

**TDMS No.** 20519 - 02

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

**CAS Number:** SYNTILO1023

**Date Report Requested:** 05/18/2011

**Time Report Requested:** 08:14:41

**First Dose M/F:** 11/03/08 / 11/03/08

**Lab:** BNW

F1\_M3

**C Number:** C20519  
**Lock Date:** 06/09/2009  
**Cage Range:** ALL  
**Date Range:** ALL  
**Reasons For Removal:** ALL  
**Removal Date Range:** ALL  
**Treatment Groups:** Include ALL  
**Study Gender:** Both  
**TDMSE Version:** 2.4.0.0\_003  
**PWG Approval Date:** NONE

|                         |             |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>Control</b>          | ANIMAL ID   | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         |             | 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 |
| <b>* TOTALS</b>         |             |   |   |   |   |   |   |   |   |   |   |

**ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |              |
|---------------------------|---|---|---|---|---|---|---|---|---|---|--------------|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Gallbladder               | + | + | + | + | + | M | + | + | + | + | <b>9</b>     |
| Mineralization            |   |   |   |   |   |   |   | 2 |   |   | <b>1 2.0</b> |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Liver                     | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

| B6C3F1 MICE MALE | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|------------------|-------------|---|---|---|---|---|---|---|---|---|----------|
|                  |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |          |
| Control          | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                  |             |   |   |   |   |   |   |   |   |   | * TOTALS |
|                  |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |          |
|                  |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0        |

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

**ENDOCRINE SYSTEM**

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | M | M | + | M | + | M | + | + | + | 6  |
| Pituitary Gland    | + | + | + | + | + | + | + | + | + | + | 10 |
| Thyroid Gland      | + | + | + | + | + | + | + | + | + | + | 10 |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | 10 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | 10 |
| Prostate        | + | + | + | + | + | + | + | + | + | + | 10 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | 10 |

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|                         |             |           |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|-----------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |   |
|                         |             | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |   |
|                         |             | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |   |
|                         | Control     | ANIMAL ID | 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 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>         |             |           |   |   |   |   |   |   |   |   |   |   |

|        |   |   |   |   |   |   |   |   |   |   |           |
|--------|---|---|---|---|---|---|---|---|---|---|-----------|
| Testes | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
|--------|---|---|---|---|---|---|---|---|---|---|-----------|

**HEMATOPOIETIC SYSTEM**

|                         |   |   |   |   |   |   |   |   |   |   |           |
|-------------------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Bone Marrow             | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Lymph Node, Bronchial   | + | + | + | M | + | + | + | + | + | M | <b>8</b>  |
| Lymph Node, Mandibular  | + | + | M | + | M | + | M | + | + | + | <b>7</b>  |
| Lymph Node, Mediastinal | + | M | + | M | + | + | + | M | M | + | <b>6</b>  |
| Lymph Node, Mesenteric  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Spleen                  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Thymus                  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

**INTEGUMENTARY SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |           |
|---------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | <b>0</b>  |
| Skin          | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

**MUSCULOSKELETAL SYSTEM**

|      |   |   |   |   |   |   |   |   |   |   |           |
|------|---|---|---|---|---|---|---|---|---|---|-----------|
| Bone | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
|------|---|---|---|---|---|---|---|---|---|---|-----------|

**NERVOUS SYSTEM**

|       |   |   |   |   |   |   |   |   |   |   |           |
|-------|---|---|---|---|---|---|---|---|---|---|-----------|
| Brain | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
|-------|---|---|---|---|---|---|---|---|---|---|-----------|

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 + .. Tissue examined microscopically  
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 I .. Insufficient tissue  
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|                         |             |           |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|-----------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |   |
|                         |             | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |   |
|                         |             | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |   |
|                         | Control     | ANIMAL ID | 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 |
| <b>* TOTALS</b>         |             |           |   |   |   |   |   |   |   |   |   |   |

**RESPIRATORY SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |              |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|--------------|
| Larynx                           | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Lung                             | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Nose                             | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Trachea<br>Inflammation, Chronic | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
|                                  |   |   |   |   |   | 1 |   |   |   |   | <b>1 1.0</b> |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |           |
|-----------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Eye             | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

