

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

F1_M3

NTP Study Number: C20523
Lock Date: 06/04/2012
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 3.0.2.2_002
PWG Approval Date: NONE

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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| B6C3F1 MICE MALE | DAY ON TEST | 0729 | 0730 | 0739 | 0740 | 0749 | 0766 | 0777 | 0778 | 0779 | 0782 | 0783 | 0789 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | 0799 | | | | | |
| | ANIMAL ID | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | 0026 | 0027 | 0028 | 0029 | 0030 | 0031 | 0032 | 0033 | 0034 | 0035 | 0036 | 0037 | 0038 | 0039 | 0040 | 0041 | 0042 | 0043 | 0044 | 0045 | 0046 | 0047 | 0048 | 0049 |

males (cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Esophagus | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Gallbladder Inflammation, Chronic Active | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Hyperplasia | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Hyperplasia, Lymphoid | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Inflammation | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Necrosis | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine Large, Colon | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | I |
| Intestine Small, Duodenum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Ileum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Hyperplasia, Lymphoid | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperplasia, Lymphoid | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine Small, Jejunum | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | A |
| Liver | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Clear Cell Focus | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Congestion | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |

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

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

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CAS Number: TRIMVX

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First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males (cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| | 0729 | 0773 | 0772 | 0773 | 0741 | 0772 | 0764 | 0777 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | |
| ANIMAL ID | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | |
| Eosinophilic Focus | | | X | | | | | | | | | | | | | X | X | | | X | | | | | X | |
| Hemorrhage | | | | | | | | | | | | | | | | | 3 | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | X | | | | | | | | | | X | | | | | | |
| Tension Lipidosis | | | | 2 | | | | | | | | | | | | | | | | | | | | | | |
| Centrilobular, Hepatocyte, Necrosis Hepatocyte, Hypertrophy Hepatocyte, Necrosis Hepatocyte, Vacuolization Cytoplasmic | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Mesentery Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas Hypertrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular Cyst, Squamous Inflammation, Chronic Active Mineralization | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Tooth Dysplasia Malformation | | | | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

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

1-4 .. Lesion qualified as:
1) Minimal 3) Moderate
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| B6C3F1 MICE MALE Control | 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 | ANIMAL ID | males (cont...) |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------------|
| | 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 | | |
| Blood Vessel | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 0 | |
| | 2 | 3 | 2 | 3 | 1 | 2 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 1 | 1 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 0 | |
| | 9 | 0 | 9 | 0 | 4 | 9 | 6 | 1 | 1 | 0 | 9 | 9 | 1 | 9 | 9 | 8 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 1 | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrium, Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Intermedia, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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| B6C3F1 MICE MALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | males (cont...) | | |
|------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|--|
| | 0729 | 0730 | 0731 | 0732 | 0733 | 0734 | 0735 | 0736 | 0737 | 0738 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | | 0749 | |
| Control | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | | |
| | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exfoliated Germ Cell | | X | X | X | | X | X | X | X | X | | X | X | X | | | X | X | X | X | X | X | X |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ectasia | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic Active | | | | | | | | | | | 4 | | | 1 | | | | | | | | 3 | 1 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | |
| Arteriole, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration | | | | 1 | | | | | 1 | | | | | | | | 1 | | | | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | 1 | | 1 | | 1 | | 1 | | 2 | 1 |

* .. 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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|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|---|------------------|
| | 0729 | 0730 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | 0749 | 0750 | 0751 | 0752 | 0753 | 0754 | 0755 | 0756 | 0757 | 0758 | 0759 | 0760 | | | | |
| ANIMAL ID | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | | | |
| Lymph Node Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | + + 3 | | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid | + | + | + | M | M | M | + | M | + | + | M | + | I | + | M | + | + | + | + | + | + | + | + | + | + | | | |
| Lymph Node, Mandibular Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | + | + | + | I | M | + | + | + | + | M | + | M | + | M | M | M | + | + | M | M | M | M | + | M | M | 2 3 | | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | + | + | + | + | M | I | M | M | + | I | I | + | + | + | M | + | + | + | + | M | + | + | M | M | M | 2 1 | | |
| Lymph Node, Mesenteric Angiectasis Congestion Hyperplasia, Lymphoid Hyperplasia, Plasma Cell | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 2 2 1 1 1 1 | | |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 1 2 1 1 2 1 3 2 2 | | |
| Thymus Atrophy Cyst Ectopic Parathyroid Gland Hyperplasia, Lymphoid Epithelial Cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | 3 2 2 1 |

* .. 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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|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|
| | 0729 | 0730 | 0731 | 0732 | 0733 | 0734 | 0735 | 0736 | 0737 | 0738 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | 0749 | 0750 | 0751 | 0752 | | |
| ANIMAL ID | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Exudate | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lateral Wall, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Abscess | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cartilage, Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------------|----------------------------|
| B6C3F1 MICE MALE | 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 | males (cont...) | |
| | | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | | 2 | 3 | 2 | 3 | 1 | 2 | 4 | 3 | 3 | 3 | 2 | 2 | 3 | 4 | 2 | 1 | 1 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | | 2 |
| 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 | males (cont...) |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Hyperplasia 2

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 1 | 3 | 2 | 2 | | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 2 | 1 | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Calculus Micro Observation Only | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue
 X .. Lesion present A .. Autolysis precludes evaluation
 I .. Insufficient tissue BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| B6C3F1 MICE MALE | 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 | * TOTALS |
| | | 7 | 7 | 5 | 4 | 7 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 6 | 7 | 7 | 7 | |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|-----|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Gallbladder | + | + | A | A | + | + | + | + | + | A | + | + | + | + | + | A | + | + | A | M | + | + | + | + | 43 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1.0 |
| Intestine Large, Cecum | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | A | + | + | A | + | + | + | + | 45 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Hyperplasia, Lymphoid | | | | | | | | | 1 | | | | | | | 1 | | | | | | | | | | 2 | 1.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.0 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | 48 | | | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | A | + | I | + | + | + | A | + | + | + | + | + | + | + | 46 | | | |
| Intestine Small, Duodenum | + | + | A | A | + | + | + | + | + | A | + | + | + | + | + | A | + | + | A | + | + | + | + | 44 | | | |
| Intestine Small, Ileum | + | + | A | A | + | + | + | + | + | A | + | + | + | + | + | A | + | + | A | + | + | + | + | 45 | | | |
| Hyperplasia, Lymphoid | | | | | | | 1 | 2 | | | | | | | 1 | | | | | | | | 2 | | 8 | 1.4 | |
| Intestine Small, Jejunum | + | + | A | A | + | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | 45 | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1.0 | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Angiectasis | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 1 | 1.0 |
| Basophilic Focus | X | | | | X | | | | | X | X | X | | | | X | | | | | | | X | | 11 | | |
| Clear Cell Focus | | | X | | X | X | | | | | | | | | X | X | | | | | X | | | | | 14 | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---------------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| | 0730 | 0732 | 0739 | 0738 | 0731 | 0737 | 0737 | 0737 | 0737 | 0737 | 0736 | 0735 | 0737 | 0737 | 0737 | 0737 | 0737 | 0737 | 0733 | 0737 | 0737 | 0736 | 0737 | 0737 | | 0737 |
| ANIMAL ID | 00026 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000 | 00001 |
| Eosinophilic Focus | | | | | | | | | X | | | | | | | X | | | X | | | | | | | 8 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Mixed Cell Focus | | | X | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Centrilobular, Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | 2 | | | | | | | 2 2.0 |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 |
| Hepatocyte, Necrosis | | | | 4 | | | | | | 3 | | | | | | | | | | | 1 | | | | | 3 2.7 |
| Hepatocyte, Vacuolization Cytoplasmic | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | + | + | + | | 4 1.3 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | 50 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | 48 |
| Cyst, Squamous | 1 | | A | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | 5 |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 4 2.3 |
| Malformation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE Control | DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|-----------------------------|-------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|
| | | 0730 | 0739 | 0736 | 0748 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | 0777 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 7 | 7 | 5 | 4 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 6 | 7 | 7 |
| | | 3 | 2 | 9 | 8 | 3 | 2 | 3 | 3 | 2 | 7 | 4 | 3 | 2 | 3 | 3 | 2 | 8 | 3 | 3 | 4 | 3 | 2 |
| | | 0 | 9 | 6 | 4 | 1 | 9 | 1 | 0 | 9 | 5 | 9 | 1 | 3 | 0 | 0 | 9 | 8 | 0 | 0 | 9 | 0 | 9 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 0 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|--------------|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Exfoliated Germ Cell | X | X | | | X | X | X | X | | X | | X | X | X | X | X | | X | X | X | X | X | X | 39 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Preputial Gland | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Ectasia | | | | | | 2 | | | | | 1 | | | | | | | | | | | 1 | 4 1.3 | |
| Inflammation, Chronic Active | | 1 | | | | 4 | | | | | | | | | | | | 3 | 1 | | | 1 | 9 2.1 | |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation | | | | | | | | | | | | | | 2 | | | | | 2 | | | | | 2 2.0 |
| Arteriole, Inflammation, Chronic Active | | | | | | | | | 2 | | | | | | | | | | | | | | | 1 2.0 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation | | | | | | | | | | | | | | | | | | 2 | | | | | | 1 2.0 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Degeneration | | | 3 | | | | 1 | 1 | | 2 | | | | 1 | | | | | | | | 1 | 9 1.3 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Myeloid Cell, Hyperplasia | | | 1 | | | 1 | 2 | 1 | | 1 | | | 1 | | | 1 | | | 2 | 1 | | 1 | 16 1.2 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
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Date Report Requested: 02/02/2015
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 Lab: BNW

| B6C3F1 MICE MALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|------|-----|-----|-----|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | 0730 | 0730 | | | |
| | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0026 | 0027 | 0028 | 0029 | 0030 | 0031 | 0032 | 0033 | 0034 | 0035 | 0036 | 0037 | 0038 | 0039 | 0040 | 0041 | 0042 | 0043 | 0044 | 0045 | 0046 | 0047 | 0048 | 0049 | 0050 | | | |
| Lymph Node Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 |
| Lymph Node, Bronchial Hyperplasia, Lymphoid | + | + | M | + | + | I | + | + | + | M | + | + | M | + | + | + | + | + | + | + | + | + | M | + | 38 | 3 | 1.7 | |
| Lymph Node, Mandibular Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | M | + | M | M | + | M | + | M | M | + | + | M | M | M | + | M | M | + | M | M | M | M | M | + | 20 | 1 | 1.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 | 2.3 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 2.0 | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | + | M | + | A | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | 35 | 3 | 1.3 | |
| Lymph Node, Mesenteric Angiectasis Congestion Hyperplasia, Lymphoid Hyperplasia, Plasma Cell | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 48 | 1 | 2.0 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1.4 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 | 3.0 | | |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 11 | 1.4 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 | 1.7 | | |
| Thymus Atrophy Cyst Ectopic Parathyroid Gland Hyperplasia, Lymphoid Epithelial Cell, Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | I | I | M | M | + | + | + | + | 44 | 5 | 2.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1 | 3.0 | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

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

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Inflammation, Chronic Active | | | | 1 | | | | 1 | 2 | 1 | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | 10 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Ulcer | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Fibro-Osseous Lesion | | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperostosis | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Infiltration Cellular | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Larynx | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Inflammation, Chronic Active | 2 | 1 | | | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 45 |
| Epiglottis, Hyperplasia, Squamous | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Squamous Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Infiltration Cellular, Histiocyte | | | | | | | 1 | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | 5 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| | 0730 | 0732 | 0739 | 0738 | 0731 | 0737 | 0737 | 0737 | 0737 | 0737 | 0736 | 0735 | 0737 | 0737 | 0737 | 0737 | 0737 | 0737 | 0733 | 0737 | 0737 | 0736 | 0737 | 0737 | | 0737 |
| ANIMAL ID | 00026 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | 00000 | 00001 | 00002 | 00003 | 00004 | 00005 | 00006 | 00007 | 00008 | 00009 | | |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 5 1.4 |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2 3.0 |
| Alveolar/bronchiolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 3 3.0 |
| Alveolar Epithelium, Hyperplasia | 2 | | | | | | | | 1 | | | | | | | | | | | | | | | | | 3 2.0 |
| Nose | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Exudate | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | 2 | 2 1.0 | |
| Inflammation, Suppurative | | | | | | | | 2 | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | 1 | | | | | | | | | 3 | 1.0 | |
| Lateral Wall, Inflammation, Chronic Active | | | | | | | | 3 | | | | | | | | | | | | | | | | 2 | 2.5 | |
| Nasolacrimal Duct, Abscess | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | 1 | | | | | | | | | | | | | | | | 3 | 1.0 | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | | | | | | | | | | | | | | | | | | 1 | | | | | 2 | 1.0 | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | 1 | | | | | | | | | | | 3 | 1.0 | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | | | | | | 1 | | | | | | | | | | | | | 1 | | | 1 | | 7 | 1.0 | |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | | 1 | | 1 | | | 1 | | 1 | | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | | 2 | 2 | 41 | 1.2 | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 1.0 | |
| Respiratory Epithelium, Necrosis | | | | | | | | 1 | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Trachea | + | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | 46 | | |
| Cartilage, Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |

* .. 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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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
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 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE MALE | 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 | | |
| | | 7 | 7 | 5 | 4 | 7 | 7 | 7 | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | |
| | | 3 | 2 | 9 | 8 | 3 | 2 | 3 | 3 | 2 | 7 | 4 | 3 | 2 | 3 | 3 | 3 | 2 | 8 | 3 | 3 | 4 | 3 | 2 | 2 | |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
| * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | |

Hyperplasia

1 2.0

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia, Lymphoid | | | | | | | | | 2 | | | | | | | | | | | | | | | | 1 2.0 |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | 2 | | | | | | | 1 2.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |
| Nephropathy | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 4 | 1 | 3 | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 47 1.9 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Calculus Micro Observation Only | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 1.0 |

* .. 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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 1) Minimal 3) Moderate
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Experiment Number: 20523 - 04

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Date Report Requested: 02/02/2015

Test Type: CHRONIC

Metal Working Fluids: Trim VX

Time Report Requested: 13:50:12

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: TRIMVX

First Dose M/F: 08/03/09 / 08/03/09

Species/Strain: MICE/B6C3F1

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------|---|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE MALE | 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 | 0 | |
| | | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 3 | 2 | 3 | 7 | 2 | 5 | 2 | 2 | 5 | 3 | 2 | 4 | 3 | 3 | 2 | 3 | 8 | 3 | 8 | 7 | 2 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 |
| 10 mg/m3 | 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 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | males (cont...) | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | 1 | | 2 | | 2 | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Basophilic Focus | X | | | X | | X | | | | | X | | | | | | | | X | | | | | | X | | | | | | | | | | | | | | | |
| Clear Cell Focus | | | X | | X | | | X | | | | | | X | | | | | X | | | | | | X | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | X | X | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | X | |
| Mixed Cell Focus | X | | | | | | | X | | | | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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1) Minimal 3) Moderate
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Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | 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 | ANIMAL ID | |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|--|
| | | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 4 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | | 3 | 2 | 3 | 7 | 2 | 5 | 2 | 2 | 5 | 3 | 2 | 4 | 3 | 3 | 2 | 3 | 8 | 3 | 8 | 7 | 2 | 3 | 3 | 2 | 3 | | |
| | | 0 | 1 | 0 | 4 | 9 | 6 | 9 | 9 | 0 | 0 | 9 | 4 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 2 | 9 | 0 | 0 | 2 | 3 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | | | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | | males (cont...) | |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Centrilobular, Hepatocyte, Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Hepatocyte, Necrosis | | 1 | | | | 2 | | | | 1 | | | | 1 | | | | 2 | | | | 1 | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Hemorrhage, Acute | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Inflammation, Suppurative, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |

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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | Animals | | | | | | | | | | | | | | | | | | | | males (cont...) | | | | | | | | |
|------------------------------|-------------|---------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|------|------|------|------|------|------|------|------|
| | | 0730 | 0621 | 0730 | 0674 | 0769 | 0676 | 0779 | 0579 | 0770 | 0779 | 0664 | 0773 | 0773 | 0773 | 0773 | 0438 | 0738 | 0488 | 0572 | 0779 | | 0773 | 0773 | 0723 | 0732 | 0732 | 0732 | 0732 | 0732 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | | | | 2 | | | | | 1 | | | | 1 | 1 | | | | | | | | | 1 | | 2 | 1 | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | 1 | | 1 | | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | | 2 | | 1 | | 1 | 1 | | | | | | | | | | | | |
| Subcapsular, Hyperplasia | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Subcapsular, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | 4 |
| Parathyroid Gland | + | + | M | M | + | + | + | M | + | M | M | + | M | M | M | M | + | M | M | + | M | M | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X |
| Pituitary Gland | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE | DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | males (cont...) | |
|------------------|-------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|
| | | 0730 | 0621 | 0730 | 0674 | 0729 | 0656 | 0709 | 0779 | 0500 | 0700 | 0700 | 0600 | 0700 | 0700 | 0400 | 0700 | 0400 | 0500 | 0700 | 0700 | | 0700 |
| 10 mg/m3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 25 |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Exfoliated Germ Cell Inflammation, Chronic Active | X | X | | X | | X | X | X | X | | X | X | X | X | | X | | X | X | X | X | X | |
| | | | | | | | 1 | | | | | | | | | | | | 1 | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Ectasia Inflammation, Chronic Active Duct, Ectasia | | | | | | | | | | | | | | | | | | | | | | | |
| | | 4 | | 3 | | 3 | | | | | | | | 1 | | | | | 1 | 3 | 2 | 4 | 3 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + |
| Infiltration Cellular, Lymphoid Inflammation | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Infiltration Cellular, Lymphoid Inflammation | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Degeneration Necrosis | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | 1 | | 2 | 1 | 1 | | | | | 1 | | 1 | | 1 | 1 | 2 | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | 1 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
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 Species/Strain: MICE/B6C3F1

