

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

F1_RE

C Number: C20523
Lock Date: 02/24/2009
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.3.1
PWG Approval Date: NONE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57622

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | |
|-------------------|--------------|------------------|
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Prostate | Inflammation | Chronic, Mild |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 2

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57623

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * 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 |
| * Islets, Pancreatic | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | |
|------------------|-----------------------------------|
| * Adrenal Cortex | Accessory Adrenal Cortical Nodule |
| * Nose | Inflammation |
| | Chronic, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 3

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57624

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 |
| * Islets, Pancreatic | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Preputial Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|---------|---------------|-------------------------------|---------|
| * Heart | | Cardiomyopathy | Minimal |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 4

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57625

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 | * Islets, Pancreatic | * Kidney | * Larynx |
| * Liver | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

OBSERVATIONS

- | | | | |
|-------------------|--------|----------------|---------------|
| * Lung | Artery | Mineralization | Mild |
| * Nose | | Necrosis | Minimal |
| * Preputial Gland | | Inflammation | Chronic, Mild |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 5

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57626

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 | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|--------------|--------------|---------|
| * Kidney | Renal Tubule | Regeneration | Minimal |
|----------|--------------|--------------|---------|

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 6

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57627

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|---------------------------|----------------------------|
| * 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 |
| * Islets, Pancreatic | * Larynx | * Liver | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Nose | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | |
|-------------------|-----------------------------------|-------------------------|
| * Adrenal Cortex | Accessory Adrenal Cortical Nodule | |
| * Kidney | Inflammation | Chronic Active, Minimal |
| * Preputial Gland | Inflammation | Chronic, Mild |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 7

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57628

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 | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|--------------|--------------|---------|
| * Kidney | Renal Tubule | Regeneration | Minimal |
|----------|--------------|--------------|---------|

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 8

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57629

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | |
|-------------------|-----------------------------------|-------------------------|
| * Adrenal Cortex | Accessory Adrenal Cortical Nodule | |
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Prostate | Inflammation | Chronic Active, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 9

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57630

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * 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 |
| * Islets, Pancreatic | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Nose | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Prostate | * Salivary Glands | * Seminal Vesicle |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | |
|-------------------|-----------------------------------|------------------|
| * Adrenal Cortex | Accessory Adrenal Cortical Nodule | |
| * Preputial Gland | Inflammation | Chronic, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 10

TRT#: 1

SEX: Male

DAY ON TEST: 93

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57631

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 | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Parathyroid Gland |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Testes | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | |
|------------|--------------|-------------------------|
| * Kidney | Inflammation | Minimal |
| * Pancreas | Inflammation | Chronic Active, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 201

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57722

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Metaplasia

Osseous, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 202

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57723

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 203

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57724

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

Ulcer

Minimal

* Lung

Metaplasia

Osseous, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 204

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57725

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 205

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57726

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 206

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57727

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

Liver

Inflammation

Chronic Active, Focal, Marked

[Inflammation TGLs = 1-7]

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 207

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57728

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 208

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57729

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 209

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57730

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 210

TRT#: 3

SEX: Male

DAY ON TEST: 93

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57731

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 401

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57702

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 402

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57703

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Pigmentation

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 403

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57704

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Metaplasia
Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Osseous, Minimal
Mild
Mild
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 404

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57705

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Moderate
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Metaplasia
Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Osseous, Minimal
Minimal
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 405

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57706

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

Skin

Ulcer

Moderate

[Ulcer TGLs = 1-7]

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 406

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57707

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Mild
Mild
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 407

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57708

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Goblet Cell

Pigmentation
Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Osseous, Minimal
Minimal
Mild
Mild
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 408

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57709

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Moderate
Moderate
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 409

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57710

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Osseous, Minimal

Pigmentation

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 410

TRT#: 5

SEX: Male

DAY ON TEST: 93

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57711

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 601

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57682

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 602

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57683

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Pigmentation
Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Minimal
Moderate
Moderate
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 603

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57684

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Marked
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Mild
Mild
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 604