**URINARY SYSTEM**

|                       |   |   |   |   |   |   |   |   |   |   |              |
|-----------------------|---|---|---|---|---|---|---|---|---|---|--------------|
| Kidney<br>Nephropathy | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
|                       | 1 |   |   |   |   |   |   |   |   |   | <b>1 1.0</b> |
| Urinary Bladder       | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

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+ .. Tissue examined microscopically

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BLANK .. Not examined microscopically

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Test Type: 90-DAY

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Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                         |             |   |   |   |   |   |   |   |   |                 |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
| <b>25 mg/m3</b>         | ANIMAL ID   | 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               |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                         |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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|                         |             |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
| <b>25 mg/m3</b>         | ANIMAL ID   | 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 |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>         |             |   |   |   |   |   |   |   |   |   |   |

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |               |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---------------|
| Larynx                       | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Inflammation, Chronic Active | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | <b>10 1.4</b> |
| Metaplasia, Squamous         | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | <b>10 1.4</b> |
| Lung                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Nose                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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BLANK .. Not examined microscopically

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|                         |             |   |   |   |   |   |   |   |   |                 |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
| <b>50 mg/m3</b>         | ANIMAL ID   | 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               |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                         |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**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 lesion and mean severity grade

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X .. Lesion present

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|                         |             |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
| <b>50 mg/m3</b>         | ANIMAL ID   | 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 |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>         |             |   |   |   |   |   |   |   |   |   |   |

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |               |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---------------|
| Larynx                       | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Inflammation, Chronic Active | 1 | 1 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | <b>10 1.6</b> |
| Metaplasia, Squamous         | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | <b>10 2.2</b> |
| Lung                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Nose                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
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|                         |             |   |   |   |   |   |   |   |   |                 |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
| <b>100 mg/m3</b>        | ANIMAL ID   | 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               |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                         |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

NONE

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

NONE

**HEMATOPOIETIC SYSTEM**

Spleen

+

1

**INTEGUMENTARY SYSTEM**

NONE

**MUSCULOSKELETAL SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

|                         |             |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>100 mg/m3</b>        | ANIMAL ID   | 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 |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>         |             |   |   |   |   |   |   |   |   |   |   |

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |               |
|---|---|---|---|---|---|---|---|---|---|---------------|
| Larynx  | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Inflammation, Chronic Active                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | <b>10 2.0</b> |
| Metaplasia, Squamous                                  | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | <b>10 3.8</b> |
| Lung  | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Nose  | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Respiratory Epithelium, Accumulation, Hyaline Droplet |   |   |   | 1 |   |   |   |   |   | <b>1 1.0</b>  |
| Trachea   | + | + | + | + | + | + | + | + | I | <b>9</b>      |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                         |             |   |   |   |   |   |   |   |   |                 |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5               |   |
| <b>200 mg/m3</b>        | ANIMAL ID   | 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               |   |
|                         |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                         |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**ALIMENTARY SYSTEM**

NONE

**CARDIOVASCULAR SYSTEM**

NONE

**ENDOCRINE SYSTEM**

Pituitary Gland

+

1

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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1-4 .. Lesion qualified as:

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2) Mild 4) Marked

|                         |             |       |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|-------|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |
|                         |             | 5     | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
|                         |             | <hr/> |   |   |   |   |   |   |   |   |   |
| <b>200 mg/m3</b>        | ANIMAL ID   | 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 |   |
|                         |             | 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  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Erosion, Focal  |   |   | 2 |   |   |   |   | 1 |   |   |           | <b>2 1.5</b>  |
| Inflammation, Chronic Active                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 |           | <b>10 2.1</b> |
| Metaplasia, Squamous                                  | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |           | <b>10 4.0</b> |
| Ulcer, Focal  |   | 1 |   |   | 1 |   | 2 |   |   |   |           | <b>3 1.3</b>  |
| Lung  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Bronchiole, Goblet Cell, Hyperplasia                  |   |   |   |   |   | 3 |   |   |   |   |           | <b>1 3.0</b>  |
| Perivascular, Inflammation, Chronic Active            |   |   |   |   | 1 |   |   |   |   |   |           | <b>1 1.0</b>  |
| Nose  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Olfactory Epithelium, Accumulation, Hyaline Droplet   | 1 |   | 1 |   |   |   |   |   |   |   |           | <b>2 1.0</b>  |
| Respiratory Epithelium, Accumulation, Hyaline Droplet |   | 1 | 1 | 1 |   | 2 |   | 1 | 1 | 1 |           | <b>7 1.1</b>  |
| Trachea   | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Inflammation, Chronic                                 |   |   |   |   |   |   |   |   |   | 1 |           | <b>1 1.0</b>  |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