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 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males (cont...) | | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|------|------|------|------|------|------|
| | 0730 | 0621 | 0730 | 0674 | 0729 | 0669 | 0779 | 0675 | 0772 | 0530 | 0732 | 0643 | 0733 | 0673 | 0779 | 0483 | 0748 | 0445 | 0772 | 0673 | | | 0733 | 0673 | 0772 | 0673 | 0733 | 0673 |
| Myeloid Cell, Hyperplasia | | | | 2 | 1 | 2 | 2 | 1 | 1 | | | | | 1 | 1 | | | 1 | 1 | | | 2 | 1 | 1 | 1 | 2 | | |
| Lymph Node, Bronchial Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | M | + | M | M | + | + | M | + | + | + | M | M | + | + | + | + | M | M | + | + | + | + | M | + | + | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | + | + | + | + | M | + | M | M | + | I | M | + | + | + | M | M | + | + | + | + | M | M | + | M | + | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | + | + | + | M | + | + | I | + | I | + | + | + | + | M | + | + | M | + | + | I | + | + | M | I | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular Inflammation, Chronic Active | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Necrosis, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thymus Atrophy Cyst Ectopic Parathyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------------|
| B6C3F1 MICE MALE | DAY ON TEST | 0 7 3 0 | 0 6 2 1 | 0 7 3 0 | 0 6 7 4 | 0 7 2 9 | 0 6 5 6 | 0 7 2 9 | 0 7 2 9 | 0 5 3 0 | 0 7 2 4 | 0 7 3 0 | 0 7 3 0 | 0 7 2 9 | 0 7 3 0 | 0 4 8 7 | 0 7 3 8 | 0 4 8 1 | 0 5 7 2 | 0 7 3 0 | 0 7 3 0 | 0 7 2 9 | 0 7 3 0 | 0 7 2 9 | males (cont...) |
| | ANIMAL ID | 0 0 2 0 1 | 0 0 2 0 2 | 0 0 2 0 3 | 0 0 2 0 4 | 0 0 2 0 5 | 0 0 2 0 6 | 0 0 2 0 7 | 0 0 2 0 8 | 0 0 2 0 9 | 0 0 2 1 0 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 1 1 | 0 0 2 2 1 | 0 0 2 2 2 | 0 0 2 2 2 | 0 0 2 2 2 | 0 0 2 2 2 | 0 0 2 2 2 | |
| Hyperplasia, Lymphoid | | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Mammary Gland | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | + | M | M | M | M | M | M | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | 2 | | | | | | | 2 | |
| Inflammation, Chronic Active | | | | | | 4 | | | | | | | | | | | | | 2 | | | | | | |
| Necrosis | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Ulcer | | | | | 4 | | | | | | | | | | | | | | | | | | | | |
| Subcutaneous Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Fibro-Osseous Lesion | | | X | | | | | | | | | | | X | | | | | | | | | | |
| Hyperostosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Skeletal Muscle | | | + | | | | | | | | | | | | | | | | | | | | | |
| Degeneration | | | 1 | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Infiltration Cellular | | | | | | | | | | | | | | | | | | | | 3 | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Peripheral Nerve | | | + | | | | | | | | | | | | | | | | | | | | | |

* .. 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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|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------------|------|
| B6C3F1 MICE MALE | DAY ON TEST | 0730 | 0621 | 0730 | 0674 | 0752 | 0679 | 0775 | 0577 | 0759 | 0772 | 0664 | 0773 | 0777 | 0477 | 0747 | 0455 | 0772 | 0773 | 0777 | 0777 | 0777 | 0777 | males (cont...) | |
| | ANIMAL ID | 0020 | 0022 | 0023 | 0024 | 0025 | 0026 | 0027 | 0028 | 0029 | 0030 | 0031 | 0032 | 0033 | 0034 | 0035 | 0036 | 0037 | 0038 | 0039 | 0040 | 0041 | 0042 | | 0043 |

Degeneration 1

Spinal Cord +

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Epiglottis, Hyperplasia, Squamous | | | | 1 | | | | | | | | 1 | | | | | | | | | | | | |
| Epiglottis, Metaplasia, Squamous | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | | | | | | | | | | | | | | | | | | 1 | | | | 1 | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | 1 | | | | | | | | | 2 | | | 1 | 2 | | 2 |
| Inflammation, Chronic | | | | | 1 | | | | | | | | | | | | | | | | 1 | | 1 | 1 |
| Pigmentation | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | | | | | | | | | | | | 1 | | | | | | | 1 | | | 1 | | 2 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | 1 | | | 1 | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exudate | | | | 1 | | | | | 1 | | | | | | | 1 | 2 | | | | | | 1 | |
| Inflammation, Chronic Active | | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | | | 1 | | 1 | 1 | | 1 |
| Lateral Wall, Inflammation, Chronic Active | | | | | | | | | 3 | | | | | | | | | | | | | | | |
| Lateral Wall, Necrosis | | | | | | | | | | | | | | | | | 4 | | | | | 2 | | |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | 4 | | | | | | | |
| Nasopharyngeal Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | males (cont...) | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|
| | 0730 | 0731 | 0732 | 0733 | 0734 | 0735 | 0736 | 0737 | 0738 | 0739 | 0740 | 0741 | 0742 | 0743 | 0744 | 0745 | 0746 | 0747 | 0748 | 0749 | 0750 | 0751 | 0752 | 0753 | 0754 | | 0755 |
| ANIMAL ID | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | | |
| Nasopharyngeal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Nasopharyngeal Duct, Perforation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | 2 | 2 | 2 | 2 | | |
| Olfactory Epithelium, Atrophy | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | 2 | 1 | 3 | 2 | 2 | 2 | 2 | | |
| Respiratory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | 1 | | | | | | | | | 1 | | | | | | | | |
| Respiratory Epithelium, Necrosis | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | |
| Turbinate, Atrophy | | | | | | | | | | 1 | | | | | | | | | 2 | | | | | | | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | 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 | ANIMAL ID | males (cont...) |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------------|
| | 7 | 6 | 7 | 6 | 7 | 6 | 7 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 4 | 5 | 7 | 7 | 7 | 7 | 7 | | | |
| | 3 | 2 | 3 | 7 | 2 | 5 | 2 | 2 | 5 | 3 | 2 | 4 | 3 | 3 | 2 | 3 | 8 | 3 | 8 | 7 | 2 | 3 | 3 | 2 | 3 | 0 | | |
| | 0 | 1 | 0 | 4 | 9 | 6 | 9 | 9 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 2 | 9 | 0 | 0 | 9 | 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 | | |
| | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 0 | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Inflammation, Chronic Active | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | | 2 | 2 | 1 | 2 | 1 | 1 | | 2 | 2 | 4 | | 2 | 1 | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Inflammation, Suppurative | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE | 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 | * TOTALS |
|------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| 10 mg/m3 | ANIMAL ID | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 5 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 0 | 0 | 9 | 8 | 1 | 9 | 0 | 8 | 9 | 0 | 6 | 0 | 9 | 1 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 1 | 9 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Gallbladder Inflammation, Chronic Active Vacuolization Cytoplasmic | + | + | M | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | 46 1 1.0 1 2.0 |
| Intestine Large, Cecum Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 2 1.5 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Intestine Large, Rectum Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | + | | + | + | + | + | 48 1 2.0 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Intestine Small, Ileum Cyst Hyperplasia, Lymphoid Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 1 9 1.3 1 1.0 |
| Intestine Small, Jejunum Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 1 2.0 |
| Liver Basophilic Focus Clear Cell Focus Eosinophilic Focus Mixed Cell Focus | + | + | + | + | + | + | + | + | + | X | + | X | + | + | + | + | + | + | + | + | X | + | + | + | 50 9 11 12 3 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|------|-------|-------|-------|-------|-------|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | 0730 | | | | | |
| ANIMAL ID | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | | | | | | |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.0 | | | | |
| Centrilobular, Hepatocyte, Fatty Change | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 2.5 | | | |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 2 | 7 1.4 | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | 7 | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 2 | 4 1.8 | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Hemorrhage, Acute | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.3 | |
| Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.3 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4 1.3 | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | 10 | | |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 9 1.7 | |
| Inflammation, Suppurative, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.5 | |

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
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Experiment Number: 20523 - 04
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| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|-----------------------------------|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|--------|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | 0730 | |
| | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | |
| | 002226 | 002227 | 002228 | 002229 | 002230 | 002231 | 002232 | 002233 | 002234 | 002235 | 002236 | 002237 | 002238 | 002239 | 002240 | 002241 | 002242 | 002243 | 002244 | 002245 | 002246 | 002247 | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cardiomyopathy | | 1 | | | 1 | 1 | | | 2 | 1 | | | | | | | 1 | | | 1 | 1 | | 17 1.2 |
| Inflammation, Chronic Active | 2 | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.7 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Accessory Adrenal Cortical Nodule | | 1 | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hyperplasia | | | | | | 2 | | | | | | | | | | | | | | | | | 2 1.5 |
| Hypertrophy | | 1 | 1 | | 1 | | 2 | | | 1 | | 1 | | 1 | | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 30 1.1 |
| Subcapsular, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Subcapsular, Hypertrophy | | | | | | | | | 2 | | | | | | | | | | | | | | 1 2.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | 3 | | | | | | 2 2.0 |
| Hyperplasia | | | | | | | | | | | | 2 | | | | | | 1 | 1 | | | | 5 1.2 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 2.5 |
| Parathyroid Gland | + | + | + | + | + | M | + | + | + | + | + | M | M | + | + | M | M | M | + | + | M | M | 28 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Pars Distalis, Cyst | | | | | | | X | | | | | | | | | | | | | | | | 1 |
| Pars Distalis, Hyperplasia | | | | | | | 1 | | | | | | | | 2 | 1 | | | | | | | 3 1.3 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|---|------|-----|-------------------------|-----------------------------------|----------------|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | | 0730 | | | | |
| ANIMAL ID | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | | | | | | |
| Myeloid Cell, Hyperplasia | 2 | 2 | 1 | 2 | | 1 | | 1 | | | 2 | | 1 | 1 | | | 2 | | 1 | 1 | 2 | 1 | 29 | 1.4 | | | |
| Lymph Node, Bronchial Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | M | + | M | I | + | + | + | + | 37 | 1 1.0 3 1.3 1 1.0 | | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | M | M | M | M | M | M | M | + | + | + | + | M | M | M | M | M | + | + | + | + | + | + | M | + | + | 27 | 3 1.0 1 1.0 |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | I | + | + | I | + | + | M | I | + | + | I | + | + | + | I | + | + | + | + | + | + | + | I | + | 35 | 2 1.5 | |
| Lymph Node, Mesenteric Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Infiltration Cellular Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 3 1.3 11 1.5 1 2.0 1 1.0 | |
| Spleen Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Necrosis, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1 1.0 8 1.9 15 1.7 1 2.0 | |
| Thymus Atrophy Cyst Ectopic Parathyroid Gland | I | + | + | I | + | + | + | I | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 44 | 5 2.4 3 2 1.0 | |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------------|
| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | 0730 | 0730 | 0732 | 0622 | 0733 | 0732 | 0733 | 0728 | 0770 | 0776 | 0777 | 0776 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | * TOTALS |
| | ANIMAL ID | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | 0022 | |
| | | 22 | 22 | 22 | 22 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | |
| | | 67 | 78 | 90 | 01 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 00 | 11 | 22 | 33 | 44 | 55 | 66 | 77 | 88 | 99 | 00 | 11 | 22 | 33 | |

Hyperplasia, Lymphoid 1 1 1 5 1.0

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Mammary Gland | M | M | M | M | M | M | M | + | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 3 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst Epithelial Inclusion | | | | | | | | | | | | | | | | | | | | X | | | | | | 1 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Inflammation, Chronic Active | | | | 1 | 3 | | | | 2 | | | | | | | | | | | | | | | 1 | | 6 2.2 |
| Necrosis | | | | | 3 | | | | 3 | | | | | | | | | | | | | | | | | 3 2.3 |
| Ulcer | 4 | | | | | | | | | | | | | | | | | | | | | | | | | 2 4.0 |
| Subcutaneous Tissue, Inflammation, Chronic Active | 4 | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Fibro-Osseous Lesion | | | | | | | | | | | | | | | | | | | | | | X | | | | 3 |
| Hyperostosis | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Infiltration Cellular | | | | | | | | | | | | | | | | | 1 | | | | | | | | | 2 2.0 |
| Inflammation, Chronic Active | | | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

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

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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|--|
| B6C3F1 MICE MALE | 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 | | |
| 10 mg/m3 | ANIMAL ID | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 3 | 7 | 7 | 7 | 7 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 3 | 5 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | * TOTALS | |

Degeneration

1 1.0

Spinal Cord

1

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|---------------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Foreign Body | | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | 1 | 1 | 2 | 2 | 1 | 2 | | 1 | 1 | 1 | 2 | | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | | 47 1.4 |
| Necrosis | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 1 1.0 |
| Epiglottis, Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Epiglottis, Metaplasia, Squamous | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 2 | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | | | 49 2.0 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Hemorrhage | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 1.0 |
| Infiltration Cellular, Histiocyte | | | 1 | | | | | | | | | | | | | | | 1 | 1 | 3 | | | | | | | 9 1.6 |
| Inflammation, Chronic | | | 1 | 1 | 1 | 1 | | | 1 | | 1 | | | | | 1 | | | 1 | | 1 | | | | | | 12 1.0 |
| Pigmentation | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | 2 2.0 |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 |
| Alveolar/bronchiolar Epithelium, Hyperplasia | | | | | | | | | | | | 3 | | | | | | 1 | 1 | | | | | | | | 7 1.4 |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | 3 1.0 |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Exudate | 1 | | | 1 | 2 | | | | | | | | | 1 | | | | | | 1 | | | | 1 | | | 11 1.2 |
| Inflammation, Chronic Active | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | | | 1 | 1 | 1 | | 1 | 1 | 2 | | 1 | 1 | | | | 33 1.0 |
| Lateral Wall, Inflammation, Chronic Active | | 3 | 2 | | | | | | | 3 | | | | | | | | | | 2 | | | | | | | 7 2.7 |
| Lateral Wall, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | 2 | | | | 2 | | | | | | | | | | 2 2.0 |
| Nasopharyngeal Duct, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

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

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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|--------|--|
| | 0730 | 0733 | 0732 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | 0733 | 0722 | | 0733 | |
| ANIMAL ID | 0022 | 0022 | 0022 | 0022 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | 0023 | | |
| Nasopharyngeal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Nasopharyngeal Duct, Perforation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 46 1.5 | |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 49 1.9 | |
| Respiratory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 49 1.5 | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 | | |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Turbinate, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 4 1.5 | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |

* .. 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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Experiment Number: 20523 - 04
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0730 | 0730 | 0732 | 0738 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | |
| 10 mg/m3 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0022 | 0022 | 0022 | 0022 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | 0033 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Nephropathy | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 46 1.9 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |

* .. 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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Experiment Number: 20523 - 04
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 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| B6C3F1 MICE MALE | 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 | 6 | 7 | 7 | 6 | 7 | 5 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 3 | |
| | 2 | 2 | 3 | 6 | 3 | 3 | 4 | 3 | 4 | 8 | 3 | 3 | 9 | 3 | 3 | 3 | 2 | 3 | 3 | 9 | 4 | 2 | |
| 30 mg/m3 | 9 | 9 | 0 | 2 | 0 | 1 | 7 | 0 | 9 | 3 | 0 | 0 | 4 | 1 | 1 | 1 | 9 | 1 | 9 | 0 | 1 | 7 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | |

males
(cont...)

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Gallbladder | + | M | + | A | + | + | + | + | A | + | + | A | + | + | + | A | + | M | + | M | M | M | + | + |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Cecum | + | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphoid | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | |
| Intestine Large, Rectum | + | + | + | + | + | + | I | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | + | + | + | A | + | + | A | + | + | + | + | A | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Small, Ileum | + | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Lymphoid | | | | 1 | | 1 | 1 | | | | | | | | | 2 | | | 2 | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Intestine Small, Jejunum | + | + | + | + | + | + | A | + | + | + | A | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | |
| Perforation | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------------|
| B6C3F1 MICE MALE | DAY ON TEST | 0729 | 0729 | 0730 | 0662 | 0771 | 0677 | 0776 | 0553 | 0558 | 0773 | 0676 | 0776 | 0677 | 0777 | 0777 | 0777 | 0777 | 0667 | 0633 | 0777 | 0777 | males (cont...) |
| | ANIMAL ID | 0040 | 0044 | 0040 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | |

Inflammation, Suppurative

3

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart

+ +

Cardiomyopathy

1 1

ENDOCRINE SYSTEM

Adrenal Cortex

+ + + + + + + + + + + + A + + + + + + + + + + + +

Accessory Adrenal Cortical Nodule

1

Angiectasis

1

Hyperplasia

2

2

1

1

1

1

1

1

1

2

1

2

1

1

Adrenal Medulla

+ + + + + M + + + + + + A + + + + + + + + + + + +

Hyperplasia

1

2

Islets, Pancreatic

+ + + + + + + + + + + + M + + + + + + + + + + + +

Hypertrophy

Parathyroid Gland

+ + + + + M M + M + + M + + M + + + + + + + + + +

Pituitary Gland

+ + + + + + + + + + + + A + + + + + + + + + + + +

Pars Distalis, Angiectasis

1

Pars Distalis, Cyst

X

Pars Distalis, Hyperplasia

1

2

Thyroid Gland

+ + + + + + + + + + + + A + + + + + + + + + + + +

* .. 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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Experiment Number: 20523 - 04
 Test Type: CHRONIC
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
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Date Report Requested: 02/02/2015
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| | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------------|
| B6C3F1 MICE MALE | DAY ON TEST | 0729 | 0729 | 0730 | 0662 | 0773 | 0677 | 0760 | 0559 | 0553 | 0770 | 0776 | 0664 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0666 | 0337 | 0777 | 0777 | males (cont...) |
| | ANIMAL ID | 0040 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | 0044 | |