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57685

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

Pigmentation

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

Degeneration

Mild

Testes

Germinal Epith

[Degeneration TGLs = 1-9]

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 605

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57686

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 606

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57687

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Moderate
Moderate
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 607

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57688

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

Pigmentation

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 608

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57689

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Mild
Mild
Minimal
Suppurative, Minimal

Stomach, Glandular

Atrophy

Mild

[Atrophy TGLs = 1-16]

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 609

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57690

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Mild
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Moderate
Moderate
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 610

TRT#: 7

SEX: Male

DAY ON TEST: 93

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57691

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 801

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57662

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Mild
Mild
Minimal
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 802

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57663

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Mild
Mild
Minimal
Minimal
Suppurative, Minimal

Respirat Epith
Respirat Epith

Metaplasia
Necrosis

Squamous, Minimal
Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 803

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57664

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 804

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57665

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Marked
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 805

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57666

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Marked

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

Pigmentation

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 806

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57667

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Marked
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 807

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57668

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Mild
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Mild
Mild
Minimal
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 808

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57669

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Mild
Histiocyte, Mild
Chronic Active, Mild

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation
Metaplasia

Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal
Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 809

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57670

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Moderate
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Marked
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Moderate
Moderate
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 810

TRT#: 9

SEX: Male

DAY ON TEST: 93

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57671

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Mild
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation
Metaplasia

Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal
Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1001

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57642

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mesenteric | * Pancreas |
| * Pituitary Gland | * Preputial Gland | * Prostate | * Salivary Glands |
| * Seminal Vesicle | * Skin | * Spleen | * Stomach, Glandular |
| * Testes | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | | | |

MISSING

- | | |
|-----------------|---------------------|
| * Mammary Gland | * Parathyroid Gland |
|-----------------|---------------------|

OBSERVATIONS

- | | | | |
|---------------------------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Marked |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| | | Pigmentation | Minimal |
| * Lymph Node, Mediastinal | | Hyperplasia | Lymphoid, Moderate |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |
| * Stomach, Forestomach | | Inflammation | Chronic Active, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1002

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57643

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Moderate |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| | | Pigmentation | Minimal |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Moderate |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1003

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57644

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Moderate |
| | Respirat Epith | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1004

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57645

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Marked |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Moderate |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1005

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57646

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Mammary Gland

OBSERVATIONS

- * Heart
 - Cardiomyopathy
 - Inflammation
 - Hyperplasia
 - Inflammation
 - Metaplasia
 - Fibrosis
 - Infiltration Cellular
 - Inflammation
- * Intestine Large, Rectum
 - Accumulation, Hyaline Droplet
 - Accumulation, Hyaline Droplet
- * Larynx
 - Hyperplasia
 - Inflammation
 - Metaplasia
 - Fibrosis
 - Infiltration Cellular
 - Inflammation
- * Lung
 - Hyperplasia
 - Hyperplasia
 - Inflammation
 - Metaplasia
 - Inflammation
- * Nose
 - Olfactory Epi
 - Respirat Epith
 - Respirat Epith
 - Goblet Cell
 - Respirat Epith
- * Prostate
 - Accumulation, Hyaline Droplet
 - Accumulation, Hyaline Droplet
 - Hyperplasia
 - Hyperplasia
 - Inflammation
 - Metaplasia
 - Inflammation

- Minimal
- Chronic Active, Minimal
- Squamous, Mild
- Chronic Active, Minimal
- Squamous, Moderate
- Mild
- Histiocyte, Mild
- Chronic Active, Mild
- Mild
- Mild
- Minimal
- Minimal
- Suppurative, Minimal
- Squamous, Minimal
- Chronic, Mild

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1006

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57647

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Preputial Gland |
| * Prostate | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Marked |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| | | Pigmentation | Minimal |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Moderate |
| | Respirat Epith | Accumulation, Hyaline Droplet | Moderate |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1007

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57648

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Lymph Node, Mediastinal
- * Mammary Gland