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CAS Number: SYNTILO1023

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First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|   |             |   |   |   |   |   |   |   |   |   |  |
|---|-------------|---|---|---|---|---|---|---|---|---|--|
| <b>B6C3F1 MICE MALE</b><br><b>200 mg/m3</b> | DAY ON TEST | 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 |  |
|   |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |  |
|   | ANIMAL ID   | 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 |  |
|   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |  |
|   |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |  |
|   |             |   |   |   |   |   |   |   |   |   |  |

\* TOTALS

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

|                         |             |   |   |   |   |   |   |   |   |   |   |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE MALE</b> | DAY ON TEST | 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 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                         | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                         |             | 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 |   |
|                         |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>         |             |   |   |   |   |   |   |   |   |   |   |

**ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |              |
|---------------------------|---|---|---|---|---|---|---|---|---|---|--------------|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Gallbladder               | M | + | + | M | + | M | + |   | + | M | <b>5</b>     |
| Inflammation, Neutrophil  |   |   |   |   |   |   | 1 |   |   |   | <b>1 1.0</b> |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Liver                     | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| B6C3F1 MICE MALE | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|------------------|-------------|---|---|---|---|---|---|---|---|---|---|
|                  |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |   |
| 400 mg/m3        | ANIMAL ID   | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |   |
|                  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                  |             | 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 | 1 |   |
|                  |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>  |             |   |   |   |   |   |   |   |   |   |   |

|              |   |   |   |   |   |   |   |   |   |   |           |
|--------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Heart        | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

**ENDOCRINE SYSTEM**

|                    |   |   |   |   |   |   |   |   |   |   |           |
|--------------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Parathyroid Gland  | M | + | M | + | + | + | + | + | M | M | <b>6</b>  |
| Pituitary Gland    | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Thyroid Gland      | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

**GENERAL BODY SYSTEM**

NONE

**GENITAL SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |           |
|-----------------|---|---|---|---|---|---|---|---|---|---|-----------|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Prostate        | + | + | + | + | + | + | + | + | + | + | <b>10</b> |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | <b>10</b> |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked



| B6C3F1 MICE MALE<br>400 mg/m3 | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|                               | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           | 0<br>9<br>5           |          |
|                               | ANIMAL ID             |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
|                               | 0<br>1<br>0<br>0<br>1 | 0<br>1<br>0<br>0<br>2 | 0<br>1<br>0<br>0<br>3 | 0<br>1<br>0<br>0<br>4 | 0<br>1<br>0<br>0<br>5 | 0<br>1<br>0<br>0<br>6 | 0<br>1<br>0<br>0<br>7 | 0<br>1<br>0<br>0<br>8 | 0<br>1<br>0<br>0<br>9 | 0<br>1<br>0<br>0<br>0 |          |
| Testes                        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| <b>HEMATOPOIETIC SYSTEM</b>   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Bone Marrow                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| Lymph Node, Bronchial         | +                     | +                     | +                     | +                     | +                     | M                     | +                     | +                     | +                     | +                     | 9        |
| Lymph Node, Mandibular        | M                     | +                     | +                     | +                     | +                     | M                     | M                     | +                     | +                     | +                     | 7        |
| Lymph Node, Mediastinal       | M                     | +                     | M                     | +                     | +                     | M                     | M                     | M                     | M                     | +                     | 4        |
| Lymph Node, Mesenteric        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| Spleen                        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| Thymus                        | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| <b>INTEGUMENTARY SYSTEM</b>   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Mammary Gland                 | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | M                     | 0        |
| Skin                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| <b>MUSCULOSKELETAL SYSTEM</b> |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Bone                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |
| <b>NERVOUS SYSTEM</b>         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Brain                         | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 10       |