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
| Exfoliated Germ Cell | X | X | X | X | X | X | X | | X | | X | X | | X | X | X | X | X | X | X | | X | X |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
| Ectasia | | | | | 1 | | | | | | 1 | | | | | | | | | | | | |
| Inflammation, Chronic Active | 4 | | | | | | 2 | | | | | 1 | | 1 | 4 | 1 | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Testes | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration | | | | | | | | | 2 | 1 | | 1 | | | | | | | | | | 1 | 1 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| B6C3F1 MICE MALE 30 mg/m3 | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | males (cont...) | | | | | |
|--|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|---|---|---|---|---|
| | | 0729 | 0729 | 0730 | 0730 | 0731 | 0731 | 0732 | 0732 | 0733 | 0733 | 0734 | 0734 | 0735 | 0735 | 0736 | 0736 | 0737 | 0737 | 0738 | 0738 | | | | | | |
| ANIMAL ID | | 0040 | 0041 | 0042 | 0043 | 0044 | 0045 | 0046 | 0047 | 0048 | 0049 | 0050 | 0051 | 0052 | 0053 | 0054 | 0055 | 0056 | 0057 | 0058 | 0059 | 0060 | | | | | |
| | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | | | |
| Myeloid Cell, Hyperplasia | | 2 | | | | | | | | | | 1 | | | 1 | | | | 1 | | 1 | 2 2 | | | | | |
| Lymph Node Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | + | + | | | | | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid Plasma Cell, Hyperplasia | | + | + | + | + | + | M | + | + | + | M | + | + | A | + | + | M | + | + | + | + | + | + | + | M | + | + |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | | + | M | M | + | M | + | M | + | + | M | M | + | M | + | + | M | + | + | + | M | + | + | M | M | + | + |
| Lymph Node, Mediastinal Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | | + | + | + | + | + | + | + | + | + | + | + | + | A | M | M | + | + | + | + | + | + | + | I | + | + | + |
| Lymph Node, Mesenteric Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Hyperplasia, Plasma Cell Inflammation, Chronic Active | | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | M | + | + | + |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus Atrophy Cyst | | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|---------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|
| | 0697 | 0731 | 0729 | 0730 | 0760 | 0771 | 0762 | 0772 | 0773 | 0774 | 0775 | 0776 | 0777 | 0778 | 0779 | 0780 | 0781 | 0782 | 0783 | 0784 | | 0785 | 0786 | 0787 | 0788 | 0789 |
| ANIMAL ID | 00426 | 00447 | 00448 | 00449 | 00450 | 00451 | 00452 | 00453 | 00454 | 00455 | 00456 | 00457 | 00458 | 00459 | 00460 | 00461 | 00462 | 00463 | 00464 | 00465 | 00466 | 00467 | 00468 | 00469 | 00470 | 00471 |
| Basophilic Focus | | | | | X | | | | | | | | | | | | | | | | | | | | | 3 |
| Clear Cell Focus | | | X | | | | | | X | X | | | X | | X | | | | | | | | | | | 9 |
| Eosinophilic Focus | | | | X | X | | | | | X | | | | X | X | X | | | | | | | | X | | 17 |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 2 1.0 |
| Mixed Cell Focus | | | X | | | | | | | | | | | | | | | | | | | X | | | | 6 |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.0 |
| Hepatocyte, Necrosis | | | | | | | | 2 | | | | | | | | | | 3 | 1 | 2 | | | | | | 5 1.8 |
| Periportal, Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Serosa, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Mesentery | | | | | | | | | | + | | | + | | | | | | | | | | | | | 4 |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 5 1.2 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.0 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | 49 |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 1.0 |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 7 1.9 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|--|
| | 0697 | 0732 | 0773 | 0776 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | | |
| ANIMAL ID | 00426 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | 00442 | | |
| Myeloid Cell, Hyperplasia | 1 | | 1 | 1 | 1 | | 1 | 1 | 1 | 2 | | | | | | | | | | 1 | 2 | | | 1 | 18 1.3 | |
| Lymph Node Lumbar, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 3 1 2.0 | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid Plasma Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 39 2 1.0 1 1.0 | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | 25 2 1.0 1 1.0 | |
| Lymph Node, Mediastinal Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 41 1 1.0 1 1.0 | |
| Lymph Node, Mesenteric Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Hyperplasia, Plasma Cell Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 47 3 1.7 4 1.8 9 1.4 1 2.0 1 2.0 | |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 49 11 1.7 9 1.8 | |
| Thymus Atrophy Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 47 8 1.5 5 1.0 | |

* .. 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

1-4 .. Lesion qualified as:

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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
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 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------------------------|
| B6C3F1 MICE MALE | DAY ON TEST | 0730 | 0537 | 0722 | 0733 | 0421 | 0744 | 0578 | 0771 | 0770 | 0771 | 0772 | 0772 | 0779 | 0645 | 0779 | 0771 | 0656 | 0773 | 0773 | 0733 | 0733 | 0730 | 0730 | 0738 | 0730 | males (cont...) |
| | ANIMAL ID | 00601 | 00602 | 00603 | 00604 | 00605 | 00606 | 00607 | 00608 | 00609 | 00610 | 00611 | 00612 | 00613 | 00614 | 00615 | 00616 | 00617 | 00618 | 00619 | 00620 | 00621 | 00622 | 00623 | 00624 | 00625 | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cardiomyopathy | | | 1 | | 1 | | 1 | 1 | 2 | | | 2 | 1 | | | 2 | 2 | | | 2 | | 1 | | | 1 | |
| Inflammation, Chronic Active | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Accessory Adrenal Cortical Nodule | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | 1 | | 3 | | | | | | | | | | 1 | | 1 | | | | 3 | | 1 | | | | 1 | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hyperplasia | | | 1 | | | | | | | 1 | 2 | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | + | M | + | M | + | + | + | + | + | M | + | + | M | M | + | + | + | + | + | M | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Cyst | | | | | | | | | | | X | | | | X | X | | | X | | | | | | | |
| Pars Distalis, Hyperplasia | | | | | | | | | | | | | | | | | | 3 | | | | | | | | |

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 + .. Tissue examined microscopically
 X .. Lesion present
 I .. Insufficient tissue
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Experiment Number: 20523 - 04
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 Metal Working Fluids: Trim VX
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Date Report Requested: 02/02/2015
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 Lab: BNW

| B6C3F1 MICE MALE | DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | males (cont...) | |
|------------------|-------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|
| | | 0730 | 0733 | 0732 | 0739 | 0731 | 0734 | 0735 | 0736 | 0737 | 0738 | 0739 | 0730 | 0731 | 0732 | 0733 | 0734 | 0735 | 0736 | 0737 | 0738 | | 0739 |
| 100 mg/m3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

Thyroid Gland +

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exfoliated Germ Cell | X | | X | X | | X | | X | X | X | | X | X | X | X | | X | X | X | X | X | X | X |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Ectasia | | | | | | 1 | | | | | | 1 | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | 3 | | | | 1 | | | 4 | 1 | | | | 3 |
| Prostate | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | 2 | | | | | | | | |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | |
| Testes | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Degeneration | | 1 | | 1 | | | | | | 2 | 1 | | 1 | | | | | | 1 | | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Myeloid Cell, Hyperplasia | 1 | | | | | 1 | | 1 | 1 | 1 | 2 | 1 | 2 | | 2 | 2 | 1 | | 2 | 1 | | 1 | 2 | 2 | 1 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | 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 | ANIMAL ID | males (cont...) |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------------|
| | 7 | 5 | 7 | 7 | 4 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 5 | 6 | 7 | 3 | 7 | 3 | 3 | 3 | 7 | 7 | 7 | | |
| | 3 | 3 | 2 | 3 | 2 | 1 | 4 | 3 | 3 | 1 | 2 | 2 | 4 | 2 | 2 | 3 | 7 | 6 | 3 | 3 | 3 | 3 | 0 | 0 | 0 | 3 | | | |
| | 0 | 7 | 9 | 1 | 4 | 4 | 8 | 1 | 0 | 1 | 9 | 9 | 5 | 9 | 9 | 1 | 1 | 7 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|
| Lymph Node | + | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | M | + | + | M | M | + | + | + | M | + | + | M | M | + | + | + | + | + | + | M | + | + | + | + | + | | | |
| Infiltration Cellular, Plasma Cell | | | 1 | | | | | | | | 1 | 1 | | | | | | | 2 | | | 1 | 1 | | | | | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | I | + | M | + | M | M | + | + | M | M | M | M | M | M | I | M | + | M | + | + | + | + | + | M | + | + | | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | + | + | M | M | I | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Lymph Node, Mesenteric Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Thymus Atrophy Cyst Ectopic Thyroid Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | I | + | + | + | + | | | |
| | | | 2 | | | | 1 | | 2 | 2 | 2 | 2 | | | | 2 | | | 2 | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | males (cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|--------------------|
| | 0730 | 0733 | 0737 | 0741 | 0744 | 0748 | 0751 | 0755 | 0759 | 0763 | 0767 | 0771 | 0775 | 0779 | 0783 | 0787 | 0791 | 0795 | 0799 | 0803 | | |
| Epiglottis, Hyperplasia, Squamous | 1 | 1 | | 1 | 2 | 2 | 3 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 3 |
| Epiglottis, Metaplasia, Squamous | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | 1 | | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | | 1 | 1 | 2 | 1 | 2 | 1 | | 2 | 1 | 1 | 1 |
| Infiltration Cellular, Histiocyte | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | | 2 | 2 | 2 | 3 | 3 |
| Inflammation, Chronic | 2 | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 1 | 3 | 3 | 2 | 2 | 3 |
| Metaplasia, Osseous | | | | | | | | | | | | 1 | | | | | | | | | | |
| Pigmentation | | | | | | 2 | | | | 1 | | | | | | | | 1 | 1 | | 1 | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 |
| Alveolar Epithelium, Hyperplasia | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | | 2 | 1 | 2 | 2 |
| Bronchiole, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | 1 | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exudate | 3 | 1 | 3 | 2 | 2 | 4 | 3 | 3 | 2 | 1 | 4 | 4 | 2 | 4 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 |
| Inflammation, Chronic Active | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 2 |
| Glands, Olfactory Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 2 |
| Lateral Wall, Inflammation, Chronic Active | | | | | | | | | | | 3 | | | | | 3 | | | | | | 2 |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | 1 | | | | | | 1 | | | | |
| Nasopharyngeal Duct, Perforation | | | | | | X | | X | | | X | | | | | X | X | X | | X | | X |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | 1 |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | 1 | | | | | 2 |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Respiratory Epithelium, Atrophy | 1 | | 1 | 1 | | 1 | 1 | 1 | | 1 | | 1 | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| Respiratory Epithelium, Hyperplasia | 2 | | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | 1 | | | | | |
| Respiratory Epithelium, Necrosis | 1 | | | | | 1 | 1 | | | | | | | | | 1 | 1 | 1 | 1 | | 1 | 1 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | ANIMAL ID | | | | | | | | | | | | | | | | | | | | males (cont...) | | | |
|--|-------------|------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------------|------|---|--|
| | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | 0730 | | 0730 | | |
| Turbinate, Atrophy | | | | | | | 1 | | | | | | | | | | | 1 | 1 | 1 | | 1 | 1 | 1 | | |
| Turbinate, Perforation | | | | X | | X | | X | | | | | | | | | X | X | | X | X | | X | X | | |
| Pleura | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cartilage, Metaplasia, Osseous Epithelium, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | 4 | | | |
| Inflammation, Chronic Active | | | | | | | | | | | 4 | | | | | 1 | | | | | | 2 | | | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cyst | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Hydronephrosis | | | | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Infarct, Chronic Inflammation, Chronic Active | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | | | |
| Metaplasia, Osseous Nephropathy | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 1 | 2 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | 2 | 3 | 2 | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|--------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--------------|------|--|
| | 0731 | 0733 | 0739 | 0773 | 0777 | 0779 | 0781 | 0783 | 0789 | 0791 | 0793 | 0799 | 0801 | 0803 | 0809 | 0811 | 0817 | 0819 | 0825 | 0827 | | 0833 | |
| | 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 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | | |
| | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 6 | 8 | 7 | 3 | 2 | 2 | 3 | 3 | | |
| | 1 | 0 | 9 | 0 | 1 | 9 | 9 | 1 | 3 | 0 | 9 | 9 | 1 | 7 | 0 | 5 | 0 | 9 | 9 | 0 | 1 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | | |
| | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 5 | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Thrombosis | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Bile Duct, Vacuolization Cytoplasmic | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | 5 1.8 | | |
| Hepatocyte, Necrosis | 2 | | | | | | | | | | | | | | 3 | | | | | 1 | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | 2 1.0 | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Acinus, Atrophy | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Abscess | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 5 1.6 | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 4 1.0 | | |
| Tooth | | | | | | | | | | | | | | | | | | | | | 5 | | |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | 3 1.7 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | 2 2.5 | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | 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 | * TOTALS |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|
| | ANIMAL ID | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 1 | 3 | 2 | 2 | 3 | 6 | 8 | 7 | 3 | 2 | 2 | 3 | 3 | 2 | 2 | 3 | |
| | | 1 | 0 | 9 | 0 | 1 | 9 | 9 | 1 | 3 | 0 | 9 | 9 | 1 | 7 | 0 | 5 | 0 | 9 | 9 | 9 | 0 | 1 | 1 | 9 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cardiomyopathy | | | | 1 | 1 | | | | | 1 | | | 1 | | | | | 1 | | | | 1 | 1 | | | 19 | 1.3 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Angiectasis | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | 1.0 |
| Hypertrophy | | | | 1 | 1 | 1 | | 1 | | | | 1 | | | | | 1 | 1 | | | 1 | 1 | 1 | 1 | | 18 | 1.2 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hyperplasia | | | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | 5 | 1.2 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Parathyroid Gland | M | M | + | + | M | M | + | + | M | + | + | + | + | M | M | + | + | + | + | + | + | M | + | + | 34 | | |
| Cyst | | | | | | | | X | | | | | | | | | | | | | | | | | | | 1 |
| Pituitary Gland | + | + | + | + | M | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Pars Distalis, Angiectasis | | | | | | | | | 1 | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Pars Distalis, Cyst | | | | X | | | | | | | | | | | | | | | | | | X | | | | 6 | |
| Pars Distalis, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | 1 | | | | 3 | 1.7 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|------|---|----|----|-----|-----|--|
| | 0731 | 0733 | 0739 | 0773 | 0777 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | 0779 | | 0779 | | | | | | |
| ANIMAL ID | 00626 | 00662 | 00668 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte Infiltration Cellular, Plasma Cell | + | + | + | + | + | + | M | + | + | + | + | + | + | + | M | + | I | + | + | + | + | + | M | 39 | 14 | 1.4 | | |
| | | 1 | | 1 | 1 | 3 | | | | 1 | | | 1 | 2 | | | | | 2 | | | | 1 | | 7 | 1.6 | | |
| | | | | 2 | | | | | | | | 2 | 1 | | | | | | 2 | | | | | | 1 | 2.0 | | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | + | M | M | + | + | + | + | M | M | M | + | + | M | + | + | M | + | I | + | + | + | + | + | M | 27 | 1 | 1.0 | |
| | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 1.0 | | |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid | M | M | M | + | + | + | + | + | M | + | + | + | + | + | A | + | M | + | + | + | + | + | + | + | 40 | 5 | 1.2 | |
| | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | | | | |
| Lymph Node, Mesenteric Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | M | + | + | + | + | + | + | + | + | 48 | 1 | 2.0 | |
| | 1 | | | | 2 | 1 | | | | | | | | | | | | | | | | | | | | 6 | 1.3 | |
| | | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Spleen Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 10 | 1.8 | |
| | | | | 1 | | | | | 2 | | | | | | | | | | | | | | | | | 8 | 1.6 | |
| | | | | 2 | | | | | | 2 | | | 2 | | | | | | 1 | | | | | 1 | 3 | | | |
| Thymus Atrophy Cyst Ectopic Thyroid Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | 46 | 9 | 1.8 | |
| | | | | | | | | | | | | | | | 2 | 1 | | | | | | | | | | 5 | | |
| | | X | | | | | | | | | | | | | | | | | | | X | | | X | | 1 | 1.0 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2.0 | |

INTEGUMENTARY 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | | | | | | | | |
|-------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-----|-----|
| | 0731 | 0730 | 0729 | 0728 | 0727 | 0726 | 0725 | 0724 | 0723 | 0722 | 0721 | 0720 | 0719 | 0718 | 0717 | 0716 | 0715 | 0714 | 0713 | 0712 | | 0711 | 0710 | 0709 | 0708 | 0707 | 0706 | 0705 | 0704 | 0703 | 0702 | 0701 | 0700 | | | |
| ANIMAL ID | 00626 | 00662 | 00662 | 00662 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | | | |
| Mammary Gland | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | M | 0 | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst Epithelial Inclusion | | | | X | | | | | | | | | | X | X | | | | | | | | | | | | | | | | | | 4 | | | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 2.0 | | |
| Inflammation, Chronic Active | | | 1 | 1 | | | | | | 1 | 3 | | | | | | 4 | | | | | | | | | | | | | | | | 11 | 2.3 | | |
| Ulcer | | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | 3 | 3.0 | | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Skeletal Muscle Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Gliosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Peripheral Nerve Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| RESPIRATORY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Inflammation, Chronic Active | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | | | | 48 | 1.4 | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
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 CAS Number: TRIMVX

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 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE MALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|------------|
| | 0731 | 0730 | 0729 | 0728 | 0727 | 0726 | 0725 | 0724 | 0723 | 0722 | 0721 | 0720 | 0719 | 0718 | 0717 | 0716 | 0715 | 0714 | 0713 | 0712 | | 0711 | 0710 |
| ANIMAL ID | 00626 | 00662 | 00662 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | 00666 | |
| Turbinate, Atrophy | | | | 1 | | | | 1 | | | | | | 1 | | | | | | 1 | | 1 | 14 |
| Turbinate, Perforation | X | | | | | | | | | | | | X | X | | | | | | | X | | 13 |
| Pleura | | | | | | | | | | | | | | + | | | | | | | | | 1 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | A | + | + | + | + | + | + | 48 |
| Cartilage, Metaplasia, Osseous Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 3 |
| | | | | | | | | | | | | | | | | | | | | | | | 1.0 1.0 |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Cataract | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | 4.0 2.3 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | 1.0 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Hydronephrosis | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | 2 | | | 2 | 2 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Metaplasia, Osseous | | 2 | | | | | | | | | | | | | | | | | | | | | 2 |
| Nephropathy | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 3 | 2 | 1 | 2 | 2 | | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 49 |
| | | | | | | | | | | | | | | | | | | | | | | | 1.8 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
 X .. Lesion present
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Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

*** END OF MALE DATA ***

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| | 0733 | 0735 | 0737 | 0739 | 0750 | 0772 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | |
| Control | 0010 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus Periesophageal Tissue, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder Inflammation, Chronic Active | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | A |
| Intestine Large, Cecum Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | 2 | + | + | + |
| Intestine Large, Colon Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | + | + | + |
| Intestine Large, Rectum Edema | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | |
| Intestine Small, Duodenum Inflammation | + | + | + | + | + | + | + | + | + | 2 | + | + | + | + | + | + | + | + | + | A | + | + | + | |
| Intestine Small, Ileum Hyperplasia, Lymphoid Inflammation | + | + | + | + | + | + | + | + | + | 1 | + | + | + | + | + | + | + | + | + | 1 | A | + | + | |
| Intestine Small, Jejunum Hyperplasia, Lymphoid Inflammation Perforation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 4 | A | + | + | |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