OBSERVATIONS

- * Larynx
 - Hyperplasia
 - Inflammation
 - Metaplasia
 - * Lung
 - Fibrosis
 - Infiltration Cellular
 - Inflammation
 - * Nose
 - Olfactory Epi
 - Respirat Epith
 - Respirat Epith
 - Respirat Epith
 - Accumulation, Hyaline Droplet
 - Accumulation, Hyaline Droplet
 - Hyperplasia
 - Inflammation
 - Metaplasia
- Squamous, Moderate
Chronic Active, Minimal
Squamous, Moderate
Mild
Histocyte, Mild
Chronic Active, Mild
Moderate
Moderate
Minimal
Suppurative, Minimal
Squamous, Minimal

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1008

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57649

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 | * Islets, Pancreatic | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Preputial Gland | * Prostate |
| * Salivary Glands | * Seminal Vesicle | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Testes | * Thymus |
| * Thyroid Gland | * Trachea | * Urinary Bladder | |

MISSING

- * Mammary Gland

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Kidney | | Inflammation | Chronic Active, Minimal |
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Goblet Cell | Hyperplasia | Minimal |
| | Respirat Epith | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1009

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57650

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

MISSING

- * Mammary Gland

OBSERVATIONS

* Adrenal Cortex		Accessory Adrenal Cortical Nodule	
* Harderian Gland		Inflammation	Chronic, Minimal
* Kidney	Renal Tubule	Regeneration	Minimal
* Larynx		Hyperplasia	Squamous, Moderate
		Inflammation	Chronic Active, Minimal
		Metaplasia	Squamous, Moderate
* Lung		Fibrosis	Mild
		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Chronic Active, Mild
* Nose	Olfactory Epi	Accumulation, Hyaline Droplet	Mild
	Respirat Epith	Accumulation, Hyaline Droplet	Mild
	Respirat Epith	Hyperplasia	Minimal
	Goblet Cell	Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
* Preputial Gland		Inflammation	Chronic, Minimal

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1010

TRT#: 11

SEX: Male

DAY ON TEST: 93

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57651

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|--------------------------|
| * Adrenal Medulla | Blood Vessel | * Bone | * Bone Marrow |
| * Brain | * Epididymis | * Esophagus | * Eye |
| * Harderian Gland | * Heart | * Intestine Large, Cecum | * Intestine Large, Colon |
| * Intestine Small, Duodenum | * Intestine Small, Ileum | * Intestine Small, Jejunum | * Islets, Pancreatic |
| * Kidney | * Liver | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland | * Pancreas |
| * Parathyroid Gland | * Salivary Glands | * Seminal Vesicle | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Testes |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Pituitary Gland

OBSERVATIONS

- | | | | |
|---------------------------|----------------|-----------------------------------|-------------------------|
| * Adrenal Cortex | | Accessory Adrenal Cortical Nodule | |
| * Intestine Large, Rectum | | Metaplasia | Squamous, Minimal |
| * Larynx | | Hyperplasia | Squamous, Moderate |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Marked |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |
| * Preputial Gland | | Inflammation | Chronic, Minimal |
| * Prostate | | Inflammation | Chronic, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 101

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57632

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 | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Uterus |

OBSERVATIONS

- | | | | |
|-------------------|--------------------------|-----------------------------|-------------------------------|
| * Kidney | Transit Epithe
Pelvis | Hyperplasia
Inflammation | Moderate
Chronic, Moderate |
| * Urinary Bladder | Transit Epithe | Hyperplasia | Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 102

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57633

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 |
| * Islets, Pancreatic | * Kidney | * Larynx | * Liver |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Nose | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | |
|------------------|--------------|-------------------------|
| * Clitoral Gland | Inflammation | Chronic Active, Minimal |
| * Lung | Inflammation | Chronic Active, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 103

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57634

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | |
|----------|--------------|------------------|
| * Larynx | Inflammation | Chronic, Minimal |
|----------|--------------|------------------|

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 104

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57635

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|---------------------------|----------------------------|
| * 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 |
| * Islets, Pancreatic | * Kidney | * Larynx | * Liver |
| * Lung | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Trachea | * Urinary Bladder | * Uterus |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- * Adrenal Cortex Accessory Adrenal Cortical Nodule
- * Uterus

Note: The presence of neutrophils is within normal limits of variation.