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|   |             |   |   |   |   |   |   |   |   |   |                 |
|---|-------------|---|---|---|---|---|---|---|---|---|-----------------|
| <b>B6C3F1 MICE MALE</b><br><br><b>400 mg/m3</b> | DAY ON TEST | 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 |                 |
|   |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |                 |
|   | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                 |
|   |             | 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 | 1 |                 |
|   |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |                 |
|   |             |   |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |           |               |
|---|---|---|---|---|---|---|---|---|---|---|-----------|---------------|
| Larynx  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Inflammation, Chronic Active                          | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 3 |           | <b>10 2.5</b> |
| Metaplasia, Squamous                                  | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |           | <b>10 4.0</b> |
| Ulcer, Focal  | 1 | 3 | 3 | 2 |   |   | 3 | 1 | 1 | 2 |           | <b>8 2.0</b>  |
| Lung  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Infiltration Cellular, Histiocyte                     |   |   |   |   | 2 |   |   |   |   |   |           | <b>1 2.0</b>  |
| Arteriole, Hypertrophy                                |   |   |   |   | 1 |   |   |   |   |   |           | <b>1 1.0</b>  |
| Bronchiole, Goblet Cell, Hyperplasia                  |   |   |   |   | 3 |   |   |   |   |   |           | <b>1 3.0</b>  |
| Perivascular, Inflammation, Chronic Active            |   |   |   |   | 3 |   |   |   |   |   |           | <b>1 3.0</b>  |
| Nose  | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |
| Olfactory Epithelium, Accumulation, Hyaline Droplet   |   | 2 | 2 | 1 | 1 | 1 | 1 | 2 |   | 1 |           | <b>8 1.4</b>  |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 |   | 3 | 2 | 2 | 2 | 1 | 3 | 1 | 2 |           | <b>9 2.0</b>  |
| Trachea   | + | + | + | + | + | + | + | + | + | + | <b>10</b> |               |

**SPECIAL SENSES SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |           |  |
|-----------------|---|---|---|---|---|---|---|---|---|---|-----------|--|
| Eye             | + | + | + | + | + | + | + | + | + | + | <b>10</b> |  |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | <b>10</b> |  |

**URINARY SYSTEM**

|        |   |   |   |   |   |   |   |   |   |   |           |              |
|--------|---|---|---|---|---|---|---|---|---|---|-----------|--------------|
| Kidney | + | + | + | + | + | + | + | + | + | + | <b>10</b> |              |
| Casts  |   |   |   |   |   | 1 |   |   |   |   |           | <b>1 1.0</b> |

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TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

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First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

| B6C3F1 MICE MALE<br>400 mg/m3 | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | * TOTALS |
|-------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|----------|
|                               | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |          |
|                               |             | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |          |
|                               |             | 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 | 1 |          |
|                               |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |          |
| Nephropathy                   |             | 1 |   |   |   | 1 |   | 1 | 1 |   |   | 4 1.0    |
| Cortex, Infarct, Focal        |             |   |   |   |   | X |   |   |   |   |   | 1        |
| Urinary Bladder               |             | + | + | + | + | + | + | + | + | + | + | 10       |

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

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

|                           |                |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|----------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | <b>Control</b> | DAY ON TEST     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                           |                | ANIMAL ID       | 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 | 9 | 9 | 9 | 9 | 9 |
|                           |                |                 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|                           |                |                 | 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 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                           |                |                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |   |   |   |   |   |   |   |   |
|                           |                | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**ALIMENTARY SYSTEM**

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |              |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Gallbladder               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Inflammation, Neutrophil  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 1.0</b> |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Rectum   | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>9</b>     |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Necrosis, Focal           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | <b>1 1.0</b> |
| Pancreas                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Salivary Glands           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Forestomach      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Glandular        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

| B6C3F1 MICE FEMALE          | DAY ON TEST |   |   |   |   |   |   |   |   |   |                 |
|-----------------------------|-------------|---|---|---|---|---|---|---|---|---|-----------------|
|                             | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                 |
| Control                     | ANIMAL ID   |   |   |   |   |   |   |   |   |   |                 |
|                             | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |                 |
|                             | 9           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |                 |
|                             | 6           | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |                 |
|                             | 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 |                 |
|                             | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |                 |
|                             | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |                 |
|                             |             |   |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |
| Blood Vessel                | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| Heart                       | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| <b>ENDOCRINE SYSTEM</b>     |             |   |   |   |   |   |   |   |   |   |                 |
| Adrenal Cortex              | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| Adrenal Medulla             | +           | + | + | + | + | + | + | + | + | M | <b>9</b>        |
| Islets, Pancreatic          | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| Parathyroid Gland           | M           | + | M | M | M | M | + | + | M | M | <b>3</b>        |
| Pituitary Gland             | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| Thyroid Gland               | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| <b>GENERAL BODY SYSTEM</b>  |             |   |   |   |   |   |   |   |   |   |                 |
| NONE                        |             |   |   |   |   |   |   |   |   |   |                 |
| <b>GENITAL SYSTEM</b>       |             |   |   |   |   |   |   |   |   |   |                 |
| Clitoral Gland              | +           | + | M | + | + | + | + | + | M | M | <b>7</b>        |
| Ovary                       | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| Uterus                      | +           | + | + | + | + | + | + | + | + | + | <b>10</b>       |
| <b>HEMATOPOIETIC SYSTEM</b> |             |   |   |   |   |   |   |   |   |   |                 |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