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| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|-----------|----------------------|
| | 0733 | 0735 | 0737 | 0739 | 0755 | 0777 | 0777 | 0777 | 0777 | 0755 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0776 | 0777 | 0777 | 0777 | 0676 | | | |
| | 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 | 5 | 7 | 5 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 6 | | |
| | 3 | 7 | 3 | 9 | 5 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 8 | 3 | 9 | 3 | 3 | 3 | 4 | | |
| | 3 | 5 | 1 | 7 | 0 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 1 | 3 | 2 | 1 | 2 | 4 | 3 | 2 | 1 | 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 | 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 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Granulocytic Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphoid Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE Control | DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | females (cont...) | | |
|-------------------------------|---|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|----------------------|---------|---------|
| | | 7 3 3 | 5 7 5 | 7 3 1 | 5 9 7 | 5 5 0 | 7 7 2 | 7 7 3 | 7 7 3 | 7 7 3 | 6 6 1 | 7 7 2 | 7 7 2 | 7 7 2 | 6 6 1 | 7 7 3 | 7 7 3 | 4 8 1 | 7 6 4 | 6 9 3 | 7 3 2 | | 7 3 1 | 7 3 4 |
| ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 | | 1 0 0 1 | 1 0 0 1 | 1 0 0 1 |
| Inflammation, Chronic Active | 1 | 1 | | | | | | | | | | | | | | 4 | | | | | | | | |
| Mineralization | 1 | | | | | | | | | | | | | | | | | | | | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|---|--|---|---|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|
| Blood Vessel | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Heart | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cardiomyopathy | 1 | 2 | | | | | | | | | | | | | | 2 | | 2 | | 1 | | 1 | | 1 | | | | | | | | | | | | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Mineralization | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Coronary Artery, Fibrosis | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|--|---|--|---|--|---|--|---|--|--|--|---|--|---|--|---|--|--|--|---|--|---|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Adrenal Cortex | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | 1 | | 2 | | 1 | | 1 | | 1 | | | | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | 1 | | 1 | | 1 | | 1 | | | | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Parathyroid Gland | + M + + M + + M + + + M M + M M + M M + + + M + M | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ectopic Tissue | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|---|--|------|------|------|------|------|------|------|------|------|---|----------------------|
| | 0733 | 0575 | 0773 | 0595 | 0573 | 0773 | 0773 | 0773 | 0573 | 0773 | 0773 | 0773 | 0676 | 0773 | 0773 | 0773 | 0477 | 0477 | 0676 | 0773 | 0773 | 0773 | 0676 | | |
| ANIMAL ID | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | 0021 | 0022 | 0023 | 0024 | 0025 | 0026 | 0027 | 0028 | 0029 | 0030 | 0031 | 0032 | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | M | | |
| Pars Distalis, Angiectasis | | | 1 | | | | | | | 1 | | 1 | | | | | | | | 1 | | | | | |
| Pars Distalis, Hyperplasia | | | | | | 1 | | 1 | | | | | | | | | | 1 | | | | | 1 | | |
| Pars Distalis, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Intermedia, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Cyst | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | | | | | | | | | | | | | + | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | 4 | | |
| GENITAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | M | M | + | + | + | + |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | X | 4 | | | | | X | | | | | X | | | | | | | | X | X | | |
| Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | 4 | | | | | | | | | | | | | X | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 1 | | 4 | | | | |
| Periovarian Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| * .. 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 | | | | | | | | | | | |

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| B6C3F1 MICE FEMALE | DAY ON TEST | 0 7 3 3 | 0 5 7 5 | 0 7 3 1 | 0 5 9 7 | 0 5 5 0 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 5 2 2 | 0 7 3 3 | 0 7 3 2 | 0 6 3 1 | 0 7 3 2 | 0 7 3 3 | 0 7 3 2 | 0 4 8 1 | 0 7 3 2 | 0 6 9 4 | 0 7 3 3 | 0 7 3 2 | 0 7 3 1 | 0 6 7 4 | 0 6 4 5 | females (cont...) |
| | ANIMAL ID | 0 0 1 0 1 | 0 0 1 0 2 | 0 0 1 0 3 | 0 0 1 0 4 | 0 0 1 0 5 | 0 0 1 0 6 | 0 0 1 0 7 | 0 0 1 0 8 | 0 0 1 0 9 | 0 0 1 0 0 | 0 0 1 0 1 | 0 0 1 0 2 | 0 0 1 0 3 | 0 0 1 0 4 | 0 0 1 0 5 | 0 0 1 0 6 | 0 0 1 0 7 | 0 0 1 0 8 | 0 0 1 0 9 | 0 0 1 0 0 | 0 0 1 0 1 | 0 0 1 0 2 | 0 0 1 0 3 | |

Inflammation, Chronic Active
 Endometrium, Hyperplasia, Cystic
 3 2 1 2 3 3 2 2 3 2 3 3 3 2 3 2 2 2 1 3 2 3 2

HEMATOPOIETIC SYSTEM

| | | |
|--|---|-----------|
| Bone Marrow | + + + + + + + + + + + + + + + + + + + | A + + + + |
| Hyperplasia, Granulocytic | | 4 |
| Myelofibrosis | | 1 |
| Myeloid Cell, Hyperplasia | | 1 |
| Lymph Node | + + + + + + + + + + + + + + + + + + + | + + |
| Iliac, Infiltration Cellular, Mixed Cell | | 2 |
| Lumbar, Angiectasis | | 4 |
| Lumbar, Inflammation, Suppurative | | 4 |
| Lumbar, Necrosis | | 4 |
| Lymph Node, Bronchial | + + + M + M + I + + + + + + + + + + + + + | A + + + + |
| Hyperplasia, Lymphoid | 1 2 | 1 |
| Infiltration Cellular, Histiocyte | | 1 |
| Lymph Node, Mandibular | M + M M + + + + + + + + + + + + + + + + + | M + M |
| Hyperplasia, Lymphoid | | 1 2 1 |
| Infiltration Cellular, Plasma Cell | | 2 |
| Lymph Node, Mediastinal | + + + + + + + + + M + + + + + + + + + + + M + M M | |
| Hyperplasia, Lymphoid | | 2 1 |
| Hyperplasia, Plasma Cell | | 4 |
| Infiltration Cellular, Histiocyte | | 2 |
| Lymph Node, Mesenteric | + + + + + + + + + + + + + + + + + + + | + + + + + |
| Hyperplasia, Lymphoid | 1 1 1 1 | 2 2 1 |

* .. 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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Experiment Number: 20523 - 04
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 Species/Strain: MICE/B6C3F1

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 CAS Number: TRIMVX

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 Lab: BNW

| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|-----------|----------------------|
| | 0 7 3 3 | 0 5 7 5 | 0 7 3 1 | 0 5 9 7 | 0 5 5 0 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 5 2 2 | 0 7 3 3 | 0 7 3 2 | 0 6 3 1 | 0 7 3 2 | 0 7 3 1 | 0 7 3 3 | 0 4 8 1 | 0 7 3 2 | 0 6 9 4 | 0 7 3 3 | 0 7 3 2 | 0 7 3 1 | 0 6 4 5 | | | |
| Inflammation, Chronic Active Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 4 4 | | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | 1 | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | 1 | 1 | | | | | | | 1 | | | | | | | 4 | | 2 | | | | | |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | 4 | | | | | | | | |
| Hyperplasia, Lymphoid | 3 | | 3 | | | | | | 1 | 2 | | | 1 | | | | 1 | 3 | 2 | | 2 | | 2 | 1 | 2 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | 2 | | | | |
| Thymus | + | + | + | + | + | + | + | M | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | | | |
| Atrophy | | | | | | | | | | 1 | | | | | | | | | 1 | | 2 | | | 3 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ectopic Parathyroid Gland | 1 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | 2 | | 2 | | | | | | | | | | | | | | 2 | 1 | 1 | | 2 | | 2 | 1 | | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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 I .. Insufficient tissue
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| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|-------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|
| | 0733 | 0753 | 0771 | 0759 | 0755 | 0777 | 0777 | 0777 | 0777 | 0755 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0777 | 0676 | 0777 | 0777 | 0777 | 0766 | | |
| | 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 | 0011001 | |
| | 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 | 0011001 | |
| | 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 | 0011001 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 0011001 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 1 | |

Fibro-Osseous Lesion X X X X

Skeletal Muscle Degeneration +
 Infiltration Cellular, Lymphoid 2

NERVOUS SYSTEM

Brain Compression +
 Hemorrhage 3 1 3 1 2 2
 Hydrocephalus 1 2
 Inflammation, Chronic Active 1 1

Peripheral Nerve Degeneration +

Spinal Cord +

RESPIRATORY SYSTEM

Larynx Inflammation, Chronic Active +
 Necrosis 2 2 2 1 1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
 Epiglottitis, Hyperplasia, Squamous 1 1

Lung Infiltration Cellular, Histiocyte +
 Inflammation, Chronic 2
 Thrombosis 1
 Interstitium, Inflammation, Suppurative 2 2

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|
| | 0733 | 0735 | 0737 | 0739 | 0755 | 0777 | 0777 | 0777 | 0777 | 0755 | 0777 | 0777 | 0777 | 0676 | 0777 | 0777 | 0777 | 0777 | 0474 | 0776 | 0777 | 0777 | 0777 | 0766 | | |
| Control | 0010 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | 0011 | | |
| | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exudate | | | | | | | | | | | | | | 1 | | | | | 1 | 1 | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | | | | 1 | | | | 1 | 2 | | | | 1 | | | | | | 1 | 1 | | 1 |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | | | | 1 | | | | 1 | 2 | | | | 1 | 2 | | | | | 1 | 1 | | 1 |
| Respiratory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Hyperplasia | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Harderian Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 1 | 1 | + |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) |
|------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|
| | 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 | 5 | 7 | 5 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 4 | 7 | 6 | 7 | 7 | 7 | 6 | |
| 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 | 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 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | 2 | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

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

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|--------------|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Periesophageal Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | 46 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Intestine Large, Cecum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Edema | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Intestine Small, Ileum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Hyperplasia, Lymphoid | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | 4 1.3 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Intestine Small, Jejunum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Hyperplasia, Lymphoid | 3 | | | | | | | | | | | | | | | | | | | | | | | | | 2 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 4.0 |
| Perforation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Liver | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

* .. 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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Experiment Number: 20523 - 04
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 Lab: BNW

| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|-----|
| | 0 7 3 1 | 0 7 3 3 | 0 7 3 3 | 0 7 2 1 | 0 7 3 1 | 0 7 7 3 | 0 6 3 1 | 0 7 3 2 | 0 7 3 7 | 0 6 3 4 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 6 5 3 | 0 7 3 3 | 0 7 3 3 | 0 6 3 3 | 0 7 8 3 | 0 6 3 3 | 0 7 3 2 | 0 6 3 8 | 0 7 2 2 | 0 7 3 3 | | | |
| ANIMAL ID | 0 0 1 2 6 | 0 0 1 2 7 | 0 0 1 2 8 | 0 0 1 2 9 | 0 0 1 3 0 | 0 0 1 3 1 | 0 0 1 3 2 | 0 0 1 3 3 | 0 0 1 3 4 | 0 0 1 3 5 | 0 0 1 3 6 | 0 0 1 3 7 | 0 0 1 3 8 | 0 0 1 3 9 | 0 0 1 4 0 | 0 0 1 4 1 | 0 0 1 4 2 | 0 0 1 4 3 | 0 0 1 4 4 | 0 0 1 4 5 | 0 0 1 4 6 | 0 0 1 4 7 | 0 0 1 4 8 | 0 0 1 4 9 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Basophilic Focus | | | | X | | | X | | | | | | | | | X | | X | | X | | | | | 6 | |
| Eosinophilic Focus | | | | | | | | | | | | | | | | X | | | | | | | | | 3 | |
| Fatty Change | | | | | | | | | | | | 2 | | | | | | | | | | | | | 1 | 2.0 |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Inflammation, Chronic Active | | | | 2 | | | | | | | | | | | | | | | | | | | | | 5 | 2.0 |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Necrosis | | | | | | | | | | | | 3 | | | | | | | | | | | | | 1 | 3.0 |
| Tension Lipidosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hepatocyte, Necrosis | | | | 2 | | | | | | | | | | | | | | | | | | | | | 3 | 1.3 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 1.7 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.3 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Duct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.7 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 5 | 1.8 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | 49 | |

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

+ .. Tissue examined microscopically

M .. Missing tissue

1-4 .. Lesion qualified as:

X .. Lesion present

A .. Autolysis precludes evaluation

1) Minimal 3) Moderate

I .. Insufficient tissue

BLANK .. Not examined microscopically

2) Mild 4) Marked

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
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| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------|
| | 0 7 3 1 | 0 7 3 3 | 0 7 3 3 | 0 7 2 1 | 0 7 3 1 | 0 7 7 3 | 0 6 3 1 | 0 7 3 2 | 0 7 3 7 | 0 6 3 2 | 0 7 3 2 | 0 7 3 1 | 0 7 3 3 | 0 3 5 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 6 1 3 | 0 7 8 3 | 0 7 3 3 | 0 6 2 8 | 0 7 3 2 | 0 6 3 2 | 0 7 3 2 | |
| 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 | 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 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

| | | | |
|------------------------------|---|---|-----|
| Inflammation, Chronic Active | 1 | 4 | 1.8 |
| Mineralization | | 1 | 1.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cardiomyopathy | | 2 | | | | | | 1 | | 1 | | | | | 1 | | | | | | | | | | | 12 | 1.3 |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Coronary Artery, Fibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Accessory Adrenal Cortical Nodule | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Hematopoietic Cell Proliferation | | | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Hyperplasia | | 1 | | | | | | 1 | | 1 | | | | | | | | | | | | 2 | 1 | | | 6 | 1.2 |
| Hypertrophy | 1 | | | | 2 | | | 1 | | | | | | | | | | 1 | | | | | | | | 14 | 1.1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | 1 | | | | | 1 | 1 | | | | | 1 | | | | 2 | | | | | | | 1 | | | 11 | 1.1 |
| Hypertrophy | | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1.0 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Parathyroid Gland | + | + | + | M | + | M | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 35 | | |
| Ectopic Tissue | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |

* .. 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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| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|----|----|-----|-----|-----|
| | 0731 | 0733 | 0733 | 0732 | 0733 | 0737 | 0733 | 0733 | 0734 | 0733 | 0733 | 0733 | 0735 | 0733 | 0733 | 0733 | 0733 | 0736 | 0737 | 0736 | 0737 | 0736 | 0737 | 0737 | | | | | | |
| Control | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 00126 | 00127 | 00128 | 00129 | 00130 | 00131 | 00132 | 00133 | 00134 | 00135 | 00136 | 00137 | 00138 | 00139 | 00140 | 00141 | 00142 | 00143 | 00144 | 00145 | 00146 | 00147 | 00148 | 00149 | 00150 | | | | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | | | |
| Pars Distalis, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 5 | 1.0 | | |
| Pars Distalis, Hyperplasia | | 1 | | | | | | | | | | 2 | 2 | 2 | | | | | | | | | | | | 3 | 11 | 1.5 | | |
| Pars Distalis, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | | |
| Pars Intermedia, Hyperplasia | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | 2 | | | | | | | | | | | | | | 2 | 3 | 1.7 | | |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tissue NOS | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| GENITAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 46 | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | X | X | X | |
| Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 2.5 |
| Periovarian Tissue, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | |
| Adenomyosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0731 | 0733 | 0733 | 0732 | 0733 | 0737 | 0731 | 0733 | 0734 | 0733 | 0732 | 0732 | 0731 | 0733 | 0733 | 0733 | 0733 | 0733 | 0736 | 0737 | 0736 | 0737 | 0736 | 0737 | |
| Control | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | |
| | 002 | 002 | 002 | 002 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 004 | 004 | 004 | 004 | 004 | 004 | 004 | 004 | 005 | |
| | 006 | 007 | 008 | 009 | 000 | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 000 | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|--|---|---|---|--|---|--|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Inflammation, Chronic Active | 1 | 2 | | | | | | | | | | | | | | | | | | | | | | | | 3 | 1.7 |
| Endometrium, Hyperplasia, Cystic | 3 | 3 | 2 | 2 | 2 | | 3 | 2 | 3 | | 2 | | 2 | 3 | 4 | 1 | 2 | 2 | 2 | 3 | 2 | 2 | 4 | 1 | 3 | 45 | 2.4 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|-----|-----|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Myelofibrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iliac, Infiltration Cellular, Mixed Cell | | | | | | | | | | | + | + | | | | | | | | | | | | | | | 11 | | |
| Lumbar, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Lumbar, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Lumbar, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Lymph Node, Bronchial | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | 44 | | |
| Hyperplasia, Lymphoid | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 6 | 1.3 |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Lymph Node, Mandibular | M | + | M | + | M | + | I | I | + | M | + | + | M | M | + | + | + | M | + | + | + | + | + | + | + | + | 35 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1.3 |
| Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Lymph Node, Mediastinal | + | M | M | + | + | + | + | + | + | + | + | + | I | + | + | + | + | I | M | M | + | + | + | + | + | + | 40 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Hyperplasia, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia, Lymphoid | | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 1.2 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE Control | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---------------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| | 0731 | 0733 | 0733 | 0732 | 0733 | 0737 | 0733 | 0733 | 0734 | 0733 | 0733 | 0733 | 0735 | 0733 | 0733 | 0733 | 0733 | 0736 | 0737 | 0738 | 0733 | 0737 | 0737 | |
| ANIMAL ID | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | |
| Inflammation, Chronic Active Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 1 4.0 |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 1.0 |
| Hematopoietic Cell Proliferation | | | | 3 | | 3 | 1 | | | | 2 | | | | | 2 | 1 | | | | | | | 11 1.9 |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Hyperplasia, Lymphoid | 2 | 1 | 2 | | 3 | | 2 | | | | | | 3 | | | | | | | | | 1 | 2 | 20 2.0 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 |
| Atrophy | | | | 2 | | 1 | | | | | | | | | | | | | | | | | | 6 1.7 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 1.0 |
| Ectopic Parathyroid Gland | | | | | | | | | | | | | | | | 1 | | | | | | | | 2 1.0 |
| Hyperplasia, Lymphoid | | | 2 | | 1 | | | | | | | | | | 1 | | | | | | | | | 11 1.5 |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Edema | | | | | | | | | | | | | | | | 2 | | | | | | | | 1 2.0 |
| Hemorrhage, Acute | | | | | | | | | | | | | | | 3 | | | | | | | | | 1 3.0 |
| Inflammation, Chronic Active | | | 1 | 1 | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0731 | 0733 | 0733 | 0732 | 0733 | 0731 | 0731 | 0732 | 0733 | 0734 | 0733 | 0733 | 0733 | 0735 | 0733 | 0733 | 0733 | 0733 | 0736 | 0737 | 0736 | 0737 | 0736 | 0737 | |
| Control | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | |
| | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | 001 | |
| | 002 | 002 | 002 | 002 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 003 | 004 | 004 | 004 | 004 | 004 | 004 | 004 | 004 | 004 | 005 | |
| | 006 | 007 | 008 | 009 | 000 | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | 000 | 001 | 002 | 003 | 004 | 005 | 006 | 007 | 008 | 009 | |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Exudate | | | | 1 | | | | 1 | | | | | | | 1 | | 1 | | | 2 | | | | 8 1.1 |
| Inflammation, Chronic Active | | | | | | | | | | | | 2 | | | | | | | 1 | | | | 1 | 4 1.3 |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | | | | | 1 | | | | | | | | | 2 1.0 |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 1 | | | | | | | | 2 | | 1 | | | 1 | 2 | | | | | | | 1 | | 14 1.2 |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | 1 | | | | | | | 2 1.0 |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 1 | | | | | | | | 2 | 1 | 1 | | | 1 | 1 | | | | 1 | 1 | 1 | | 1 | 23 1.2 |
| Respiratory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 |
| Respiratory Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | | 1 | 1 | 1 | 1 | 49 1.2 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 1.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Harderian Gland Hyperplasia | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| | | | | 1 | | | | | | | | | | | | | | | | | | | | 3 1.0 |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------|
| Kidney Cyst | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Infarct, Chronic | | | | | | | | | | | | | 1 | | 2 | | | | | | 2 | | | 4 1.8 |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 2.0 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-------|-----------------|--|
| | 0 7 3 1 | 0 7 3 3 | 0 7 3 3 | 0 7 2 1 | 0 7 3 1 | 0 6 7 3 | 0 7 3 1 | 0 7 3 2 | 0 6 7 7 | 0 7 3 4 | 0 7 3 3 | 0 7 3 3 | 0 6 7 1 | 0 7 3 3 | 0 7 3 3 | 0 6 7 3 | 0 7 6 3 | 0 6 7 3 | 0 7 8 3 | 0 7 3 2 | 0 6 7 8 | 0 7 3 2 | 0 7 3 3 | 0 7 3 2 | | | |
| 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 | 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 | | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | * TOTALS | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | |
| Nephropathy | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | | | 1 | | | 1 | | 2 | 2 | 1 | | 1 | 1 | 3 | | 2 | 38 | 1.4 | |
| Renal Tubule, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | | |

