

**TDMS No.** 20523 - 01

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** RATS/Wistar Han

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

Metal working fluids (Trim VX)

**CAS Number:** TRIMVX

**Date Report Requested:** 03/18/2011

**Time Report Requested:** 13:35:18

**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

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Lab: BNW

DAY ON TEST

**WISTAR HAN RATS MALE****0 mg/m<sup>3</sup>**

ANIMAL ID

0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	3	3
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1
1	2	3	4	5	6	7	8	9	0	

**\* TOTALS****ALIMENTARY SYSTEM**

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

**CARDIOVASCULAR SYSTEM**

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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DAY ON TEST

0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	3	3
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1
1	2	3	4	5	6	7	8	9	0	

\* TOTALS

## WISTAR HAN RATS MALE

0 mg/m3

ANIMAL ID

## ENDOCRINE SYSTEM

Adrenal Cortex

Adrenal Medulla

Islets, Pancreatic

Parathyroid Gland

Pituitary Gland

Thyroid Gland

+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

Epididymis

Preputial Gland

Prostate

Seminal Vesicle

Testes

+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10
+	+	+	+	+	+	+	+	+	+	10

## HEMATOPOIETIC SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with tumor

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WISTAR HAN RATS MALE	0 mg/m <sup>3</sup>	DAY ON TEST													* TOTALS
			0 0 9 3												
		ANIMAL ID	1	2	3	4	5	6	7	8	9	0			
Bone Marrow			+	+	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial			+	+	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular			+	+	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mediastinal			+	+	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric			+	+	+	+	+	+	+	+	+	+	+	+	10
Spleen			+	+	+	+	+	+	+	+	+	+	+	+	10
Thymus			+	+	+	+	+	+	+	+	+	+	+	+	10
<b>INTEGUMENTARY SYSTEM</b>															
Mammary Gland			M	M	M	+	M	M	M	M	M	M	M	+	2
Skin			+	+	+	+	+	+	+	+	+	+	+	+	10
<b>MUSCULOSKELETAL SYSTEM</b>															
Bone			+	+	+	+	+	+	+	+	+	+	+	+	10
<b>NERVOUS SYSTEM</b>															
Brain			+	+	+	+	+	+	+	+	+	+	+	+	10
<b>RESPIRATORY SYSTEM</b>															
Larynx			+	+	+	+	+	+	+	+	+	+	+	+	10

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			0 0 9 3										
		ANIMAL ID	0 0 0 0 1	0 0 0 0 2	0 0 0 0 3	0 0 0 0 4	0 0 0 0 5	0 0 0 0 6	0 0 0 0 7	0 0 0 0 8	0 0 0 0 9	0 0 0 0 0	
Lung			+	+	+	+	+	+	+	+	+	+	10
Nose			+	+	+	+	+	+	+	+	+	+	10
Trachea			+	+	+	+	+	+	+	+	+	+	10
<b>SPECIAL SENSES SYSTEM</b>													
Eye			+	+	+	+	+	+	+	+	+	+	10
Harderian Gland			+	+	+	+	+	+	+	+	+	+	10
<b>URINARY SYSTEM</b>													
Kidney			+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder			+	+	+	+	+	+	+	+	+	+	10
<b>SYSTEMIC LESIONS</b>													
Multiple Organ			+	+	+	+	+	+	+	+	+	+	10

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DAY ON TEST

WISTAR HAN RATS MALE

25 mg/m<sup>3</sup>

ANIMAL ID

0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	3	3
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	2	2	2	2	2	2
0	0	0	0	0	0	0	0	0	1	1
1	2	3	4	5	6	7	8	9	0	0

\* TOTALS

### ALIMENTARY SYSTEM

Liver

+

1

### CARDIOVASCULAR SYSTEM

NONE

### ENDOCRINE SYSTEM

NONE

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

NONE

### HEMATOPOIETIC SYSTEM

NONE

### INTEGUMENTARY SYSTEM

NONE

### MUSCULOSKELETAL SYSTEM

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor

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0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
9	9	9	9	9	9	9	9	9	9	9
3	3	3	3	3	3	3	3	3	3	3
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0
2	2	2	2	2	2	2	2	2	2	2
0	0	0	0	0	0	0	0	0	1	1
1	2	3	4	5	6	7	8	9	0	0