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 106

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57637

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|-----------------------------|--------------------------|----------------------------|---------------------------|
| * 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 | * Islets, Pancreatic |
| * Kidney | * Larynx | * Liver | * Lung |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Ovary | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | |
|-------------------|-----------------------------------|------------------|
| * Adrenal Cortex | Accessory Adrenal Cortical Nodule | |
| * Harderian Gland | Inflammation | Chronic, Minimal |
| * Pancreas | Inflammation | Chronic, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 107

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57638

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 | * Islets, Pancreatic | * Kidney | * Larynx |
| * Liver | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Nose | * Ovary | * Pancreas |
| * Parathyroid Gland | * Pituitary Gland | * Salivary Glands | * Skin |
| * Spleen | * Stomach, Forestomach | * Stomach, Glandular | * Thymus |
| * Thyroid Gland | * Trachea | * Urinary Bladder | * Uterus |

MISSING

- * Lymph Node, Bronchial

OBSERVATIONS

- | | | |
|--------|--------------|-------------------------|
| * Lung | Inflammation | Chronic Active, Minimal |
|--------|--------------|-------------------------|

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 108

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57639

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 | * Islets, Pancreatic | * Kidney | * Larynx |
| * Liver | * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

MISSING

- * Lymph Node, Mediastinal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 109

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57640

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 | * Islets, Pancreatic | * Larynx | * Liver |
| * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal |
| * Lymph Node, Mesenteric | * Mammary Gland | * Nose | * Ovary |
| * Pancreas | * Parathyroid Gland | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |
| * Uterus | | | |

OBSERVATIONS

- | | | | |
|----------|--------------|--------------|-------------------------|
| * Kidney | | Inflammation | Chronic Active, Minimal |
| | Renal Tubule | Regeneration | Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 110

TRT#: 2

SEX: Female

DAY ON TEST: 94

DOSE: 0 mg/m3

DISP: Terminal Sacrifice

HISTO: 57641

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 | * Islets, Pancreatic | * Kidney | * Larynx |
| * Liver | * Lung | * Lymph Node, Bronchial | * Lymph Node, Mandibular |
| * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland | * Nose |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- * Uterus

Note: The presence of neutrophils is within normal limits of variation.

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 301

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57732

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 302

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57733

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 303

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57734

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 304

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57735

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 305

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57736

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 306

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57737

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 307

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57738

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 308

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57739

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Metaplasia

Osseous, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 309

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57740

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 310

TRT#: 4

SEX: Female

DAY ON TEST: 94

DOSE: 25 mg/m3

DISP: Terminal Sacrifice

HISTO: 57741

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* Lung

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 501

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57712

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 502

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57713

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Moderate
Moderate
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 503

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57714

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Metaplasia

Squamous, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 504

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57715

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 505

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57716

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Minimal

Respirat Epith

Accumulation, Hyaline Droplet

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 506

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57717

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 507

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57718

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Foreign Body

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 508

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57719

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 509

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57720

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Mild
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Moderate
Moderate
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 510

TRT#: 6

SEX: Female

DAY ON TEST: 94

DOSE: 50 mg/m3

DISP: Terminal Sacrifice

HISTO: 57721

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Inflammation

Squamous, Mild
Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Mild
Mild
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 701

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57692

OBSERVATIONS

Kidney		Infarct	Multiple, Mild
[Infarct TGLs = 1-9]			
* Larynx		Inflammation	Chronic Active, Minimal
		Metaplasia	Squamous, Mild
* Lung		Fibrosis	Minimal
		Infiltration Cellular	Histiocyte, Minimal
		Inflammation	Chronic Active, Minimal
* Nose	Olfactory Epi	Accumulation, Hyaline Droplet	Mild
	Respirat Epith	Accumulation, Hyaline Droplet	Mild
	Respirat Epith	Hyperplasia	Minimal
	Goblet Cell	Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
	Respirat Epith	Metaplasia	Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 702