* .. 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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Experiment Number: 20523 - 04
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 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
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 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | females (cont...) |
|--------------------|-------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------------------|
| | | 6 7 7 7 7 7 7 7 4 6 7 6 7 5 6 7 7 7 7 7 7 7 | | | | | | | | | | | | | | | | | | | | |
| 10 mg/m3 | ANIMAL ID | 0 | | | | | | | | | | | | | | | | | | | | |
| | | 3 | | | | | | | | | | | | | | | | | | | | |
| | | 0 | | | | | | | | | | | | | | | | | | | | |
| | | 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 | | | | | | | | | | | | | | | | | | | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum Inflammation | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum Hyperplasia, Lymphoid Infiltration Cellular, Lymphoid Inflammation | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Intestine Small, Ileum Hyperplasia, Lymphoid Inflammation Perforation Serosa, Fibrosis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + |
| Intestine Small, Jejunum Hyperplasia, Lymphoid Inflammation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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 2) Mild 4) Marked

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 Metal Working Fluids: Trim VX
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Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 10 mg/m3 | DAY ON TEST | 0 6 0 7 | 0 7 3 2 | 0 7 2 4 | 0 7 3 2 | 0 7 3 3 | 0 7 3 1 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 4 9 | 0 7 6 1 | 0 7 3 3 | 0 7 4 3 | 0 7 5 7 | 0 7 6 9 | 0 7 7 3 | 0 7 7 3 | 0 7 7 3 | 0 7 7 3 | 0 7 7 3 | 0 7 5 8 | 0 7 7 3 | 0 7 5 0 | 0 7 3 2 | females (cont...) |
|--------------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| | ANIMAL ID | 0 0 3 0 1 | 0 0 3 0 2 | 0 0 3 0 3 | 0 0 3 0 4 | 0 0 3 0 5 | 0 0 3 0 6 | 0 0 3 0 7 | 0 0 3 0 8 | 0 0 3 0 9 | 0 0 3 0 0 | 0 0 3 0 1 | 0 0 3 0 2 | 0 0 3 0 3 | 0 0 3 0 4 | 0 0 3 0 5 | 0 0 3 0 6 | 0 0 3 0 7 | 0 0 3 0 8 | 0 0 3 0 9 | 0 0 3 0 0 | 0 0 3 0 1 | 0 0 3 0 2 | 0 0 3 0 3 | 0 0 3 0 4 | 0 0 3 0 5 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow Atrophy | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Lymph Node Lumbar, Angiectasis | | | | | | | | | | | | + | | | | | | | | | | | | | | | + | | |
| Lymph Node, Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Lymph Node, Bronchial Hyperplasia, Lymphoid | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1 | | | | |
| Lymph Node, Mandibular Hyperplasia, Lymphoid | I | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | M | I | M | + | M | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid Hyperplasia, Plasma Cell | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Mesenteric Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Artery, Inflammation | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen, Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spleen, Hyperplasia, Lymphoid | 2 | | 2 | | | | | | | | | | | | 2 | | | 2 | | | | | | | | | | 1 | |
| Spleen, Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | 1 | | 3 | 3 | 2 | 2 | 3 | 1 | | 3 | | | 2 | 2 | | | | 2 | 2 | 2 | 2 | 3 | 2 | 2 | | 2 | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue
 X .. Lesion present A .. Autolysis precludes evaluation
 I .. Insufficient tissue BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|--|
| | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | | |
| 10 mg/m3 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | | |
| ANIMAL ID | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | 33 | | |
| | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Respiratory Epithelium, Atrophy | | | | | | | | 1 | | | | | | | | | | | 1 | | | | | | |
| Respiratory Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | 2 | | | | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia, Lymphoid | | | | | | | 1 | | | | | | | 1 | | | | | | | | | 1 | | |
| Infarct, Chronic | | | 2 | | | | | | | | 1 | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Metaplasia, Osseous | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Nephropathy | 2 | | 2 | 1 | 1 | | 1 | | 1 | 1 | 2 | 2 | | | | | 1 | 2 | 1 | 1 | | 1 | 1 | | |
| Glomerulus, Inflammation, Acute | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |

females
(cont...)

* .. 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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Experiment Number: 20523 - 04

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Date Report Requested: 02/02/2015

Test Type: CHRONIC

Metal Working Fluids: Trim VX

Time Report Requested: 13:50:12

Route: RESPIRATORY EXPOSURE WHOLE BODY

CAS Number: TRIMVX

First Dose M/F: 08/03/09 / 08/03/09

Species/Strain: MICE/B6C3F1

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE FEMALE | 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 | | |
| | ANIMAL ID | | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 6 | 7 | 6 | 7 | 5 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | | |
| 10 mg/m3 | | | 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 | |
| | | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) | | | | | | | | | |

Hyperplasia, Lymphoid

* .. 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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Experiment Number: 20523 - 04
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| B6C3F1 MICE FEMALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|----------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------|---|
| | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | | 0 7 3 2 | | | | | |
| ANIMAL ID | 0 0 3 2 6 | 0 0 3 2 7 | 0 0 3 2 8 | 0 0 3 2 9 | 0 0 3 3 0 | 0 0 3 3 1 | 0 0 3 3 2 | 0 0 3 3 3 | 0 0 3 3 4 | 0 0 3 3 5 | 0 0 3 3 6 | 0 0 3 3 7 | 0 0 3 3 8 | 0 0 3 3 9 | 0 0 3 4 0 | 0 0 3 4 1 | 0 0 3 4 2 | 0 0 3 4 3 | 0 0 3 4 4 | 0 0 3 4 5 | 0 0 3 4 6 | 0 0 3 4 7 | 0 0 3 4 8 | 0 0 3 4 9 | 0 0 3 4 0 | | |
| Basophilic Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Clear Cell Focus | | | | | | | | | | | | | X | | | | | | | | | | | | | | 5 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Eosinophilic Focus | X | | | | X | | | | | | | | | | | | | X | | X | | | | | | 8 | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | 3 | | | | | | 2 2.5 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Hepatodiaphragmatic Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Infarct | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Mixed Cell Focus | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Tension Lipidosis | | | | | | | | | | | | | | 1 | | | | | | | | 1 | | 2 | | 4 1.3 | |
| Hepatocyte, Hypertrophy | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 2 2.0 | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | | 10 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 9 2.0 | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Necrosis, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | 4 2.0 | |

* .. 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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| B6C3F1 MICE FEMALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|----------|
| | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | 07 32 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 6 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | | |
| Hyperplasia | | | | | | 2 | | | | 2 | | | 1 | | | | | | | | | | | | | 6 1.7 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 2 | | | 1 2.0 | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 1.0 | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Stomach, Glandular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cyst | | | | | | | | | | | | | | | X | | | | | | | | | | | 1 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 3 1.0 | |
| Mineralization | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | | | 2 1.0 | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Dysplasia | | | | | | | | | | | | | | | | | | | + | | | | | | | 1 | |
| | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 4.0 | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Cardiomyopathy | 1 | | 1 | 1 | | | | | | | | 1 | | | 1 | | 1 | | | | | | 1 | | 18 1.2 | | |
| Inflammation, Chronic Active | | | | | | | | 1 | | | | | | | | | | 1 | 1 | | | | | | | 5 1.6 | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 | |
| Angiectasis | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.3 | |
| Hyperplasia | | 1 | | | | | | | | | | | | | | | | | | | | | | | 2 | 6 1.3 | |
| Hypertrophy | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | 8 1.1 | |
| <hr/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 7 1.1 | |

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|----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|-------|--------|--------|--|
| | 0732 | 0732 | 0733 | 0733 | 0732 | 0731 | 0735 | 0732 | 0731 | 0731 | 0738 | 0733 | 0733 | 0733 | 0733 | 0732 | 0733 | 0733 | 0732 | 0733 | | 0736 | 0737 | 0736 | 0735 | 0737 | |
| ANIMAL ID | 00326 | 00337 | 00338 | 00339 | 00300 | 00301 | 00302 | 00303 | 00304 | 00305 | 00306 | 00307 | 00308 | 00309 | 00310 | 00311 | 00312 | 00313 | 00314 | 00315 | 00316 | 00317 | 00318 | 00319 | 00320 | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Parathyroid Gland | M | M | + | + | + | M | + | + | + | M | + | + | + | + | M | M | + | M | + | M | + | M | M | + | 30 | | |
| Pituitary Gland | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Pars Distalis, Angiectasis | | | | | | | | | | | | 1 | | | | | | | | | | | | | 2 1.0 | | |
| Pars Distalis, Hyperplasia | | 4 | | | | | | | | 1 | 2 | 1 | | 1 | | | | | 2 | | 1 | | | 1 | 17 1.4 | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cyst | | | | | | | | | | | | X | | | | | | | | | | | | | 1 | | |
| Inflammation, Chronic Active | | | | | | | | | 1 | | | | | | | | | | 1 | | | | | | 2 1.0 | | |
| GENERAL BODY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GENITAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Cyst | | | | | | X | | | | | | | | X | | | | X | | X | | | | | 8 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Angiectasis | | | | 1 | | 1 | | | | | | | | | | | | | | | | | | | 4 1.5 | | |
| Inflammation, Chronic Active | | | | | | | | | | 3 | | | | | | | | | | | | | | | 4 1.8 | | |
| Endometrium, Hyperplasia, Cystic | 3 | 3 | 3 | 4 | | 2 | 2 | 3 | 3 | 1 | | 2 | | 1 | 2 | 2 | 3 | 2 | | 3 | 4 | | 2 | 1 | 2 | 35 2.4 | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 10 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|-------|------|-----|
| | 0732 | 0732 | 0733 | 0733 | 0732 | 0731 | 0735 | 0732 | 0731 | 0731 | 0738 | 0733 | 0733 | 0733 | 0733 | 0732 | 0733 | 0733 | 0732 | 0733 | 0733 | 0731 | 0733 | 0734 | 0737 | | 0736 | 0735 | 0737 | |
| ANIMAL ID | 00326 | 00327 | 00328 | 00329 | 00330 | 00331 | 00332 | 00333 | 00334 | 00335 | 00336 | 00337 | 00338 | 00339 | 00340 | 00341 | 00342 | 00343 | 00344 | 00345 | 00346 | 00347 | 00348 | 00349 | 00350 | 00351 | 00352 | 00353 | | |
| Necrosis, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | | |
| Angiectasis | 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Ectopic Parathyroid Gland | | | | | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | 3 | 1.0 | |
| Hyperplasia, Lymphoid | | | | | 1 | | | | | | | 1 | 2 | | | | | | | | | | | | | 1 | | 15 | 1.3 | |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Dilatation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 1 | 1.0 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 3 | 2.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 2 | 2.0 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Fibro-Osseous Lesion | | | | | | | | | | | X | | X | | | | | | | | | | | | | | X | | 10 | |
| Skeletal Muscle | | | | + | | | | | | | | | | | | | | | | | | | | | | | + | | 4 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Compression | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Infiltration Cellular | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Infiltration Cellular, Lymphocyte | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | |
|--------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | | | |
| 10 mg/m3 | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 7 | | |
| | 3 | 3 | 3 | 3 | 3 | 2 | 6 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 4 | 8 | | 3 |
| | 2 | 2 | 3 | 3 | 2 | 1 | 5 | 2 | 1 | 1 | 8 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 9 | 2 | 7 | 1 | 2 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|-----|---|
| Necrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Peripheral Nerve | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Spinal Cord | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|-----|
| Larynx | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Inflammation, Chronic Active | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | | | 50 | 1.6 |
| Epiglottis, Hyperplasia, Squamous | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 3 | 1.0 |
| Epiglottis, Metaplasia, Squamous | 3 | 2 | 2 | 3 | 2 | 4 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | | | 50 | 2.4 | |
| Lung | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Hemorrhage | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Infiltration Cellular, Histiocyte | | | | | | | 4 | | | | | | | 1 | | | | | | | | 3 | | | | | 4 | 2.3 |
| Inflammation, Chronic | | | | | | | | | | | | | | | | | | 1 | | | | 2 | | | | | 6 | 1.2 |
| Alveolar/bronchiolar Epithelium, Hyperplasia | 1 | | | | | | | | | | | | | 1 | | | | | | | | 1 | | | | | 3 | 1.0 |
| Nose | | | | | | | | | | | | | | | | | | | | | | | | | | 50 | | |
| Cyst, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Exudate | 1 | | | 1 | 1 | 1 | | | | 1 | | | | | 1 | | | | | | | 1 | | | | | 17 | 1.0 |
| Foreign Body | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Inflammation, Chronic Active | | | | 1 | 1 | 1 | | 1 | | | 1 | 1 | 1 | 1 | | 2 | | 1 | 1 | | 1 | | 1 | | | | 25 | 1.0 |
| Glands, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | 1 | 1.0 |
| Lateral Wall, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3.0 |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | | 2 | 2 | 2 | 2 | | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | | 48 | 1.6 |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | 2 | 1.5 |
| Olfactory Epithelium, Metaplasia, Respiratory | | 1 | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|---|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|-----|
| | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | 0732 | | |
| 10 mg/m3 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | 0032 | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 50 | 1.8 |
| Respiratory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Respiratory Epithelium, Hyperplasia | 1 | 1 | | 1 | 2 | 1 | | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 44 | 1.2 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | 1 | | 2 | 1.0 |
| Respiratory Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 1 | | | 2 | 1.0 |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Harderian Gland | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Hyperplasia | | 1 | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.5 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia, Lymphoid | | | | | | | | | 1 | | | | | | | | | | | | | | | | | 4 | 1.0 |
| Infarct, Chronic | | | | 2 | 2 | | | | | | | | | | 1 | | | | | | | | | | | 5 | 1.6 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | 2 | | | | | | | | | | 2 | 1.5 |
| Nephropathy | 2 | 1 | | | 2 | | | 2 | 1 | | 2 | 2 | 1 | 2 | 1 | | | | | 1 | | | 1 | 1 | 28 | 1.4 | |
| Glomerulus, Inflammation, Acute | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Urethra | | | | | | | | | | | | | | | | | | | | | | | | + | | 1 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 1 | 2.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNV

| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
|---------------------------|-------------|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----|---|---|---|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE FEMALE | DAY ON TEST | 7 | 7 | 7 | 7 | 7 | 7 | 3 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 6 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | | 3 | 3 | 3 | 3 | 3 | 2 | 6 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 4 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | | 2 | 2 | 3 | 3 | 2 | 1 | 5 | 2 | 1 | 1 | 8 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 2 | 9 | 2 | 7 | 1 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | | | | 2 | 1 | | | | | | | 1 | | | | | | | | | | | | | | 3 | | 1.3 | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
Test Type: CHRONIC
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Metal Working Fluids: Trim VX
CAS Number: TRIMVX

Date Report Requested: 02/02/2015
Time Report Requested: 13:50:12
First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| B6C3F1 MICE FEMALE | 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | |
|--------------------|----------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | 0 |
| | | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | | | 6 |
| | | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 9 | 7 | 3 | 3 | |
| | | 7 | 2 | 1 | 9 | 5 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 5 | 3 | 1 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 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 | 2 | 2 | 2 | 2 | |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder Vacuolization Cytoplasmic | | A | + | + | + | A | + | + | + | + | M | + | A | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum Inflammation | | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Large, Colon | | + | + | + | + | A | + | I | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Large, Rectum | | + | + | + | + | I | + | + | + | + | + | + | I | + | I | + | + | + | + | + | A | + | + |
| Intestine Small, Duodenum Inflammation Necrosis | | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Small, Ileum Hyperplasia, Lymphoid | | + | + | + | + | A | + | + | + | + | + | A | + | + | + | + | + | + | + | + | A | + | + |
| Intestine Small, Jejunum Hyperplasia, Lymphoid Inflammation Ulcer | | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + |
| Liver | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | |
| Basophilic Focus | | | | | | | | | | | | X | | | | | | | | | | | |
| Clear Cell Focus | | | | | | | | | | | | | | | | | | | | | X | | |
| Eosinophilic Focus | | | | | | X | | | | | X | X | | | | | | | | | X | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| B6C3F1 MICE FEMALE | DAY ON TEST | 0 6 3 7 | 0 7 3 2 | 0 7 3 1 | 0 6 1 9 | 0 7 1 5 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 4 9 5 | 0 6 7 3 | 0 7 3 3 | 0 7 3 1 | females (cont...) |
| | ANIMAL ID | 0 0 5 0 1 | 0 0 5 0 2 | 0 0 5 0 3 | 0 0 5 0 4 | 0 0 5 0 5 | 0 0 5 0 6 | 0 0 5 0 7 | 0 0 5 0 8 | 0 0 5 0 9 | 0 0 5 0 0 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 2 2 | 0 0 5 2 2 | 0 0 5 2 2 | |