WISTAR HAN RATS MALE

25 mg/m<sup>3</sup>

ANIMAL ID

\* TOTALS

## NERVOUS SYSTEM

NONE

## RESPIRATORY SYSTEM

Larynx

+ + + + + + + + + + 10

Lung

+ + + + + + + + + + 10

Nose

+ + + + + + + + + + 10

## SPECIAL SENSES SYSTEM

NONE

## URINARY SYSTEM

NONE

## SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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DAY ON TEST

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

WISTAR HAN RATS MALE

50 mg/m<sup>3</sup>

ANIMAL ID

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

\* TOTALS

### ALIMENTARY SYSTEM

NONE

### CARDIOVASCULAR SYSTEM

NONE

### ENDOCRINE SYSTEM

NONE

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

NONE

### HEMATOPOIETIC SYSTEM

NONE

### INTEGUMENTARY SYSTEM

Skin

+

1

### MUSCULOSKELETAL SYSTEM

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor

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DAY ON TEST

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

WISTAR HAN RATS MALE

50 mg/m<sup>3</sup>

ANIMAL ID

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

\* TOTALS

## NERVOUS SYSTEM

NONE

## RESPIRATORY SYSTEM

Larynx

|   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

Lung

|   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

Nose

|   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

## SPECIAL SENSES SYSTEM

NONE

## URINARY SYSTEM

NONE

## SYSTEMIC LESIONS

Multiple Organ

|   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | + | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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Lab: BNW

DAY ON TEST

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |

WISTAR HAN RATS MALE

100 mg/m3

ANIMAL ID

\* TOTALS

### ALIMENTARY SYSTEM

Stomach, Glandular

+

1

### CARDIOVASCULAR SYSTEM

NONE

### ENDOCRINE SYSTEM

NONE

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

Testes

+

1

### HEMATOPOIETIC SYSTEM

NONE

### INTEGUMENTARY SYSTEM

NONE

### MUSCULOSKELETAL SYSTEM

NONE

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|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

WISTAR HAN RATS MALE

100 mg/m<sup>3</sup>

ANIMAL ID

\* TOTALS

## NERVOUS SYSTEM

NONE

## RESPIRATORY SYSTEM

Larynx

+ + + + + + + + + + 10

Lung

+ + + + + + + + + + 10

Nose

+ + + + + + + + + + 10

## SPECIAL SENSES SYSTEM

NONE

## URINARY SYSTEM

NONE

## SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

\* .. Total animals with tissue examined microscopically; Total animals with tumor

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Lab: BNW

| WISTAR HAN RATS MALE | 200 mg/m3 | ANIMAL ID | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|----------------------|-----------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|                      |           |           | 0<br>0<br>9<br>3      |          |
|                      |           |           | 0<br>0<br>8<br>0<br>1 | 0<br>0<br>8<br>0<br>2 | 0<br>0<br>8<br>0<br>3 | 0<br>0<br>8<br>0<br>4 | 0<br>0<br>8<br>0<br>5 | 0<br>0<br>8<br>0<br>6 | 0<br>0<br>8<br>0<br>7 | 0<br>0<br>8<br>0<br>8 | 0<br>0<br>8<br>0<br>9 | 0<br>0<br>8<br>0<br>0 | 0<br>0<br>8<br>0<br>1 | 0<br>0<br>8<br>0<br>0 |          |

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

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Lab: BNW

DAY ON TEST

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |

WISTAR HAN RATS MALE

200 mg/m<sup>3</sup>

ANIMAL ID

\* TOTALS

## NERVOUS SYSTEM

NONE

## RESPIRATORY SYSTEM

Larynx

+ + + + + + + + + + 10

Lung

+ + + + + + + + + + 10

Nose

+ + + + + + + + + + 10

## SPECIAL SENSES SYSTEM

NONE

## URINARY SYSTEM

NONE

## SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

DAY ON TEST

**WISTAR HAN RATS MALE****400 mg/m<sup>3</sup>**

ANIMAL ID

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

**\* TOTALS****ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

DAY ON TEST

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

WISTAR HAN RATS MALE

400 mg/m3

ANIMAL ID

\* TOTALS

## ENDOCRINE SYSTEM

Adrenal Cortex

Adrenal Medulla

Islets, Pancreatic

Parathyroid Gland

Pituitary Gland

Thyroid Gland

|   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |
| M | + | + | + | + | + | + | + | + | + | 9  |
| + | + | + | + | + | + | + | + | + | M | 9  |
| + | + | + | + | + | + | + | + | + | + | 10 |