| B6C3F1 MICE FEMALE            | DAY ON TEST      |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
|                               | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      | 0<br>9<br>6      |          |
| Control                       | ANIMAL ID        |                  |                  |                  |                  |                  |                  |                  |                  |                  |          |
|                               | 0<br>1<br>0<br>1 | 0<br>1<br>0<br>2 | 0<br>1<br>0<br>3 | 0<br>1<br>0<br>4 | 0<br>1<br>0<br>5 | 0<br>1<br>0<br>6 | 0<br>1<br>0<br>7 | 0<br>1<br>0<br>8 | 0<br>1<br>0<br>9 | 0<br>1<br>0<br>0 |          |
|                               |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | * TOTALS |
| Bone Marrow                   | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 10       |
| Lymph Node, Bronchial         | +                | +                | +                | +                | +                | +                | M                | +                | M                | +                | 8        |
| Lymph Node, Mandibular        | M                | +                | M                | +                | +                | M                | +                | +                | +                | +                | 7        |
| Lymph Node, Mediastinal       | M                | +                | +                | M                | M                | +                | M                | M                | M                | M                | 3        |
| Lymph Node, Mesenteric        | M                | +                | +                | +                | +                | +                | +                | +                | +                | +                | 9        |
| 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                        | +                | +                | +                | +                | +                | +                | I                | +                | +                | +                | 9        |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

| B6C3F1 MICE FEMALE                                  | DAY ON TEST         |   |   |   |   |   |   |   |   |   |       |
|---|---------------------|---|---|---|---|---|---|---|---|---|-------|
|   | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |       |
| Control   | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |       |
|   | 9                   | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |       |
|   | 6                   | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |       |
|   | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |       |
|   | ANIMAL ID           |   |   |   |   |   |   |   |   |   |       |
|   | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |       |
|   | 1                   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |       |
|   | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |       |
|   | 1                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |       |
| <b>* TOTALS</b>                                     |                     |   |   |   |   |   |   |   |   |   |       |
| Metaplasia, Squamous                                | 1                   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Lung  | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| Nose  | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1                   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Trachea   | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| <b>SPECIAL SENSES SYSTEM</b>                        |                     |   |   |   |   |   |   |   |   |   |       |
| Eye   | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| Harderian Gland                                     | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| <b>URINARY SYSTEM</b>                               |                     |   |   |   |   |   |   |   |   |   |       |
| Kidney  | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |
| Nephropathy   | 1                   |   |   |   |   |   |   |   |   |   | 1 1.0 |
| Urinary Bladder                                     | + + + + + + + + + + |   |   |   |   |   |   |   |   |   | 10    |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
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1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |   |   |   |   |   |   |   |   |                 |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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               |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6               |   |
| <b>25 mg/m3</b>           | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
|                           |             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                           |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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|                           |             |   |   |   |   |   |   |   |   |                 |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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               |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6               |   |
| <b>25 mg/m3</b>           | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               |   |
|                           |             | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                           |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|                              |   |   |   |   |   |   |   |   |   |   |              |
|------------------------------|---|---|---|---|---|---|---|---|---|---|--------------|
| Larynx                       | + | + | + | + | + | + | + | + | I | + | <b>9</b>     |
| Inflammation, Chronic Active | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 |   | 1 | <b>9 1.2</b> |
| Metaplasia, Squamous         | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   | 1 | <b>9 1.0</b> |
| Lung                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Nose                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
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TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |   |   |   |   |   |   |   |   |   |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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 |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
| <b>50 mg/m3</b>           | ANIMAL ID   | 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 |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>           |             |   |   |   |   |   |   |   |   |   |   |