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57693

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 703

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57694

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 704

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57695

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

Mineralization

Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 705

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57696

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Mild

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 706

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57697

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 707

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57698

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 708

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57699

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 709

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57700

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Mild
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Inflammation

Mild
Mild
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 710

TRT#: 8

SEX: Female

DAY ON TEST: 94

DOSE: 100 mg/m3

DISP: Terminal Sacrifice

HISTO: 57701

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Minimal

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 901

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57672

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Mild
Chronic Active, Minimal

Liver

Metaplasia
Fibrosis
Mineralization

Squamous, Moderate
Minimal
Minimal

[Fibrosis TGLs = 1-14]

Serosa

* Lung

Fibrosis
Infiltration Cellular
Inflammation

Minimal
Histiocyte, Mild
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation

Mild
Mild
Minimal
Minimal
Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 902

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57673

OBSERVATIONS

* Larynx

Hyperplasia
Inflammation

Squamous, Minimal
Chronic Active, Minimal

* Lung

Metaplasia
Fibrosis
Infiltration Cellular
Inflammation

Squamous, Moderate
Minimal
Histiocyte, Minimal
Chronic Active, Minimal

* Nose

Olfactory Epi
Respirat Epith
Respirat Epith

Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Inflammation

Moderate
Moderate
Minimal
Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 903

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57674

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Mild

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 904

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57675

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 905

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57676

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Marked

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Foreign Body

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 906

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57677

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 907

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57678

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Minimal

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 908

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57679

OBSERVATIONS

* Larynx

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Moderate

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Moderate

Respirat Epith

Accumulation, Hyaline Droplet

Moderate

Goblet Cell

Hyperplasia

Minimal

Respirat Epith

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 909	TRT#: 10 DOSE: 200 mg/m3	SEX: Female DISP: Terminal Sacrifice	DAY ON TEST: 94 HISTO: 57680
OBSERVATIONS			
Bone	Maxilla	Inflammation	Chronic Active, Mild
Kidney		Dilatation	Moderate
	Bilateral, Pelvis	Inflammation	Chronic Active, Moderate
	[Dilatation TGLs = 2-7]		
* Larynx		Inflammation	Chronic Active, Minimal
		Metaplasia	Squamous, Mild
* Lung		Fibrosis	Minimal
		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Chronic Active, Minimal
Lymph Node	Renal	Infiltration Cellular	Mixed Cell, Mild
	[Infiltration Cellular TGLs = 3-7]		
* Nose	Olfactory Epi	Accumulation, Hyaline Droplet	Moderate
	Respirat Epith	Accumulation, Hyaline Droplet	Moderate
	Goblet Cell	Hyperplasia	Minimal
	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
	Respirat Epith	Metaplasia	Squamous, Minimal

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 910

TRT#: 10

SEX: Female

DAY ON TEST: 94

DOSE: 200 mg/m3

DISP: Terminal Sacrifice

HISTO: 57681

OBSERVATIONS

* Larynx

Hyperplasia

Squamous, Mild

Inflammation

Chronic Active, Minimal

Metaplasia

Squamous, Marked

* Lung

Fibrosis

Minimal

Infiltration Cellular

Histiocyte, Mild

Inflammation

Chronic Active, Minimal

* Nose

Olfactory Epi

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Accumulation, Hyaline Droplet

Mild

Respirat Epith

Hyperplasia

Minimal

Goblet Cell

Hyperplasia

Minimal

Inflammation

Suppurative, Minimal

Respirat Epith

Metaplasia

Squamous, Minimal

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1101

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57652

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 | * Islets, Pancreatic | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|-------------------------|--|--|--|
| * Kidney | Transit Epithe
Pelvis
Renal Tubule | Hyperplasia
Inflammation
Regeneration | Mild
Chronic Active, Moderate
Minimal |
| * Larynx | | Hyperplasia
Inflammation
Metaplasia | Squamous, Minimal
Chronic Active, Minimal
Squamous, Moderate |
| * Lung | | Fibrosis
Infiltration Cellular
Inflammation | Mild
Histocyte, Mild
Chronic Active, Mild |
| Lymph Node | Deep Cervical | Infiltration Cellular | Polymorphnuclr, Mild |
| [Infiltration Cellular | TGLs = 1-14] | | |
| * Nose | Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell | Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation | Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1102