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

Epididymis

Preputial Gland

Prostate

Seminal Vesicle

Testes

|   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|----|
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |
| + | + | + | + | + | + | + | + | + | + | 10 |

## HEMATOPOIETIC SYSTEM

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS MALE          | 400 mg/m3 | DAY ON TEST |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |
|-------------------------------|-----------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                               |           |             | 0<br>0<br>9<br>3 |          |
|                               |           | ANIMAL ID   | 0<br>1<br>0<br>0 |          |
| Bone Marrow                   |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Lymph Node, Bronchial         |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Lymph Node, Mandibular        |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Lymph Node, Mediastinal       |           |             | +                | +                | +                | +                | +                | +                | M                | +                | +                | +                | 9        |
| Lymph Node, Mesenteric        |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Spleen                        |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Thymus                        |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>INTEGUMENTARY SYSTEM</b>   |           |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Mammary Gland                 |           |             | M                | M                | M                | M                | M                | M                | M                | M                | M                | +                | 1        |
| Skin                          |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>MUSCULOSKELETAL SYSTEM</b> |           |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Bone                          |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>NERVOUS SYSTEM</b>         |           |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Brain                         |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>RESPIRATORY SYSTEM</b>     |           |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Larynx                        |           |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS MALE         | 400 mg/m <sup>3</sup> | DAY ON TEST |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |
|------------------------------|-----------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                              |                       |             | 0<br>0<br>9<br>3 |          |
|                              |                       |             | ANIMAL ID        |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Lung                         |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Nose                         |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Trachea                      |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>SPECIAL SENSES SYSTEM</b> |                       |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Eye                          |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Harderian Gland              |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>URINARY SYSTEM</b>        |                       |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Kidney                       |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Urinary Bladder              |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| <b>SYSTEMIC LESIONS</b>      |                       |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
| Multiple Organ               |                       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |

\*\*\* END OF MALE DATA \*\*\*

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

DAY ON TEST

**WISTAR HAN RATS FEMALE****0 mg/m<sup>3</sup>**

ANIMAL ID

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

**\* TOTALS****ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 0 mg/m <sup>3</sup>   | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |  |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|--|
|                        |                       |                       | 0<br>0<br>9<br>4      | 0<br>0<br>9<br>4 |  |
| ANIMAL ID              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                  |  |
|                        | 0<br>0<br>1<br>0<br>1 |                  |  |
|                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |  |

## ENDOCRINE SYSTEM

|                    |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Pituitary Gland    | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland      | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

## GENERAL BODY SYSTEM

|      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## GENITAL SYSTEM

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Ovary          | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Uterus         | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