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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1) Minimal 3) Moderate

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|                           |             |   |   |   |   |   |   |   |   |   |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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 |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
| <b>50 mg/m3</b>           | ANIMAL ID   | 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 |   |
|                           |             | 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                       | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Erosion, Focal               |   |   |   |   |   | 1 | 1 |   |   |   | <b>2 1.0</b>  |
| Inflammation, Chronic Active | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | <b>10 1.7</b> |
| Metaplasia, Squamous         | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | <b>10 2.1</b> |
| Lung                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Nose                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |   |   |   |   |   |   |   |   |                 |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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               |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6               |   |
| <b>100 mg/m3</b>          | ANIMAL ID   | 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               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                           |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

|   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b><br><br><b>100 mg/m3</b> | 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 | 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 | 9 | 9 | 9 | 9 |
|   |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
|   | ANIMAL ID   | 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 |
|   |             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|   |             | 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

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |    |     |     |
|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Larynx  | + | + | + | + | + | + | + | + | + | + | 10 |     |     |
| Erosion, Focal  |   |   | 1 |   | 1 | 1 |   |   |   |   |    | 3   | 1.0 |
| Inflammation, Chronic Active                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 10 | 1.9 |     |
| Metaplasia, Squamous                                  | 3 | 4 | 4 | 4 | 4 | 3 | 4 | 4 | 3 | 2 | 10 | 3.5 |     |
| Ulcer, Focal  | 1 | 1 |   |   |   |   |   |   |   |   | 2  | 1.0 |     |
| Lung  | + | + | + | + | + | + | + | + | + | + | 10 |     |     |
| Arteriole, Hypertrophy                                |   |   |   |   | 2 |   |   |   |   |   |    | 1   | 2.0 |
| Bronchiole, Goblet Cell, Hyperplasia                  |   |   |   |   | 2 |   |   |   |   |   |    | 1   | 2.0 |
| Perivascular, Inflammation, Chronic Active            |   |   |   |   | 2 |   |   |   |   |   |    | 1   | 2.0 |
| Nose  | + | + | + | + | + | + | + | + | + | + | 10 |     |     |
| Olfactory Epithelium, Accumulation, Hyaline Droplet   |   |   | 1 |   |   |   |   |   |   |   |    | 1   | 1.0 |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 1 | 1 |   | 1 | 2 | 2 | 2 |   |   |   | 6  | 1.5 |     |
| Trachea   | + | + | + | + | + | + | I | + | + | + | 9  |     |     |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |                 |   |   |   |   |   |   |   |   |   |
|---------------------------|-------------|-----------------|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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 |   |
|                           | ANIMAL ID   | 6               | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|                           |             | 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 |   |
|                           |             | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                           |             | 1               | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|                           |             | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

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BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

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First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |   |   |   |   |   |   |   |   |                 |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|-----------------|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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               |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6               |   |
| <b>200 mg/m3</b>          | ANIMAL ID   | 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               |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0               | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9               | 0 |
|                           |             |   |   |   |   |   |   |   |   | <b>* TOTALS</b> |   |

**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 lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

|                           |             |   |   |   |   |   |   |   |   |   |   |
|---------------------------|-------------|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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 |   |
|                           |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
| <b>200 mg/m3</b>          | ANIMAL ID   | 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 |   |
|                           |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                           |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| <b>* TOTALS</b>           |             |   |   |   |   |   |   |   |   |   |   |