Fatty Change 3
 Hematopoietic Cell Proliferation 2
 Inflammation, Chronic Active 2
 Hepatocyte, Hypertrophy
 Hepatocyte, Necrosis

Mesentery + + +
 Fat, Necrosis 1 1 3

Pancreas + A + + +
 Atrophy 2
 Inflammation, Chronic Active 2
 Duct, Cyst 2

Salivary Glands +

Stomach, Forestomach +
 Hyperkeratosis
 Hyperplasia
 Inflammation 1
 Inflammation, Chronic Active
 Ulcer

Stomach, Glandular + A + + +
 Cyst X
 Inflammation, Chronic Active 1 1

CARDIOVASCULAR SYSTEM

Blood Vessel +

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue
 X .. Lesion present A .. Autolysis precludes evaluation
 I .. Insufficient tissue BLANK .. Not examined microscopically
 1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
 2) Mild 4) Marked

| B6C3F1 MICE FEMALE 30 mg/m3 | 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 | ANIMAL ID | females (cont...) | |
|--------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|---|
| | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | | | |
| | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | | 3 |
| | 7 | 2 | 1 | 9 | 5 | 2 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Cardiomyopathy | | | | 1 | | | 2 | | | | | 2 | | | 1 | | | | | | 1 | 1 | | | 2 | 1 | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | 1 | | | | | | | | | | | | 1 | | | | | |
| Angiectasis | | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Hyperplasia | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Hypertrophy | 1 | | | | | | 1 | 1 | | 1 | | | | | | 1 | | | | | | | | | | | 1 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | 1 | 2 | | | | | | | | | | 1 | | | | | | | | | | | |
| Hypertrophy | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Parathyroid Gland | + | + | + | M | + | M | M | M | + | + | + | + | + | + | + | + | + | + | M | + | M | M | + | M | + | + | + |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Angiectasis | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | | | |
| Pars Distalis, Hyperplasia | | | 1 | | | | | | | 2 | 3 | | | | 1 | | 3 | | | 1 | | | | | | | 1 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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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 Metal Working Fluids: Trim VX
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| | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | 0 6 3 7 | 0 7 3 2 | 0 7 3 1 | 0 6 1 9 | 0 7 1 5 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 2 | 0 7 3 2 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 4 9 5 | 0 6 7 3 | 0 7 3 3 | 0 7 3 1 | females (cont...) |
| | ANIMAL ID | 0 0 5 0 1 | 0 0 5 0 2 | 0 0 5 0 3 | 0 0 5 0 4 | 0 0 5 0 5 | 0 0 5 0 6 | 0 0 5 0 7 | 0 0 5 0 8 | 0 0 5 0 9 | 0 0 5 0 0 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 1 1 | 0 0 5 2 2 | 0 0 5 2 2 | 0 0 5 2 2 | 0 0 5 2 2 | |

Inflammation, Suppurative
 Follicular Cell, Hyperplasia
 1

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | M | + | + | + | + | M | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | M | + | + |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | X | | | | X | | | | | | | X | | | | | | | | | X | |
| Inflammation, Chronic Active | | | | | | | | | | 4 | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Hemorrhage | | | | | 2 | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | | 3 | 3 | 1 | 2 | 2 | 3 | 3 | 1 | 2 | 1 | 2 | | 2 | 1 | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | + | + | | + | + | + | | | | | | + | | | | | | | | | | + |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iliac, Angiectasis | | | | | | | | 2 | | | | | | | | | | | | | | | | | |
| Lumbar, Angiectasis | | | | | | | | 2 | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | | | | |
|--|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|---|--|
| | 0637 | 0733 | 0733 | 0611 | 0715 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0717 | 0493 | 0677 | | | 0733 | 0733 | | |
| Lumbar, Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | |
| Renal, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Renal, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node, Bronchial | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | I | I | + | + | + | + | + | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | 1 | 2 | | | | | | | | | 2 | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Lymph Node, Mandibular | + | + | + | + | M | + | + | + | + | + | + | M | + | M | + | + | M | M | + | + | I | + | + | M | + | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | |
| Hyperplasia, Lymphoid | | | | | | 1 | | | | | | | | | | | | | | | | | | | 1 | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | 2 | | | | | | | | | | | | | | | |
| Lymph Node, Mediastinal | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | M | + | + | + | + | | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Lymph Node, Mesenteric | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Spleen | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Angiectasis | | | | | | 2 | | | | | | | | | | | | | | | | | | | | 2 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |

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Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---------------------------|-----------|----------------------|
| | 0637 | 0733 | 0733 | 0671 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0467 | 0673 | 0773 | | | |
| 30 mg/m3 | 0050 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 0055 | 1234567890123456789012345 | 12345 | |

Inflammation, Suppurative

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thymus | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Atrophy | | | | | 1 | | | | | | | | | | | | | | | | | 2 | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | |
| Ectopic Parathyroid Gland | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Lymphoid | | | | | | 2 | | | | 2 | | | 1 | | | | 1 | 1 | | | | 2 | 2 |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Edema | | | | | | | | | | | | | 2 | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | 1 | | | | | | | | | | | | | | | | |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibro-Osseous Lesion | | | X | | | X | X | | | | X | | | | | | | X | | | | | |
| Skeletal Muscle | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Demyelination | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Meninges, Infiltration Cellular | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ .. Tissue examined microscopically
X .. Lesion present
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| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | | | | |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|------|------|------|
| | 0637 | 0773 | 0773 | 0661 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | | 0467 | 0673 | 0773 | 0773 |
| 30 mg/m3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0050 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0050 | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 0050 | |

Peripheral Nerve

Spinal Cord

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | 2 | 2 | 2 | 1 | | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 2 | 1 |
| Epiglottis, Hyperplasia, Squamous | 3 | | | 1 | | | | | 1 | | 1 | 1 | | | | | | 1 | | 1 | 1 | | | |
| Epiglottis, Metaplasia, Squamous | 4 | 3 | 4 | 4 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 2 | 3 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibrosis | | | | | | | | | | | | | | | | | | 1 | | | | | | 1 |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | | | | | | 1 | 1 | 1 | | 1 | 1 | | | | | | | 1 | 1 | | | | | 2 |
| Inflammation, Chronic | | | 1 | | | 1 | 1 | 2 | | 1 | | | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | 2 |
| Mineralization | | | | | | | | | | | | | | | | | | | | | | | | |
| Proteinosis | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Alveolar/bronchiolar Epithelium, Hyperplasia | | | | | | | | | | 1 | | | | | | | 1 | 1 | | | | | | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 | | | | | |
| Mediastinum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Exudate | 1 | 1 | 4 | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Inflammation, Chronic Active | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 2 |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | 2 | | | | | | | | | | | | | | |
| Nasopharyngeal Duct, Perforation | | | X | X | | | X | | X | | | | X | | | X | X | | | X | | X | X | X |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Olfactory Epithelium, Atrophy | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | |
|--------------------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|----------------------|------|
| | 0637 | 0773 | 0773 | 0661 | 0771 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | | | 0467 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 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 | 1 | 2 | 2 | 2 | 2 |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Respiratory Epithelium, Atrophy | | | 1 | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | |
| Respiratory Epithelium, Hyperplasia | 2 | 2 | 1 | 1 | 2 | 1 | | 2 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 1 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | 1 | | | | | | | | | | | | | 1 | | | | | | | |
| Respiratory Epithelium, Necrosis | | | | 1 | | | | | 1 | 1 | | | 1 | | | 1 | 1 | | 1 | | 1 | 1 | 1 | |
| Turbinate, Atrophy | | | | | 1 | | 1 | | | | | | 2 | | | 1 | | | 1 | | | 1 | 1 | |
| Turbinate, Perforation | | | | | | | X | | X | | | X | | | | | | X | | | X | X | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Cartilage, Metaplasia, Osseous Epithelium, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | |

SPECIAL SENSES SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 2 | |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | |
| Harderian Gland | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | X |
| Hyperplasia | 1 | | | | | | | | | 1 | | | | | | | | | | | | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + |
| Amyloid Deposition | | | | | | | | | | | | | | | | | | | | | | | | |
| Infarct, Chronic | | | | | | | | | | | | | | | | | | | 2 | 2 | | | 1 | 2 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | |
| Metaplasia, Osseous | | | | | | | | | | | 2 | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | females (cont...) | | | |
|--------------------------------|-------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------------------|------|------|------|
| | | 0637 | 0732 | 0731 | 0679 | 0775 | 0772 | 0773 | 0773 | 0773 | 0773 | 0772 | 0772 | 0773 | 0773 | 0773 | 0773 | 0773 | 0772 | 0773 | 0773 | | 0493 | 0675 | 0773 |
| 30 mg/m3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Nephropathy | | 2 | | | 1 | | | | | 2 | 3 | | 1 | 1 | 2 | | | | | | 1 | 2 | 1 | 1 | |
| Urinary Bladder Angiectasis | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |

* .. 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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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|
| | 018 | 073 | 073 | 073 | 065 | 073 | 064 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | | 073 |
| ANIMAL ID | 00526 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | 00005 | |
| Fatty Change | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | 3 | | | | | 1 3.0 |
| Hepatocyte, Necrosis | | | | | 4 | | | | | | | | | | | | | 2 | | | | 2 3.0 |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | 5 |
| Fat, Necrosis | | | | | | | | | | | | | | | | 2 | | | | | 2 | 5 1.8 |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | 49 |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | 2 | | | | | | | | | | | | | | | | | 3 2.0 |
| Duct, Cyst | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | 50 |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | 50 |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | 49 |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |

CARDIOVASCULAR SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|--------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | 50 |
|--------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----|

* .. 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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1-4 .. Lesion qualified as:
 1) Minimal 3) Moderate
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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|-----------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|--------|
| | 0198 | 0733 | 0732 | 0732 | 0635 | 0732 | 0634 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | 0733 | | 0733 |
| ANIMAL ID | 00526 | 00527 | 00528 | 00529 | 00530 | 00531 | 00532 | 00533 | 00534 | 00535 | 00536 | 00537 | 00538 | 00539 | 00540 | 00541 | 00542 | 00543 | 00544 | 00545 | 00546 | |
| Heart | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Cardiomyopathy | | | 2 | | | | | | | | 1 | | | | | | | 2 | | | 1 | 12 1.4 |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | 2 | | | | | 1 2.0 |
| Inflammation, Chronic Active | | | | | | 1 | | | | 1 | | | | | | | | | | 1 | | 3 1.0 |
| Mineralization | | | | | | | | | | | | 1 | | | | | | | | | | 1 1.0 |
| Necrosis | | | | | | | | | | | | 1 | | | | | 2 | | | | | 2 1.5 |
| ENDOCRINE SYSTEM | | | | | | | | | | | | | | | | | | | | | | |
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | 1 | 3 1.0 |
| Angiectasis | | | | | | | | | | | | 1 | | | | | | | | | | 2 1.0 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Hyperplasia | | | | | | | | | 1 | | | | | | | | | | | | | 2 1.0 |
| Hypertrophy | | | | | | | | 1 | | 1 | | | | | 1 | 1 | 2 | | | 1 | 1 | 13 1.1 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia | | | 1 | | | 1 | | | | | | | | | | | | | | | | 5 1.2 |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Parathyroid Gland | M | + | + | + | + | + | + | M | M | + | + | M | M | + | + | + | + | + | + | M | + | 36 |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | 49 |
| Pars Distalis, Angiectasis | | | | | | | | | | | | | | | | | | | | | | 2 1.0 |
| Pars Distalis, Hyperplasia | | | 1 | | 1 | | 1 | | | | | 2 | | | 3 | | | | 1 | | 1 | 15 1.5 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Cyst | | | | | | | | | | | | | | | | | | | | | X | 1 |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-----------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B6C3F1 MICE FEMALE | 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 | |
| | 30 mg/m3 | ANIMAL ID | | 1 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| | | | | 9 | 3 | 3 | 3 | 5 | 3 | 4 | 3 | 1 | 3 | 3 | 0 | 3 | 3 | 3 | 3 | 8 | 0 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| | | 8 | 3 | 2 | 2 | 5 | 2 | 9 | 3 | 6 | 2 | 2 | 7 | 1 | 1 | 3 | 3 | 0 | 9 | 1 | 5 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|----------|------------|
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |
| Follicular Cell, Hyperplasia | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|------------|------------|---|---|---|---|---|---|-----------|------------|-----------|--|--|
| Clitoral Gland | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 | | | | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Congestion | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 9 | 1.0 | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 2 | 4.0 | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 3 | 1.7 | | | | | | | | | | | |
| Hemorrhage | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | 3 | 1.3 | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 1 | 2 | 3 | 2 | | 2 | | 3 | 1 | 2 | 2 | 1 | 3 | | | | 1 | | 2 | 2 | 2 | 1 | 1 | | | 3 | 2 | 1 | 4 | 2 | | | | | | | | | 43 | 2.0 | | | |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|------------|---|---|---|---|---|---|---|---|---|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-----------|--|--|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1.8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lymph Node | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Iliac, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lumbar, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + .. Tissue examined microscopically M .. Missing tissue 1-4 .. Lesion qualified as:
 X .. Lesion present A .. Autolysis precludes evaluation 1) Minimal 3) Moderate
 I .. Insufficient tissue BLANK .. Not examined microscopically 2) Mild 4) Marked

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|--|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-------|--------|----|
| | 018 | 033 | 072 | 073 | 065 | 073 | 064 | 073 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | 077 | | 077 | | |
| ANIMAL ID | 00526 | 00552 | 00552 | 00552 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | 00555 | | | |
| Lumbar, Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Pancreatic, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Renal, Angiectasis | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | | |
| Renal, Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | | |
| Lymph Node, Bronchial | M | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | M | + | + | + | + | 44 | | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | | |
| Hyperplasia, Lymphoid | | | | | | | | | | 1 | 1 | | | | | | | 1 | | | 1 | 3 1.4 | | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | 1 | | | | | | | | | | | | 2 1.0 | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | | |
| Lymph Node, Mandibular | + | + | + | M | M | M | + | + | + | I | + | + | + | + | + | + | + | + | + | M | M | + | + | 37 |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | 2 | | | | | 3 1.3 | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Lymph Node, Mediastinal | + | + | + | + | I | + | + | + | I | M | + | + | + | + | + | + | + | + | + | + | + | + | 45 | |
| Hyperplasia, Lymphoid | | | | | | | | | 1 | | 2 | | | | | | | | | | 1 | 1 | 7 1.4 | |
| Infiltration Cellular, Histiocyte | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Lymph Node, Mesenteric | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Angiectasis | | | | | | | | | | | | | | | | | 1 | | | | | 1 | 2 1.0 | |
| Hematopoietic Cell Proliferation | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Hyperplasia, Lymphoid | | | 3 | | | 2 | | 1 | | | 2 | | | | | | | 1 | | | 1 | | 12 1.4 | |
| Spleen | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Angiectasis | | | | 1 | | | | | | | | | | | | | | | | | | | 2 1.5 | |
| Hematopoietic Cell Proliferation | | | | 1 | | 3 | | 2 | 1 | 3 | | | | 3 | | | 2 | | | | | | 11 2.4 | |
| Hyperplasia, Granulocytic | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 | |
| Hyperplasia, Lymphoid | | | 2 | | | | 2 | | | | 2 | 2 | | | | | | 1 | | 1 | 2 | 3 | 17 1.9 | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | |
|---------------------------------|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|-----|-------|---|----|-----|-----|
| | 018 | 073 | 073 | 073 | 065 | 073 | 064 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | | 073 | | | | | |
| ANIMAL ID | 00526 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | 00055 | | | | | | |
| Inflammation, Suppurative | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | | | | |
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | M | + | + | + | + | + | + | 47 | | |
| Atrophy | 3 | | | | 2 | | 1 | | | | | | | | | | | 1 | | | 3 | | | | 7 | 1.9 | |
| Cyst | | | | | | | | | | | X | | | | | | | | | | | | | | 1 | | |
| Ectopic Parathyroid Gland | | | 1 | | | | | | | | | | | | | | | | 1 | | 1 | | 1 | | 5 | 1.0 | |
| Hyperplasia, Lymphoid | | 1 | | | | 1 | | 1 | | | | | | | | | | | | | | 1 | 2 | 2 | | 13 | 1.5 |
| INTEGUMENTARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Edema | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Inflammation, Chronic Active | | | | | 1 | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 |
| MUSCULOSKELETAL SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Fibro-Osseous Lesion | | X | | X | | | | X | | | X | X | X | | | | | | | | X | | | | | 12 | |
| Skeletal Muscle | | | | | | | | | | + | | | | | | | | + | | | | | | | | 2 | |
| NERVOUS SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Compression | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Demyelination | | | | | | | | | | | | | | | | | | | 2 | | | | | | | 1 | 2.0 |
| Infiltration Cellular | | | 1 | | | | | | | | | | | | | 1 | | | | | | | | | | 3 | 1.0 |
| Meninges, Infiltration Cellular | | | | | | | | | | | | | | | | | | | 1 | | | | | | | 1 | 1.0 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS | |
|--------------------|-------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----------|----|
| | 01 | 07 | 07 | 07 | 06 | 07 | 06 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | | 07 |
| 30 mg/m3 | 98 | 33 | 32 | 32 | 55 | 32 | 49 | 33 | 62 | 22 | 22 | 71 | 11 | 33 | 33 | 80 | 09 | 11 | 51 | 31 | 31 | 32 |
| | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 |
| | 52 | 52 | 52 | 52 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 | 53 |
| | 67 | 78 | 89 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 |