## HEMATOPOIETIC SYSTEM

|                       |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow           | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Bronchial | + | M | + | M | + | + | M | + | + | + | + | + | + | 7  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE        | 0 mg/m <sup>3</sup> | DAY ON TEST |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  | * TOTALS |
|-------------------------------|---------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|----------|
|                               |                     |             | 0<br>0<br>9<br>4      | 0<br>0<br>9<br>4 | 0<br>0<br>9<br>4 |          |
| ANIMAL ID                     |                     |             | 0<br>0<br>1<br>0<br>1 | 0<br>0<br>1<br>0<br>2 | 0<br>0<br>1<br>0<br>3 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 | 0<br>0<br>1<br>0<br>6 | 0<br>0<br>1<br>0<br>7 | 0<br>0<br>1<br>0<br>8 | 0<br>0<br>1<br>0<br>9 | 0<br>0<br>1<br>0<br>0 |                  |                  |          |
| Lymph Node, Mandibular        |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| Lymph Node, Mediastinal       |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M                     | +                     | +                     |                  |                  | 9        |
| Lymph Node, Mesenteric        |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| Spleen                        |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| Thymus                        |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| <b>INTEGUMENTARY SYSTEM</b>   |                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Mammary Gland                 |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| Skin                          |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| <b>MUSCULOSKELETAL SYSTEM</b> |                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Bone                          |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| <b>NERVOUS SYSTEM</b>         |                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Brain                         |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| <b>RESPIRATORY SYSTEM</b>     |                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Larynx                        |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| Lung                          |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |
| Nose                          |                     |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                |                  | 10       |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE       | 0 mg/m <sup>3</sup> | DAY ON TEST |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |    |  |
|------------------------------|---------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|----|--|
|                              |                     |             | 0<br>0<br>9<br>4 |          |    |  |
|                              |                     |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |  |
| Trachea                      |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |
| <b>SPECIAL SENSES SYSTEM</b> |                     |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |  |
| Eye                          |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |
| Harderian Gland              |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |
| <b>URINARY SYSTEM</b>        |                     |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |  |
| Kidney                       |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |
| Urinary Bladder              |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |
| <b>SYSTEMIC LESIONS</b>      |                     |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |  |
| Multiple Organ               |                     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +        | 10 |  |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE<br>25 mg/m3 | DAY ON TEST<br>ANIMAL ID |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |
|------------------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|
|                                    |                          | 0<br>0<br>9<br>4      | 0<br>0<br>9<br>4 |
|                                    |                          | 0<br>0<br>3<br>0<br>1 | 0<br>0<br>3<br>0<br>2 | 0<br>0<br>3<br>0<br>3 | 0<br>0<br>3<br>0<br>4 | 0<br>0<br>3<br>0<br>5 | 0<br>0<br>3<br>0<br>6 | 0<br>0<br>3<br>0<br>7 | 0<br>0<br>3<br>0<br>8 | 0<br>0<br>3<br>0<br>9 | 0<br>0<br>3<br>0<br>0 | 0<br>0<br>3<br>1<br>1 |                  |

\* TOTALS

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 25 mg/m3 | ANIMAL ID | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|------------------------|----------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                        |          |           | 0<br>0<br>9<br>4      |
|                        |          |           | 0<br>0<br>3<br>0<br>1 | 0<br>0<br>3<br>0<br>2 | 0<br>0<br>3<br>0<br>3 | 0<br>0<br>3<br>0<br>4 | 0<br>0<br>3<br>0<br>5 | 0<br>0<br>3<br>0<br>6 | 0<br>0<br>3<br>0<br>7 | 0<br>0<br>3<br>0<br>8 | 0<br>0<br>3<br>0<br>9 | 0<br>0<br>3<br>0<br>0 | 0<br>0<br>3<br>0<br>1 | 0<br>0<br>3<br>0<br>0 |

\* TOTALS

## NERVOUS SYSTEM

NONE

## RESPIRATORY SYSTEM

Larynx

++ + + + + + + + + 10

Lung

++ + + + + + + + + 10

Nose

++ + + + + + + + + 10

## SPECIAL SENSES SYSTEM

NONE

## URINARY SYSTEM

NONE

## SYSTEMIC LESIONS

Multiple Organ

++ + + + + + + + + 10

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE<br>50 mg/m3 | DAY ON TEST<br>ANIMAL ID |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |
|------------------------------------|--------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|
|                                    |                          | 0<br>0<br>9<br>4      | 0<br>0<br>9<br>4 |
|                                    |                          | 0<br>0<br>5<br>0<br>1 | 0<br>0<br>5<br>0<br>2 | 0<br>0<br>5<br>0<br>3 | 0<br>0<br>5<br>0<br>4 | 0<br>0<br>5<br>0<br>5 | 0<br>0<br>5<br>0<br>6 | 0<br>0<br>5<br>0<br>7 | 0<br>0<br>5<br>0<br>8 | 0<br>0<br>5<br>0<br>9 | 0<br>0<br>5<br>0<br>0 | 0<br>0<br>5<br>1<br>1 |                  |

\* TOTALS

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

NONE

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

|  |                          |   |   |   |   |   |   |   |   |   |   |
|--|--------------------------|---|---|---|---|---|---|---|---|---|---|
| <b>WISTAR HAN RATS FEMALE</b><br><b>50 mg/m3</b> | DAY ON TEST<br>ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|  |                          | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
|  |                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
|  |                          | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
|  |                          | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\* TOTALS