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57653

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------|----------------|-------------------------------|-------------------------|
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |
| * Uterus | | | |

Note: The presence of neutrophils is within normal limits of variation.

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1103

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57654

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

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

OBSERVATIONS

* Adrenal Cortex		Accessory Adrenal Cortical Nodule	
* Clitoral Gland		Inflammation	Chronic, Minimal
* Harderian Gland		Inflammation	Chronic, Minimal
* Larynx		Hyperplasia	Squamous, Mild
		Inflammation	Chronic Active, Minimal
		Metaplasia	Squamous, Marked
* Lung		Fibrosis	Mild
		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Chronic Active, Mild
* Nose	Olfactory Epi	Accumulation, Hyaline Droplet	Moderate
	Respirat Epith	Accumulation, Hyaline Droplet	Moderate
	Goblet Cell	Hyperplasia	Minimal
	Respirat Epith	Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
* Uterus			

Note: The presence of neutrophils is within normal limits of variation.

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1104

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57655

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------|--|--|--|
| * Larynx | | Hyperplasia
Inflammation
Metaplasia | Squamous, Mild
Chronic Active, Minimal
Squamous, Moderate |
| * Lung | | Fibrosis
Infiltration Cellular
Inflammation | Mild
Histiocyte, Mild
Chronic Active, Mild |
| * Nose | Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell | Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation | Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal |

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1105

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57656

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | | |

OBSERVATIONS

- | | | | |
|----------|--|--|--|
| * Larynx | | Hyperplasia
Inflammation
Metaplasia | Squamous, Mild
Chronic Active, Minimal
Squamous, Marked |
| * Lung | | Fibrosis
Infiltration Cellular
Inflammation | Mild
Histiocyte, Mild
Chronic Active, Mild |
| * Nose | Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell | Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation | Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal |
| * Uterus | Respirat Epith
Endometrium | Metaplasia
Hyperplasia | Squamous, Minimal
Cystic, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1106

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57657

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 |
| * Islets, Pancreatic | * Kidney | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|------------------|----------------|-------------------------------|-------------------------|
| * Clitoral Gland | | Inflammation | Chronic, Minimal |
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1107

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57658

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 |
| * Islets, Pancreatic | * Kidney | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Ovary | * Pancreas | * Pituitary Gland | * Salivary Glands |
| * Skin | * Spleen | * Stomach, Forestomach | * Stomach, Glandular |
| * Thymus | * Thyroid Gland | * Trachea | * Urinary Bladder |

MISSING

- * Parathyroid Gland

OBSERVATIONS

- | | | | |
|------------------|----------------|-------------------------------|-------------------------|
| * Clitoral Gland | | Inflammation | Chronic, Minimal |
| * Larynx | | Hyperplasia | Squamous, Minimal |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Moderate |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |
| * Uterus | Endometrium | Hyperplasia | Cystic, Mild |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1108

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57659

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 | * Islets, Pancreatic | * Kidney | * Liver |
| * Lymph Node, Bronchial | * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric |
| * Mammary Gland | * Ovary | * Pancreas | * Parathyroid Gland |
| * Pituitary Gland | * Salivary Glands | * Skin | * Spleen |
| * Stomach, Forestomach | * Stomach, Glandular | * Thymus | * Thyroid Gland |
| * Trachea | * Urinary Bladder | * Uterus | |