Peripheral Nerve

+

1

Spinal Cord

+

1

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|--------|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | 1 | 2 | 2 | 1 | | 2 | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 2 | 1 | 2 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 48 1.4 |
| Epiglottis, Hyperplasia, Squamous | 2 | | 1 | | 2 | | 2 | | | | 2 | | 1 | | | 1 | | 3 | | | | | 16 1.5 | |
| Epiglottis, Metaplasia, Squamous | 4 | 4 | 3 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 4 | 2 | 4 | 4 | 3 | 3 | 4 | 3 | 4 | 4 | 4 | 3 | 4 | 50 3.5 |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Fibrosis | | | | | | | | | | | | | | | | | | | | | | | 2 1.0 | |
| Hemorrhage | | | 2 | | | | | | | | | | | | | 2 | | | | | | | 2 2.0 | |
| Infiltration Cellular, Histiocyte | 1 | | 1 | 1 | | 2 | | 1 | | | 2 | | | | 1 | | | | | | | | 15 1.2 | |
| Inflammation, Chronic | 2 | 1 | 1 | 1 | | 1 | 1 | | | | | | | | 1 | | | | | 1 | | 1 | 26 1.1 | |
| Mineralization | | | | | | | | | | | 1 | | | | | | | | | | | | 1 1.0 | |
| Proteinosis | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | 2 | | 1 | 1 | | | | | | | | | | 1 | | | | | 1 | | | | 8 1.1 | |
| Alveolar Epithelium, Hyperplasia | | | | | | | | | | | 2 | | | | | | | | | | | | 2 1.5 | |
| Mediastinum, Necrosis | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Exudate | 1 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 2 | 4 | 2 | 2 | | 48 2.0 | |
| Inflammation, Chronic Active | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 49 1.2 | |
| Nasolacrimal Duct, Inflammation, Chronic Active | | | | | | | | | | | 2 | | | | | | | | | | | | 2 2.0 | |
| Nasopharyngeal Duct, Perforation | | | X | | | | | | | | | | | | | | | | X | | | | 14 | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 50 2.0 | |
| Olfactory Epithelium, Atrophy | | | 1 | | | | | | | | | | | | | | | | | | | | 1 1.0 | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-------------|-----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|-----|-----|
| | | 0001 | 0002 | 0003 | 0004 | 0005 | 0006 | 0007 | 0008 | 0009 | 0010 | 0011 | 0012 | 0013 | 0014 | 0015 | 0016 | 0017 | 0018 | 0019 | 0020 | | | |
| 30 mg/m3 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | | 1 | 7 | 7 | 7 | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 4 | 7 | 7 | 7 | 7 | 7 | | | |
| | | 9 | 3 | 3 | 3 | 5 | 3 | 4 | 3 | 1 | 3 | 3 | 0 | 3 | 3 | 8 | 0 | 3 | 3 | 3 | 3 | | | |
| | | 8 | 3 | 2 | 2 | 5 | 2 | 9 | 3 | 6 | 2 | 2 | 7 | 1 | 1 | 3 | 3 | 0 | 9 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | | | |
| | | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | | | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | | | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 50 | 2.0 |
| Respiratory Epithelium, Atrophy | | | 1 | 1 | 1 | | 1 | | | | | | | | 1 | | | 1 | 2 | 1 | 1 | | 28 | 1.0 |
| Respiratory Epithelium, Hyperplasia | | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | | 1 | 1 | 48 | 1.6 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Respiratory Epithelium, Necrosis | | | 1 | | | | | | | | | | | | 1 | | | 1 | | | | 13 | 1.0 | |
| Turbinate, Atrophy | | | | 1 | | | | | | | | | | | 1 | | | 1 | | | | 10 | 1.1 | |
| Turbinate, Perforation | | | | | | | | | | | | | | | | | | | | | | 6 | | |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cartilage, Metaplasia, Osseous | | | | | | | | | | | | | | | | | | 1 | | | | 2 | 1.0 | |
| Epithelium, Hyperplasia | | | | | | | | | | | | | | | | 1 | | | | | | 1 | 1.0 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Cornea, Hyperplasia | | | | | | | | | 1 | | | | | | | | | | | | | 1 | 1.0 | |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | 1 | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| URINARY SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | |
| Kidney | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Amyloid Deposition | | 4 | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | |
| Infarct, Chronic | | | 1 | | | | | | | | | | | | | | | | | | | 5 | 1.6 | |
| Inflammation, Chronic Active | | 1 | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Metaplasia, Osseous | | | | | | | | | | | | | 2 | | | | | | | | | 2 | 2.0 | |

* .. 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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Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 30 mg/m3 | DAY ON TEST | | ANIMAL ID | | | | | | | | | | | | | | | | | | | | * TOTALS | | | |
|--------------------------------|-------------|-----|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----------|---|-----------|------------|
| | 018 | 073 | 073 | 073 | 065 | 073 | 064 | 073 | 071 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | 073 | | | 073 | 073 |
| Nephropathy | 4 | 2 | 2 | 1 | | 1 | 2 | 1 | 1 | 1 | | | 2 | | | 2 | | 2 | | 3 | | 1 | 2 | | 26 | 1.7 |
| Urinary Bladder Angiectasis | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | 1.0 |

* .. 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:
 1) Minimal 3) Moderate
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Experiment Number: 20523 - 04
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
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| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| B6C3F1 MICE FEMALE | DAY ON TEST | 0 7 1 5 | 0 5 1 3 | 0 6 6 8 | 0 6 4 5 | 0 7 3 7 | 0 5 5 3 | 0 7 3 3 | 0 7 6 1 | 0 7 3 3 | 0 7 2 5 | 0 7 3 3 | 0 6 9 4 | 0 7 3 2 | 0 7 3 2 | 0 6 1 2 | 0 7 3 2 | 0 1 6 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 1 | 0 7 3 2 | 0 7 3 3 | 0 7 3 2 | females (cont...) |
| | ANIMAL ID | 0 0 7 0 1 | 0 0 7 0 2 | 0 0 7 0 3 | 0 0 7 0 4 | 0 0 7 0 5 | 0 0 7 0 6 | 0 0 7 0 7 | 0 0 7 0 8 | 0 0 7 0 9 | 0 0 7 1 0 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 1 1 | 0 0 7 2 0 | 0 0 7 2 1 | 0 0 7 2 2 | 0 0 7 2 2 | 0 0 7 2 3 | 0 0 7 2 4 | 0 0 7 2 5 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus Periesophageal Tissue, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Gallbladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum Inflammation | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | I | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum Hyperplasia, Lymphoid Hyperplasia, Plasma Cell | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum Hyperplasia, Lymphoid | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver Basophilic Focus Clear Cell Focus Eosinophilic Focus Inflammation, Chronic Active Mixed Cell Focus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| | | | | | | | X | | | | | | X | | | | | | | | X | | | | | |
| | | | | | | | | X | | | | | | | | | | | | | X | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | 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 | ANIMAL ID | females (cont...) |
|---------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------|----------------------|
| | | 7 | 5 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 1 | 7 | 7 | 7 | 7 | 7 | | |
| | | 1 | 1 | 6 | 4 | 3 | 5 | 3 | 3 | 6 | 3 | 2 | 3 | 9 | 3 | 3 | 3 | 1 | 3 | 6 | 3 | 3 | 3 | 3 | 0 | |
| | | 5 | 3 | 8 | 5 | 1 | 7 | 3 | 3 | 1 | 3 | 5 | 3 | 4 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 1 | 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 | 7 | 7 | 7 | 7 | 7 | 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 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 0 | |

Hepatocyte, Degeneration
 Hepatocyte, Hypertrophy
 Hepatocyte, Necrosis

2

4

4

1

1

Mesentery
 Fat, Necrosis

+ +
 2

+
 2

Pancreas
 Atrophy
 Hypertrophy
 Infiltration Cellular, Lymphoid

+
 +
 1
 1

Salivary Glands

+ +

Stomach, Forestomach
 Hyperkeratosis
 Hyperplasia
 Inflammation
 Inflammation, Chronic Active
 Ulcer

+
 1
 2 1
 1

Stomach, Glandular
 Inflammation, Chronic Active

+
 2

CARDIOVASCULAR SYSTEM

Blood Vessel

+ +

Heart
 Cardiomyopathy
 Inflammation, Chronic Active

+
 1 1 1 1 1 1 1
 1 2 2 3 3 1

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| B6C3F1 MICE FEMALE | DAY ON TEST | 07 | 05 | 06 | 06 | 07 | 05 | 07 | 07 | 06 | 07 | 07 | 06 | 07 | 07 | 07 | 06 | 07 | 01 | 07 | 07 | 07 | 07 | 07 | 07 | 07 | 07 |
| | 100 mg/m3 | 15 | 13 | 16 | 14 | 13 | 15 | 13 | 13 | 16 | 13 | 12 | 13 | 19 | 13 | 13 | 13 | 11 | 13 | 16 | 13 | 13 | 13 | 13 | 13 | 13 | 13 |
| ANIMAL ID | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | |
| | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | 77 | |
| | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 00 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 01 | 02 | 02 | 02 | 02 | 02 | 02 | 02 | |
| | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 00 | 01 | 02 | 03 | 04 | 05 | 06 | 07 | |

females
(cont...)

Necrosis
 Thrombosis
 Coronary Artery, Thrombosis

1

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia | | | | | | | | 1 | | 2 | | | | 1 | | | | | | | | | | | 1 | |
| Hypertrophy | | | 1 | | | | | | | | | | | 1 | | | | | 1 | 1 | 1 | 1 | | | | |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | 1 | | | | 1 | 1 | |
| Pigmentation | | | | | | | | | | | 1 | | | | | | | | | | | | | | | |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Parathyroid Gland | + | M | M | M | M | M | M | + | M | + | + | + | M | M | + | M | + | + | M | M | M | M | + | + | | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Angiectasis | | | | | | | | | | | | 1 | | | | | | | | | | | | | | |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pars Distalis, Hyperplasia | | | | 1 | | | | | | | | 1 | 1 | | 2 | 1 | 1 | | | 2 | | | | 2 | | |
| Pars Distalis, Hypertrophy | | | | | | | | 2 | | | | | | | | | | | | | | | | | | |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|------------------------------|---|
| B6C3F1 MICE FEMALE | 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 | | |
| | | 7 | 5 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 1 | 7 | 7 | 7 | | 7 |
| | | 1 | 1 | 6 | 4 | 3 | 5 | 3 | 3 | 6 | 3 | 2 | 3 | 9 | 3 | 3 | 3 | 1 | 3 | 6 | 3 | 3 | 3 | | 3 |
| 100 mg/m3 | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | females (cont...) | |
| | | 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 | 7 | 7 | 7 | 7 | | 7 |

Follicular Cell, Hypertrophy

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clitoral Gland | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Cyst | X | | | | | | X | | X | | | | X | | | | | | | X | | | | |
| Cyst, Multiple | | | | | | | | | | | | | | | | | | | | | | | | |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | 2 | | | | | | | | | | | 1 |
| Inflammation, Chronic Active | | | | | | | | | | | | 3 | 1 | | | | | | | 1 | | | | |
| Necrosis | | | | | | | | | | | | 4 | | | | | | | | | | | | |
| Endometrium, Hyperplasia, Cystic | 3 | 2 | 3 | | 1 | 1 | 3 | 3 | 3 | 3 | | 2 | 2 | | 3 | 4 | 4 | 2 | 1 | 3 | 3 | 1 | 2 | 1 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Necrosis | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | 2 | | | | | | |
| Lymph Node | | | | | | | | | | | + | + | | | | | | | | + | + | | | + |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| Artery, Lumbar, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 3 |
| Artery, Renal, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | 3 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|-----------|----------------------|
| | 0 7 1 5 | 0 5 1 3 | 0 6 6 8 | 0 6 4 5 | 0 7 3 7 | 0 5 5 7 | 0 7 3 3 | 0 7 3 3 | 0 6 6 1 | 0 7 3 3 | 0 7 2 5 | 0 7 3 3 | 0 6 9 4 | 0 7 3 2 | 0 7 3 2 | 0 6 3 2 | 0 7 3 2 | 0 1 6 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 1 | 0 7 3 2 | | |
| | 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 0 1 | | |

Iliac, Angiectasis
 Lumbar, Angiectasis
 Lumbar, Infiltration Cellular, Plasma Cell
 Renal, Angiectasis
 Renal, Infiltration Cellular, Plasma Cell
 Renal, Necrosis

2
2

Lymph Node, Bronchial
 Hyperplasia, Lymphoid
 Infiltration Cellular, Histiocyte
 Plasma Cell, Hyperplasia

+ + + + + + + + + + + M + + + + + + + M + + + +
 2 3 1 1 2 3 1
 2

Lymph Node, Mandibular
 Hyperplasia, Lymphoid
 Infiltration Cellular, Histiocyte

M + + + M + + + + + + + + + + + + + M + + +
 3

Lymph Node, Mediastinal
 Hyperplasia, Lymphoid
 Infiltration Cellular, Histiocyte
 Pigmentation

+ + + + I I + + + + + + + + + M + + + + + I +
 1 2 2

Lymph Node, Mesenteric
 Angiectasis
 Hematopoietic Cell Proliferation
 Hyperplasia, Lymphoid

I +
 2 1 1

Spleen
 Angiectasis
 Hematopoietic Cell Proliferation
 Hyperplasia, Lymphoid
 Inflammation, Suppurative

A +
 2 1 1 2 2 1 3 2 1 2 1 2 1

* .. 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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Lab: BNW

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--------|------------------------------|
| B6C3F1 MICE FEMALE | DAY ON TEST | 0 7 | 0 5 | 0 6 | 0 6 | 0 7 | 0 5 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 7 | 0 7 | 0 7 | 0 7 | females (cont...) |
| | | 1 | 1 | 6 | 4 | 3 | 5 | 3 | 3 | 6 | 3 | 2 | 3 | 9 | 3 | 3 | 3 | 1 | 3 | 6 | 3 | 3 | 3 | 3 | 3 | 3 | |
| | | 5 | 3 | 8 | 5 | 1 | 7 | 3 | 3 | 1 | 3 | 5 | 3 | 4 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | 2 | |
| 100 mg/m3 | ANIMAL ID | 0 0 7 0 1 | 0 0 7 0 2 | 0 0 7 0 3 | 0 0 7 0 4 | 0 0 7 0 5 | 0 0 7 0 6 | 0 0 7 0 7 | 0 0 7 0 8 | 0 0 7 0 9 | 0 0 7 0 0 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | 0 0 7 0 1 | | |

Necrosis, Lymphoid

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Thymus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | | 1 | | | | | | | | | | | | |
| Atrophy | 2 | | 1 | | | | | | | | | | | | | | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | 1 | | | | | X | X | |
| Ectopic Parathyroid Gland | | | | | | | | | | | | | | 1 | | | | | 1 | | | | | | | 1 |
| Hyperplasia, Lymphoid | | | | | 2 | | | | 3 | | | | | 2 | | | | | | | | | 1 | 1 | | |
| Necrosis, Lymphoid | | | | | | | | | | | | | | 2 | | | | | | | | | | | | |

INTEGUMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mammary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Skin | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia | | | | 1 | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Chronic Active | | | | 2 | | | | | | | | | | 1 | | | | | | 4 | | | | 1 | | |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |

MUSCULOSKELETAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Fibro-Osseous Lesion | | | X | | | | | | | | X | | | | X | | | | | | X | X | | X | X | |
| Skeletal Muscle | | + | + | | | | | | | | | | | | | | | | | | | | | | | |

NERVOUS SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Brain | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Compression | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |

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+ .. Tissue examined microscopically
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Experiment Number: 20523 - 04
 Test Type: CHRONIC
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 Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | ANIMAL ID | females (cont...) | | | | |
|---------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|------------------|------------------|------------------|------------------|
| | 0 7 1 5 | 0 5 1 3 | 0 6 6 8 | 0 6 4 5 | 0 7 3 7 | 0 5 5 7 | 0 7 3 3 | 0 7 3 3 | 0 6 6 1 | 0 7 3 3 | 0 7 7 5 | 0 6 3 4 | 0 7 3 2 | 0 6 9 3 | 0 7 3 3 | 0 7 3 1 | 0 6 3 2 | 0 7 3 2 | 0 1 3 3 | 0 7 3 3 | | | 0 7 3 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 1 |
| | 0 7 0 1 | 0 0 0 2 | 0 0 0 3 | 0 0 0 4 | 0 0 0 5 | 0 0 0 6 | 0 0 0 7 | 0 0 0 8 | 0 0 0 9 | 0 0 0 0 | 0 0 0 1 | 0 0 0 1 | 0 0 0 2 | 0 0 0 3 | 0 0 0 4 | 0 0 0 5 | 0 0 0 6 | 0 0 0 7 | 0 0 0 8 | 0 0 0 9 | 0 0 0 0 | 0 0 0 1 | 0 0 0 2 | 0 0 0 3 | 0 0 0 4 | 0 0 0 5 |