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

Larynx

+ + + + + + + + + + 10

Lung

+ + + + + + + + + + 10

Nose

+ + + + + + + + + + 10

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

**SYSTEMIC LESIONS**

Multiple Organ

+ + + + + + + + + + 10

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 100 mg/m3 | ANIMAL ID | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|------------------------|-----------|-----------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|                        |           |           | 0<br>0<br>9<br>4      |          |
|                        |           |           | 0<br>0<br>7<br>0<br>1 | 0<br>0<br>7<br>0<br>2 | 0<br>0<br>7<br>0<br>3 | 0<br>0<br>7<br>0<br>4 | 0<br>0<br>7<br>0<br>5 | 0<br>0<br>7<br>0<br>6 | 0<br>0<br>7<br>0<br>7 | 0<br>0<br>7<br>0<br>8 | 0<br>0<br>7<br>0<br>9 | 0<br>0<br>7<br>0<br>0 | 0<br>0<br>7<br>0<br>1 | 0<br>0<br>7<br>0<br>0 |          |

### ALIMENTARY SYSTEM

NONE

### CARDIOVASCULAR SYSTEM

NONE

### ENDOCRINE SYSTEM

NONE

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

NONE

### HEMATOPOIETIC SYSTEM

NONE

### INTEGUMENTARY SYSTEM

NONE

### MUSCULOSKELETAL SYSTEM

NONE

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 100 mg/m <sup>3</sup> | ANIMAL ID | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------|-----------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|---|
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0                      | 0                     | 0         | 9           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|                        |                       |           | 4           | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0                      | 0                     | 0         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0                      | 0                     | 0         | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 0                      | 0                     | 0         | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 |

\* TOTALS

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lung   | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

|        |   |  |  |  |  |  |  |  |  |  |  |  |  |   |
|--------|---|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Kidney | + |  |  |  |  |  |  |  |  |  |  |  |  | 1 |
|--------|---|--|--|--|--|--|--|--|--|--|--|--|--|---|

**SYSTEMIC LESIONS**

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 200 mg/m <sup>3</sup> | ANIMAL ID | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|------------------------|-----------------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|                        |                       |           | 0<br>0<br>9<br>4 |
|                        |                       |           | 0<br>0<br>9<br>1 | 0<br>0<br>9<br>2 | 0<br>0<br>9<br>3 | 0<br>0<br>9<br>4 | 0<br>0<br>9<br>5 | 0<br>0<br>9<br>6 | 0<br>0<br>9<br>7 | 0<br>0<br>9<br>8 | 0<br>0<br>9<br>9 | 0<br>0<br>9<br>0 | 0<br>0<br>9<br>1 |                  | * TOTALS         |

**ALIMENTARY SYSTEM**

|       |   |   |
|-------|---|---|
| Liver | + | 1 |
|-------|---|---|

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

|            |   |   |
|------------|---|---|
| Lymph Node | + | 1 |
|------------|---|---|

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

|      |   |   |
|------|---|---|
| Bone | + | 1 |
|------|---|---|

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 200 mg/m <sup>3</sup> | ANIMAL ID | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|------------------------|-----------------------|-----------|-------------|---|---|---|---|---|---|---|---|---|---|
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9                      | 9                     | 9         | 9           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|                        |                       |           | 4           | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0                      | 0                     | 0         | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9                      | 9                     | 9         | 9           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
|                        |                       |           | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1                      | 1                     | 1         | 2           | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 9 | 0 | 0 |

\* TOTALS

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lung   | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

|        |   |   |
|--------|---|---|
| Kidney | + | 1 |
|--------|---|---|

**SYSTEMIC LESIONS**

|                |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

DAY ON TEST

**WISTAR HAN RATS FEMALE****400 mg/m<sup>3</sup>**

ANIMAL ID

|   |   |   |   |   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |

**\* TOTALS****ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------|---|---|---|---|---|---|---|---|---|---|----|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | 10 |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | 10 |
| Liver                     | + | + | + | + | + | + | + | + | + | + | 10 |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | 10 |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | 10 |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | 10 |