OBSERVATIONS

- | | | | |
|----------|--|--|--|
| * Larynx | | Hyperplasia
Inflammation
Metaplasia | Squamous, Mild
Chronic Active, Minimal
Squamous, Marked |
| * Lung | | Fibrosis
Infiltration Cellular
Inflammation | Mild
Histiocyte, Mild
Chronic Active, Mild |
| * Nose | Olfactory Epi
Respirat Epith
Respirat Epith
Goblet Cell | Accumulation, Hyaline Droplet
Accumulation, Hyaline Droplet
Hyperplasia
Hyperplasia
Inflammation | Moderate
Moderate
Minimal
Minimal
Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |
| Oviduct | | Infiltration Cellular | Polymorphnuclr, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1109

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57660

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

- | | | | |
|---------------------------|-----------------------------|--------------------------|----------------------------|
| * 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 |
| * Islets, Pancreatic | * Kidney | * Liver | * Lymph Node, Bronchial |
| * Lymph Node, Mandibular | * Lymph Node, Mediastinal | * Lymph Node, Mesenteric | * Mammary Gland |
| * Ovary | * Pancreas | * Parathyroid Gland | * Pituitary Gland |
| * Salivary Glands | * Skin | * Spleen | * Stomach, Forestomach |
| * Stomach, Glandular | * Thymus | * Thyroid Gland | * Trachea |
| * Urinary Bladder | * Uterus | | |

OBSERVATIONS

- | | | | |
|------------------|----------------|-----------------------------------|-------------------------|
| * Adrenal Cortex | | Accessory Adrenal Cortical Nodule | |
| * Larynx | | Hyperplasia | Squamous, Mild |
| | | Inflammation | Chronic Active, Minimal |
| | | Metaplasia | Squamous, Marked |
| * Lung | | Fibrosis | Mild |
| | | Infiltration Cellular | Histiocyte, Mild |
| | | Inflammation | Chronic Active, Mild |
| * Nose | Olfactory Epi | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Accumulation, Hyaline Droplet | Mild |
| | Respirat Epith | Hyperplasia | Minimal |
| | Goblet Cell | Hyperplasia | Minimal |
| | | Inflammation | Suppurative, Minimal |
| | Respirat Epith | Metaplasia | Squamous, Minimal |

* PROTOCOL REQUIRED TISSUE

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P14: INDIVIDUAL ANIMAL PATHOLOGY DATA

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 12:52:05

First Dose M/F: 07/14/08 / 07/14/08

Lab: BNW

ANIMAL ID: 1110

TRT#: 12

SEX: Female

DAY ON TEST: 94

DOSE: 400 mg/m3

DISP: Terminal Sacrifice

HISTO: 57661

ORGAN AND ACCOUNTABLE SITE STATUS

NORMAL

* 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	* Islets, Pancreatic
* Kidney	* Liver	* Lymph Node, Bronchial	* Lymph Node, Mediastinal
* Lymph Node, Mesenteric	* Mammary Gland	* Ovary	* Pancreas
* Parathyroid Gland	* Pituitary Gland	* Salivary Glands	* Skin
* Spleen	* Stomach, Forestomach	* Stomach, Glandular	* Thymus
* Thyroid Gland	* Trachea	* Urinary Bladder	* Uterus

MISSING

* Lymph Node, Mandibular

OBSERVATIONS

* Adrenal Cortex		Accessory Adrenal Cortical Nodule	
* Harderian Gland		Inflammation	Chronic, Minimal
* Larynx		Hyperplasia	Squamous, Mild
		Inflammation	Chronic Active, Minimal
		Metaplasia	Squamous, Moderate
* Lung		Fibrosis	Mild
		Infiltration Cellular	Histiocyte, Mild
		Inflammation	Chronic Active, Mild
* Nose	Olfactory Epi	Accumulation, Hyaline Droplet	Moderate
	Respirat Epith	Accumulation, Hyaline Droplet	Moderate
	Respirat Epith	Hyperplasia	Minimal
	Goblet Cell	Hyperplasia	Minimal
		Inflammation	Suppurative, Minimal
	Respirat Epith	Metaplasia	Squamous, Minimal

*** END OF REPORT ***

* PROTOCOL REQUIRED TISSUE