**NERVOUS SYSTEM**

NONE

**RESPIRATORY SYSTEM**

|   |   |   |   |   |   |   |   |   |   |   |               |
|---|---|---|---|---|---|---|---|---|---|---|---------------|
| Larynx  | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Erosion, Focal  |   |   |   |   | 1 |   |   |   |   |   | <b>1 1.0</b>  |
| Inflammation, Chronic Active                          | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | <b>10 2.3</b> |
| Metaplasia, Squamous                                  | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | <b>10 4.0</b> |
| Ulcer, Focal  | 2 |   | 2 |   |   | 1 |   | 1 | 2 | 3 | <b>6 1.8</b>  |
| Lung  | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Infiltration Cellular, Histiocyte                     |   |   |   | 2 |   |   |   |   |   |   | <b>1 2.0</b>  |
| Arteriole, Hypertrophy                                |   |   | 1 | 2 |   |   |   |   |   |   | <b>2 1.5</b>  |
| Bronchiole, Goblet Cell, Hyperplasia                  |   |   |   | 3 |   |   |   |   |   |   | <b>1 3.0</b>  |
| Perivascular, Inflammation, Chronic Active            |   |   |   | 2 |   |   |   |   |   |   | <b>1 2.0</b>  |
| Nose  | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |
| Olfactory Epithelium, Accumulation, Hyaline Droplet   |   |   |   |   |   | 1 |   | 1 |   |   | <b>2 1.0</b>  |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 1 |   | 2 | 3 | 2 | 1 | 2 | 2 | 2 | 1 | <b>9 1.8</b>  |
| Trachea   | + | + | + | + | + | + | + | + | + | + | <b>10</b>     |

**SPECIAL SENSES SYSTEM**

NONE

**URINARY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked



TDMS No. 20519 - 02

Test Type: 90-DAY

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal working fluids (Syntilo 1023)

CAS Number: SYNTILO1023

Date Report Requested: 05/18/2011

Time Report Requested: 08:14:41

First Dose M/F: 11/03/08 / 11/03/08

Lab: BNW

|                           |             |                 |   |   |   |   |   |   |   |   |   |
|---------------------------|-------------|-----------------|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | DAY ON TEST | 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 |   |
|                           | ANIMAL ID   | 6               | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |   |
|                           |             | 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 |   |
|                           |             | 0               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                           |             | 1               | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|                           |             | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |

NONE

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

|                           |                  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | <b>400 mg/m3</b> | DAY ON TEST     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                           |                  | ANIMAL ID       | 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 | 1 | 1 | 1 | 1 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
|                           |                  |                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |   |   |   |   |   |   |   |   |
|                           |                  | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**ALIMENTARY SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |              |
|--|---|---|---|---|---|---|---|---|---|---|--------------|
| Esophagus                                  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Gallbladder                                | + | + | M | + | + | + | M | + | + | + | <b>8</b>     |
| Intestine Large, Cecum                     | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Colon                     | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Large, Rectum                    | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Duodenum                  | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Ileum                     | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Intestine Small, Jejunum                   | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Liver                                      | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Pancreas                                   | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Periductular, Inflammation, Focal, Chronic |   |   |   |   |   |   | 1 |   |   |   | <b>1 1.0</b> |
| Salivary Glands                            | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Forestomach                       | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |
| Stomach, Glandular                         | + | + | + | + | + | + | + | + | + | + | <b>10</b>    |

**CARDIOVASCULAR SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue  
 M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

| B6C3F1 MICE FEMALE<br>400 mg/m3     | DAY ON TEST |             |             |             |             |             |             |             |             |             | ANIMAL ID             |                      |
|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------------|----------------------|
|                                     | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 |                       |                      |
|                                     | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0<br>1<br>1<br>0<br>1 |                      |
|                                     | 1           | 1           | 1           | 1           | 1           | 1           | 1           | 1           | 1           | 1           | 1<br>1<br>0<br>1      |                      |
|                                     | 2           | 3           | 4           | 5           | 6           | 7           | 8           | 9           | 0           |             |                       |                      |
|                                     |             |             |             |             |             |             |             |             |             |             |                       | <b>* TOTALS</b>      |
| Blood Vessel                        | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Heart                               | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| <b>ENDOCRINE SYSTEM</b>             |             |             |             |             |             |             |             |             |             |             |                       |                      |
| Adrenal Cortex                      | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Adrenal Medulla                     | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Islets, Pancreatic                  | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Parathyroid Gland<br>Cyst, Multiple | +           | +           | +           | +           | +           | M           | +           | +           | +           | +           |                       | <b>9</b><br><b>1</b> |
| Pituitary Gland                     | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Thyroid Gland                       | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| <b>GENERAL BODY SYSTEM</b>          |             |             |             |             |             |             |             |             |             |             |                       |                      |
| NONE                                |             |             |             |             |             |             |             |             |             |             |                       |                      |
| <b>GENITAL SYSTEM</b>               |             |             |             |             |             |             |             |             |             |             |                       |                      |
| Clitoral Gland                      | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Ovary                               | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |
| Uterus                              | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           |                       | <b>10</b>            |