**CARDIOVASCULAR SYSTEM**

|              |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | 10 |
| Heart        | + | + | + | + | + | + | + | + | + | + | 10 |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE | 400 mg/m3             | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                        |                       |                       | 0<br>0<br>9<br>4      |
| ANIMAL ID              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |                       |
|                        | 0<br>1<br>1<br>0<br>1 | 1<br>1<br>1<br>0<br>2 | 1<br>1<br>1<br>0<br>3 | 1<br>1<br>1<br>0<br>4 | 1<br>1<br>1<br>0<br>5 | 1<br>1<br>1<br>0<br>6 | 1<br>1<br>1<br>0<br>7 | 1<br>1<br>1<br>0<br>8 | 1<br>1<br>1<br>0<br>9 | 1<br>1<br>1<br>0<br>0 | 1<br>1<br>1<br>0<br>1 | 1<br>1<br>1<br>0<br>0 | 1<br>1<br>1<br>0<br>1 | 1<br>1<br>1<br>0<br>0 |

## ENDOCRINE SYSTEM

|                    |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | + | + | M | + | + | + | + | + | 9  |
| Pituitary Gland    | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland      | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

## GENERAL BODY SYSTEM

|      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| NONE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

## GENITAL SYSTEM

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Ovary          | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Oviduct        |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Uterus         | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

## HEMATOPOIETIC SYSTEM

|             |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE        | 400 mg/m <sup>3</sup>       | DAY ON TEST |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |    |
|-------------------------------|-----------------------------|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|----|
|                               |                             |             | 0<br>0<br>9<br>4 |          |    |
| ANIMAL ID                     |                             |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |
|                               | Lymph Node                  |             | +                |                  |                  |                  |                  |                  |                  |                  |                  |                  |          | 1  |
|                               | Lymph Node, Bronchial       |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | Lymph Node, Mandibular      |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | M        | 9  |
|                               | Lymph Node, Mediastinal     |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | Lymph Node, Mesenteric      |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | Spleen                      |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | Thymus                      |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | <b>INTEGUMENTARY SYSTEM</b> |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |
|                               | Mammary Gland               |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
|                               | Skin                        |             | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                |          | 10 |
| <b>MUSCULOSKELETAL SYSTEM</b> |                             |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |
| Bone                          |                             | +           | +                | +                | +                | +                | +                | +                | +                | +                | +                |                  | 10       |    |
| <b>NERVOUS SYSTEM</b>         |                             |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |
| Brain                         |                             | +           | +                | +                | +                | +                | +                | +                | +                | +                | +                |                  | 10       |    |
| <b>RESPIRATORY SYSTEM</b>     |                             |             |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |    |
| Larynx                        |                             | +           | +                | +                | +                | +                | +                | +                | +                | +                | +                |                  | 10       |    |

\* .. Total animals with tissue examined microscopically; Total animals with tumor

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

TDMS No. 20523 - 01

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/Wistar Han

## P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Metal working fluids (Trim VX)

CAS Number: TRIMVX

Date Report Requested: 03/18/2011

Time Report Requested: 13:35:18

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

Lab: BNW

| WISTAR HAN RATS FEMALE       | 400 mg/m <sup>3</sup> | DAY ON TEST |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  | * TOTALS |
|------------------------------|-----------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|----------|
|                              |                       |             | 0<br>0<br>9<br>4      | 0<br>0<br>9<br>4 | 0<br>0<br>9<br>4 |          |
| ANIMAL ID                    |                       |             | 0<br>1<br>1<br>0<br>1 | 0<br>1<br>1<br>0<br>2 | 0<br>1<br>1<br>0<br>3 | 0<br>1<br>1<br>0<br>4 | 0<br>1<br>1<br>0<br>5 | 0<br>1<br>1<br>0<br>6 | 0<br>1<br>1<br>0<br>7 | 0<br>1<br>1<br>0<br>8 | 0<br>1<br>1<br>0<br>9 | 0<br>1<br>1<br>0<br>0 |                  |                  |          |
| Lung                         |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| Nose                         |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| Trachea                      |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| <b>SPECIAL SENSES SYSTEM</b> |                       |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Eye                          |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| Harderian Gland              |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| <b>URINARY SYSTEM</b>        |                       |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Kidney                       |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| Urinary Bladder              |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |
| <b>SYSTEMIC LESIONS</b>      |                       |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                  |                  |          |
| Multiple Organ               |                       |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                | +                | 10       |

\*\*\* END OF REPORT \*\*\*

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+ .. Tissue examined microscopically

X .. Lesion present

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