Peripheral Nerve
Degeneration

+

+
1

Spinal Cord

+

+

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Larynx | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Inflammation, Chronic Active | 1 | 2 | | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| Necrosis | | | | | | | | | | | | | 1 | | | | | | | | | | | | | |
| Epiglottis, Hyperplasia, Squamous | 3 | 1 | 1 | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | | | 1 | 2 | 1 | 2 | | 1 | 1 | 1 | 1 | 2 | |
| Epiglottis, Metaplasia, Squamous | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| Lung | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Fibrosis | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | | | 2 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Infiltration Cellular, Histiocyte | 3 | 2 | 1 | | 2 | 1 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | |
| Inflammation, Chronic | 3 | 2 | 2 | | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | 2 | 2 | 3 | |
| Metaplasia, Osseous | | | | | | | | | | 1 | | | | | | | | | | | | | | | | |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | 3 | 2 | 2 | | 3 | 3 | 3 | 3 | 3 | 1 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 3 | 2 | 3 | 3 | |
| Alveolar Epithelium, Hyperplasia | 2 | 1 | 1 | | 2 | 2 | 2 | 2 | 2 | 1 | 3 | 2 | 2 | | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | |
| Alveolar Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| Exudate | 4 | 3 | 3 | 2 | 1 | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 4 | 3 | | 3 | 2 | 2 | 1 | 2 | 4 | 2 | 4 | 4 | 4 | |
| Inflammation, Chronic Active | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | | 1 | 2 | 1 | 2 | 2 | 2 | |
| Goblet Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Nasopharyngeal Duct, Perforation | | | X | | X | X | | | | | | | | | X | X | | | | | X | | | | | |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | 0 7 | 0 5 | 0 6 | 0 6 | 0 7 | 0 5 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 6 | 0 7 | 0 7 | 0 1 | 0 7 | 0 7 | 0 7 | 0 7 | 0 7 | females (cont...) | |
|---|-------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------------|--|
| | ANIMAL ID | 0 7 0 1 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | 0 0 7 0 | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Olfactory Epithelium, Atrophy | | | | 1 | | | | | | | | | | | | | | | | | | | | 1 | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | 1 | | | | | | | | 1 | | | | | | | | | | | | | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | | 3 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 2 | 2 | 4 | 3 | 2 | 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | |
| Respiratory Epithelium, Atrophy | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 2 | 1 | | 1 | 1 | | | | 1 | | | 1 | 1 | 1 | |
| Respiratory Epithelium, Hyperplasia | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 1 | 2 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | 1 | | | | | | |
| Respiratory Epithelium, Necrosis | | | | 1 | | 1 | 1 | | | | 1 | | | | | 1 | 1 | | | | 1 | | 1 | 1 | | |
| Turbinate, Atrophy | | 1 | | 1 | | 1 | 1 | | | 1 | | | 1 | | | 1 | | | | 1 | 1 | 1 | | 1 | | |
| Turbinate, Perforation | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| Trachea | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Pigmentation | | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
| Cartilage, Metaplasia, Osseous | | 1 | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Epithelium, Hyperplasia | | 1 | | 1 | | 2 | | | | | | | | | | | | | 2 | | | | | | | |
| Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | | | | + | | |
| Eye | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | 3 | | | |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | 2 | | | |
| Harderian Gland | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | females (cont...) | |
|---------------------------------|-------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|--|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
| | 7 | 5 | 6 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 1 | 7 | 7 | 7 | 7 | 7 | | |
| | 1 | 1 | 6 | 4 | 3 | 5 | 3 | 3 | 6 | 3 | 2 | 3 | 9 | 3 | 3 | 3 | 1 | 3 | 6 | 3 | 3 | 3 | 3 | 3 | | |
| | 5 | 3 | 8 | 5 | 1 | 7 | 3 | 3 | 1 | 3 | 5 | 3 | 4 | 2 | 2 | 3 | 2 | 2 | 3 | 3 | 3 | 3 | 2 | 1 | | |
| | | 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 | 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 | 7 | 7 | 7 | 7 | 7 | 7 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | | |

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Angiectasis | | | | | | | | | | | | | 1 | | | | | | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | |
| Nephropathy | 2 | | 1 | | 1 | 1 | 2 | 2 | 1 | | 2 | 1 | 2 | 1 | 1 | 1 | | | 1 | | 2 | | 1 |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Hyperplasia, Lymphoid | | | | | | | 2 | | | | | | | | | | | | | | | 2 | |

* .. 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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Date Report Requested: 02/02/2015
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First Dose M/F: 08/03/09 / 08/03/09
Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | 0 | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | |
|--------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------|---|---|---|---|---|---|----|--|
| | | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 3 | 6 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 6 | 7 | 6 | 7 | | 7 | 6 | 7 | 7 | 6 | 7 | 7 | |
| 100 mg/m3 | | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 1 | 8 | 3 | 3 | 4 | 3 | 7 | 3 | 1 | 7 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | | |
| | 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 | |
| | | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | |
| | | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 | |
| | | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 | 0 | 0 | 49 | |

ALIMENTARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|-----|
| Esophagus Periesophageal Tissue, Inflammation, Chronic Active | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | 1 | 2.0 |
| Gallbladder | + | + | + | + | + | M | + | + | A | + | + | + | + | A | + | A | A | + | + | + | + | + | + | M | + | + | + | + | 44 | | | |
| Intestine Large, Cecum Inflammation | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | A | A | + | + | + | + | + | 1 | + | + | + | + | + | + | 45 | 1 | 1.0 |
| Intestine Large, Colon Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 2 | + | + | + | + | + | 50 | 1 | 2.0 |
| Intestine Large, Rectum | + | + | + | + | + | + | + | + | A | + | + | I | + | + | + | A | + | + | + | + | + | + | I | + | + | + | + | + | + | 45 | | |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | A | A | + | + | + | + | + | + | + | + | + | + | + | + | 45 | | |
| Intestine Small, Ileum Hyperplasia, Lymphoid Hyperplasia, Plasma Cell | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | A | A | + | + | + | + | + | 2 | + | + | + | + | + | 46 | 2 | 2.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 | 1 | 4.0 |
| Intestine Small, Jejunum Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | A | + | + | + | + | A | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | 46 | 1 | 3.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | |
| Liver Basophilic Focus Clear Cell Focus Eosinophilic Focus Inflammation, Chronic Active Mixed Cell Focus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | 4 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | 3 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | 8 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | | 1 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 | 1.0 |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |

* .. 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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 Metal Working Fluids: Trim VX
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| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|----|-------|--------|
| | 0 7 3 3 | 0 6 7 3 | 0 7 3 3 | 0 7 3 2 | 0 7 3 1 | 0 6 7 8 | 0 7 3 2 | 0 3 1 9 | 0 6 7 1 | 0 7 3 1 | 0 6 7 2 | 0 7 3 5 | 0 7 3 1 | 0 5 7 2 | 0 7 3 3 | 0 7 3 5 | 0 6 7 2 | 0 7 3 3 | 0 6 7 3 | 0 7 3 2 | 0 7 3 3 | 0 6 7 4 | 0 7 3 3 | 0 7 3 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ANIMAL ID | 0 0 7 2 6 | 0 0 7 2 7 | 0 0 7 2 8 | 0 0 7 2 9 | 0 0 7 3 0 | 0 0 7 3 1 | 0 0 7 3 2 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 3 3 | 0 0 7 4 0 | 0 0 7 4 1 | 0 0 7 4 2 | 0 0 7 4 3 | 0 0 7 4 4 | 0 0 7 4 4 | 0 0 7 4 4 | 0 0 7 4 4 | 0 0 7 4 5 | 0 0 7 4 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2 1.5 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1 1.0 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hepatocyte, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 5 2.2 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mesentery | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 11 | | | | |
| Fat, Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 2.0 | |
| Pancreas | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 | |
| Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | 3 1.7 | |
| Infiltration Cellular, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | | | | | 1 1.0 | |
| Salivary Glands | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Stomach, Forestomach | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Hyperkeratosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Inflammation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Stomach, Glandular | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| CARDIOVASCULAR SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Blood Vessel | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Heart | | | | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | | |
| Cardiomyopathy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 15 1.3 |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 2.3 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

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

| | | |
|-----------------------------|---|-------|
| Necrosis | 4 | 1 4.0 |
| Thrombosis | 4 | 1 4.0 |
| Coronary Artery, Thrombosis | | 1 1.0 |

ENDOCRINE SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Adrenal Cortex | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Accessory Adrenal Cortical Nodule | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Angiectasis | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 2 1.5 |
| Degeneration, Cystic | | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Hyperplasia | 1 | | | | | | | | | | | 1 | | 1 | | | | | | | | | | | | 7 1.1 |
| Hypertrophy | | | | | 2 | | | | | | | 1 | | 1 | | | | | | | | | 1 | | | 10 1.1 |
| Adrenal Medulla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 5 1.0 |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Parathyroid Gland | + | M | M | M | + | + | + | + | + | + | M | + | M | M | + | + | + | + | + | + | M | + | + | + | 28 | |
| Pituitary Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | 49 | |
| Pars Distalis, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | | 5 1.2 |
| Pars Distalis, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | 1 |
| Pars Distalis, Hyperplasia | 2 | | | | | | | | | | | | | | | | | | | | | | | | | 10 1.4 |
| Pars Distalis, Hypertrophy | | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Thyroid Gland | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Follicular Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

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

GENERAL BODY SYSTEM
 NONE

GENITAL SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Clitoral Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | I | + | 46 | |
| Ovary | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | 1 | | | | | | | | | 1 | | | | 3 1.3 |
| Cyst | | | | | | | | | | | | | | | | | | | | | X | | X | | 7 |
| Cyst, Multiple | | | | | | | | | | | | | | | | X | | | | | | | | | 1 |
| Uterus | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Inflammation, Chronic Active | | | | | | 2 | | | | | | 1 | | | | | | | | | | | | | 5 1.6 |
| Necrosis | | | | | | | | | | | | | | | | | | | | | | | | | 1 4.0 |
| Endometrium, Hyperplasia, Cystic | 4 | | 2 | 2 | 4 | 2 | 3 | 2 | 3 | 2 | 1 | 3 | 3 | 1 | 2 | 4 | 2 | 3 | 3 | 2 | 2 | 2 | 3 | | 43 2.4 |

HEMATOPOIETIC SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-------|
| Bone Marrow | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Necrosis | | | | | | 2 | | | | | | | | | | | | | | | | | | | 2 1.5 |
| Myeloid Cell, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lymph Node | | | + | | | | | | | | | | | | + | | + | | | | + | | | 10 | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Artery, Lumbar, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Artery, Renal, Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | 1 3.0 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE 100 mg/m3 | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | 0733 | 0673 | 0773 | 0773 | 0676 | 0773 | 0363 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | 0673 | |
| ANIMAL ID | 00726 | 00727 | 00728 | 00729 | 00730 | 00731 | 00732 | 00733 | 00734 | 00735 | 00736 | 00737 | 00738 | 00739 | 00740 | 00741 | 00742 | 00743 | 00744 | 00745 | 00746 | 00747 | 00748 | 00749 | |
| Iliac, Angiectasis | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 2.0 | |
| Lumbar, Angiectasis | | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Lumbar, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Angiectasis | | | | 1 | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Renal, Infiltration Cellular, Plasma Cell | | | | | | | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Renal, Necrosis | | | | 3 | | | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Lymph Node, Bronchial Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte Plasma Cell, Hyperplasia | + | + | + | M | I | + | M | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | I | + | 43 9 2.0 4 2.0 1 1.0 |
| Lymph Node, Mandibular Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte | M | M | + | M | + | M | M | M | + | + | + | + | M | + | + | + | + | + | + | M | + | + | + | + | 39 1 3.0 1 1.0 |
| Lymph Node, Mediastinal Hyperplasia, Lymphoid Infiltration Cellular, Histiocyte Pigmentation | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 45 5 1.8 1 2.0 1 2.0 |
| Lymph Node, Mesenteric Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 1 2.0 1 2.0 4 1.8 |
| Spleen Angiectasis Hematopoietic Cell Proliferation Hyperplasia, Lymphoid Inflammation, Suppurative | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 1 1.0 11 1.9 13 1.6 1 2.0 |

* .. 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

Experiment Number: 20523 - 04

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

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

Necrosis, Lymphoid 2 1 2.0

Thymus + + + + + I + **49**

Angiectasis 2 1 3 1.3

Atrophy 2 4 1.8

Cyst X X 5 1.0

Ectopic Parathyroid Gland 1 1 3 1 5 1.2

Hyperplasia, Lymphoid 1 3 1 3 1 11 1.8

Necrosis, Lymphoid 2 1 2.0

INTEGUMENTARY SYSTEM

Mammary Gland + **50**

Hyperplasia 1 1 1.0

Skin + **50**

Hyperplasia 1 1.0

Inflammation, Chronic Active 5 2.0

Necrosis 1 4.0

MUSCULOSKELETAL SYSTEM

Bone + **50**

Fibro-Osseous Lesion X X 9

Skeletal Muscle + 4

NERVOUS SYSTEM

Brain + **50**

Compression 2 1 3 1.7

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

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 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
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 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | * TOTALS |
|--------------------|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| | 0733 | 0673 | 0773 | 0773 | 0676 | 0773 | 0331 | 0667 | 0773 | 0331 | 0667 | 0773 | 0577 | 0773 | 0676 | 0773 | 0676 | 0773 | 0676 | 0773 | |
| 100 mg/m3 | 0026 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 0077 | 2 |
| ANIMAL ID | 0726 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 0777 | 1.0 |

| | | | |
|-------------------------------|---|---|-----|
| Peripheral Nerve Degeneration | 2 | 1 | 1.0 |
| Spinal Cord | 2 | | |

RESPIRATORY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|---|---|----|-----|-----|
| Larynx | | | | | | | | | | | | | | | | | | | | | 50 | | | | | | |
| Inflammation, Chronic Active | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 47 | 1.6 | |
| Necrosis | | 1 | | | | | | | | | | 1 | | | | | | | | | | | | | 3 | 1.0 | |
| Epiglottis, Hyperplasia, Squamous | 2 | 2 | | | 1 | 2 | | 1 | 3 | 1 | 1 | 2 | 2 | 2 | | 3 | 3 | 2 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 42 | 1.6 |
| Epiglottis, Metaplasia, Squamous | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 50 | 4.0 |
| Lung | | | | | | | | | | | | | | | | | | | | | 50 | | | | | | |
| Fibrosis | 2 | 1 | | 2 | 2 | 1 | 2 | 1 | | 1 | 2 | 1 | 2 | 2 | 2 | 1 | | 2 | 1 | 2 | 2 | 2 | 1 | 1 | 42 | 1.5 | |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | 2 | | | | | | | | | 1 | 2.0 | |
| Infiltration Cellular, Histiocyte | 2 | 2 | 2 | 3 | 4 | 2 | 3 | 1 | | 3 | 3 | 2 | 2 | 2 | 3 | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 48 | 2.3 | |
| Inflammation, Chronic | 3 | 2 | | 3 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 2 | 3 | 2 | | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 47 | 2.4 | |
| Metaplasia, Osseous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Metaplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Alveolar/bronchiolar Epithelium, Hyperplasia | 3 | 2 | | 3 | 3 | 3 | 3 | 2 | | 2 | 3 | 3 | 3 | 3 | 3 | | | 3 | 2 | 3 | 3 | 3 | 2 | 2 | 45 | 2.6 | |
| Alveolar Epithelium, Hyperplasia | | 1 | | 2 | 2 | 1 | 2 | | | 2 | 2 | 2 | 2 | 2 | 4 | 1 | | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 43 | 1.9 | |
| Alveolar Epithelium, Metaplasia, Squamous | | | | 2 | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 | |
| Nose | | | | | | | | | | | | | | | | | | | | | 50 | | | | | | |
| Exudate | 4 | 2 | 3 | 4 | 4 | 4 | 4 | 4 | 3 | 4 | 3 | 2 | 2 | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 49 | 2.9 |
| Inflammation, Chronic Active | 2 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 | 2 | 1 | 1 | 49 | 1.6 | |
| Goblet Cell, Hyperplasia | | | | | | | | 1 | | | | | | | | | | | | | | | | | 2 | 1.0 | |
| Nasopharyngeal Duct, Perforation | | X | | X | X | X | X | | | X | | | | | X | | | X | | X | X | X | | | 17 | | |

* .. Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Metal Working Fluids: Trim VX

CAS Number: TRIMVX

Date Report Requested: 02/02/2015

Time Report Requested: 13:50:12

First Dose M/F: 08/03/09 / 08/03/09

Lab: BNW

| B6C3F1 MICE FEMALE | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | * TOTALS | | |
|---|-------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----|----------|-----|-----|
| | 0733 | 0733 | 0732 | 0731 | 0738 | 0732 | 0739 | 0731 | 0731 | 0732 | 0735 | 0731 | 0732 | 0737 | 0733 | 0735 | 0733 | 0735 | 0733 | 0733 | 0734 | 0737 | 0737 | | | | |
| 100 mg/m3 | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | 00726 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | 00707 | | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 50 | 2.0 | | |
| Olfactory Epithelium, Atrophy | | | | 1 | | | | | | | 1 | | | | | | | | | 1 | | | | 5 | 1.0 | | |
| Olfactory Epithelium, Metaplasia, Respiratory | | | | | | | | | 1 | | | | | | 1 | | | | | | | | | 4 | 1.0 | | |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 4 | 2 | 2 | 4 | 3 | 2 | 3 | 4 | 2 | 2 | 2 | 3 | 2 | 3 | 4 | 3 | 2 | 4 | 2 | 3 | 3 | 3 | 2 | 3 | 2 | 50 | 2.6 |
| Respiratory Epithelium, Atrophy | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | | 1 | 1 | | 1 | 2 | 1 | 1 | 1 | 1 | | 1 | 1 | 39 | 1.1 |
| Respiratory Epithelium, Hyperplasia | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 49 | 1.3 |
| Respiratory Epithelium, Metaplasia, Squamous | | | | | | | | | | | 1 | | | | | | | | | | | | | | | 2 | 1.0 |
| Respiratory Epithelium, Necrosis | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | | | | 1 | | | 1 | | 1 | 1 | 1 | | | | 23 | 1.0 | |
| Turbinate, Atrophy | | 1 | | 1 | 1 | 1 | | | | 1 | | | | 1 | | | | | | 1 | | | | | 19 | 1.0 | |
| Turbinate, Perforation | | | | X | | X | | | | X | | | | X | | | X | | | | | | | | 6 | | |
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | 49 | | |
| Pigmentation | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 | |
| Cartilage, Metaplasia, Osseous | | | | | | | | | | 1 | | | | | | 1 | | 1 | | | | | | | 4 | 1.0 | |
| Epithelium, Degeneration | | | | | | | | | | | | 1 | | | | | | 2 | | | | | | | 2 | 1.5 | |
| Epithelium, Hyperplasia | | | | | | 1 | | | | | | | | | | | | | | | | | | | 5 | 1.4 | |
| Epithelium, Necrosis | | | | | | | | | | | | | | | | | | | | | | 1 | | | 1 | 1.0 | |
| SPECIAL SENSES SYSTEM | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ear | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | |
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Chronic Active | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Cornea, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Harderian Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | 49 | | |
| Hyperplasia | | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1.0 |

* .. 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

Experiment Number: 20523 - 04
 Test Type: CHRONIC
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: MICE/B6C3F1

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Metal Working Fluids: Trim VX
 CAS Number: TRIMVX

Date Report Requested: 02/02/2015
 Time Report Requested: 13:50:12
 First Dose M/F: 08/03/09 / 08/03/09
 Lab: BNW

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

URINARY SYSTEM

| | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------|-------|
| Kidney | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Angiectasis | | | | | | | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Cyst | | | | | | | | | | | | | | | | | X | | X | | | | | | 2 |
| Nephropathy | 2 | | | 2 | | 1 | 2 | | | 1 | | 1 | | 1 | | | | 1 | 1 | | | | 2 | 29 1.3 | |
| Pigmentation | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 1.0 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Hyperplasia, Lymphoid | | | | | | | | | | | | | | | | | | | | | | | 1 | | 3 1.7 |

*** END OF REPORT ***

* .. 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