Clitoral Gland
- * Ear
- * Esophagus
- * Eye
- * Harderian Gland
- * Heart
- * Intestine Large, Cecum
- * Intestine Large, Colon
- * Intestine Large, Rectum
- * Intestine Small, Duodenum
- * Intestine Small, Ileum
- * Intestine Small, Jejunum
- * Kidney
- * Larynx
- * Liver
- * Lung
- * Lymph Node, Mandibular
- * Lymph Node, Mesenteric
- * Mammary Gland
- * Nose
- * Oral Mucosa
- * Ovary
- * Pancreas
- * Parathyroid Gland
- * Pituitary Gland
- * Salivary Glands
- * Skin
- * Spleen
- * Stomach, Forestomach
- * Stomach, Glandular
- * Thymus
- * Thyroid Gland
- * Tongue
- * Trachea
- * Urinary Bladder
- * Uterus

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperkeratosis

Mild

Hyperplasia

Mild

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 139

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 139

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Skin

Note: Skin, Control is Normal.

* Skin, Site of Application

Hyperplasia

Minimal

TDMS No. 20307 - 03

Test Type: 90-DAY

Route: SKIN APPLICATION

Species/Strain: RATS/F344/N Tac

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Ethanone, 1-(1,2,3,4,5,6,7,8-Octahydro-2,3,8,8-Tetramethyl-2-Naphthalenyl)- (Iso-E Super)

CAS Number: 54464-57-2

Date Report Requested: 07/27/2011

Time Report Requested: 12:19:40

First Dose M/F: 12/12/06 / 12/13/06

Lab: MBA

ANIMAL ID: 140

TRT#: 14

SEX: Female

DAY ON TEST: 92

DOSE: 100%

DISP: Terminal Sacrifice

HISTO: 140

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * Adrenal Cortex | * Adrenal Medulla | * Blood Vessel | * 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 |
| * Kidney | * Larynx | * Lymph Node, Mandibular | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Oral Mucosa | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Tongue | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | |
|--------------------------------|-----------------------|---------------------|
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Liver | Inflammation | Chronic, Mild |
| * Lung | Infiltration Cellular | Histiocyte, Minimal |
| * Skin | | |
| Note: Skin, Control is Normal. | | |
| * Skin, Site of Application | Hyperkeratosis | Mild |
| | Hyperplasia | Mild |

*** END OF REPORT ***