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ .. Tissue examined microscopically  
X .. Lesion present  
I .. Insufficient tissue  
M .. Missing tissue  
A .. Autolysis precludes evaluation  
BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
1) Minimal 3) Moderate  
2) Mild 4) Marked

|                           |                  |                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|------------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| <b>B6C3F1 MICE FEMALE</b> | <b>400 mg/m3</b> | DAY ON TEST     | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |   |
|                           |                  | ANIMAL ID       | 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 | 1 | 1 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                           |                  |                 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |   |   |   |   |   |   |   |   |
|                           |                  | <b>* TOTALS</b> |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**HEMATOPOIETIC SYSTEM**

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Lymph Node, Bronchial   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 9  |
| Lymph Node, Mandibular  | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | 8  |
| Lymph Node, Mediastinal | M | + | M | + | + | M | M | M | M | M | M | M | M | M | M | M | M | M | 3  |
| Lymph Node, Mesenteric  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Spleen                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Thymus                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

**INTEGUMENTARY SYSTEM**

|               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |
| Skin          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 10 |

**MUSCULOSKELETAL SYSTEM**

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

**NERVOUS SYSTEM**

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

**RESPIRATORY SYSTEM**

\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
 + .. Tissue examined microscopically  
 X .. Lesion present  
 I .. Insufficient tissue

M .. Missing tissue  
 A .. Autolysis precludes evaluation  
 BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

| B6C3F1 MICE FEMALE<br>400 mg/m3                       | DAY ON TEST |             |             |             |             |             |             |             |             |             | * TOTALS |
|---|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
|   | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 | 0<br>9<br>6 |          |
| ANIMAL ID   | 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           |          |
|   | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 0           | 1        |
|   | 1           | 2           | 3           | 4           | 5           | 6           | 7           | 8           | 9           | 0           |          |
| Larynx  | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| Inflammation, Chronic Active                          | 2           | 2           | 3           | 2           | 2           | 2           | 2           | 3           | 2           | 3           | 10 2.3   |
| Metaplasia, Squamous                                  | 4           | 4           | 4           | 4           | 4           | 4           | 4           | 4           | 4           | 4           | 10 4.0   |
| Ulcer, Focal  | 2           | 1           | 3           |             |             | 3           |             | 2           | 1           | 2           | 7 2.0    |
| Lung  | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| Infiltration Cellular, Histiocyte                     | 3           | 2           |             |             |             |             |             |             | 3           |             | 3 2.7    |
| Arteriole, Hypertrophy                                | 2           | 2           |             |             |             |             |             |             | 2           |             | 3 2.0    |
| Bronchiole, Goblet Cell, Hyperplasia                  | 4           | 2           |             |             |             |             |             |             | 3           |             | 3 3.0    |
| Perivascular, Inflammation, Chronic Active            | 3           | 3           |             |             |             |             |             |             | 3           |             | 3 3.0    |
| Nose  | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| Olfactory Epithelium, Accumulation, Hyaline Droplet   | 1           | 1           | 2           | 1           | 2           |             | 1           | 2           | 2           | 1           | 9 1.4    |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 4           | 3           | 3           | 4           | 3           | 2           | 3           | 3           | 4           | 4           | 10 3.3   |
| Trachea   | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| <b>SPECIAL SENSES SYSTEM</b>                          |             |             |             |             |             |             |             |             |             |             |          |
| Eye   | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| Harderian Gland                                       | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| <b>URINARY SYSTEM</b>                                 |             |             |             |             |             |             |             |             |             |             |          |
| Kidney  | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |
| Nephropathy   |             |             |             |             |             | 1           |             |             |             |             | 1 1.0    |
| Urinary Bladder                                       | +           | +           | +           | +           | +           | +           | +           | +           | +           | +           | 10       |

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1-4 .. Lesion qualified as:  
 1) Minimal 3) Moderate  
 2) Mild 4) Marked

**TDMS No.** 20519 - 02

**Test Type:** 90-DAY

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** MICE/B6C3F1

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

Metal working fluids (Syntilo 1023)

**CAS Number:** SYNTILO1023

**Date Report Requested:** 05/18/2011

**Time Report Requested:** 08:14:41

**First Dose M/F:** 11/03/08 / 11/03/08

**Lab:** BNW

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

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\* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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1-4 .. Lesion qualified as:

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