Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:22
First Dose M/F: NA / NA
Lab: BAT

C Number: C88148B
Lock Date: 10/02/2001
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both
PWG Approval Date: NONE
### Experiment Number: 88148-05
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:22  
**First Dose M/F:** NA / NA  
**Lab:** BAT

---

### Blood Measurements

**HSD Rat Male**  
**0 MG/KG**

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### Totals

**Alimentary System**

- **Intestine Small, Duodenum**: + + + + + + + + + + 10
- **Liver**: + + + + + + + + + + 10
- **Bile Duct, Hyperplasia**: 1 1 1 1 5 1.0
- **Hematopoietic Cell Proliferation**: 1 1 2 1.0
- **Infiltration Cellular, Mixed Cell**: 1 1 1 1 1 1 8 1.0
- **Necrosis**: 1 1.0
- **Pancreas**: + + + + + + + + + + 10
- **Stomach, Foreestomach**: + + + + + + + + + + 10
- **Tongue**: + + + + + + + + + + 10

**Cardiovascular System**

- **NONE**

**Endocrine System**

- **Adrenal Cortex**: + + + + + + + + + + 10
- **Hypertrophy**: 2 1 2 1.5
- **Adrenal Medulla**: + + + + + + + + + + 10
- **Pituitary Gland**: + + + + + + + + + + 10
- **Cyst**: 1 1 1 3 1.0
- **Thyroid Gland**: + + + + + + + + + + 10
- **Ultimobranchial Cyst**: 1 1 1 1 5 1.0

**General Body System**

# Table Notes

* ..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:  
1) Minimal  2) Mild  3) Moderate  4) Marked  
X ..Lesion present  
A ..Autolysis precludes evaluation  
I ..Insufficient tissue  
BLANK ..Not examined microscopically

---

Page 2
Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD
Test Compound: 3,3',4,4'-Tetrachloroazobenzene
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Date Report Requested: 10/20/2014
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First Dose M/F: NA / NA
Lab: BAT

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

DAY ON TEST
HSD Rat Male
0 MG/KG

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TOTALS
NONE

Genital System
NONE

Hematopoietic System

Spleen
- Hematopoietic Cell Proliferation
  +                              + + + + + + + + + + 10
Thymus
- Atrophy
  + + + + + + + + + + 9

Integumentary System

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

Musculoskeletal System
NONE

Nervous System
NONE

Respiratory System

Lung
- Alveolar Epith, Metaplasia, Bronchiolar
  + + + + + + + + + + 10
Alveolus, Infiltration Cellular, Histiocyte
  + + + + + + + + + + 10

* ..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:
A ..Autolysis precludes evaluation
1) Minimal
X ..Lesion present
2) Mild
I ..Insufficient tissue
3) Moderate
I ..Insufficient tissue
BLANK ..Not examined microscopically
4) Marked

Page 3
### Experiment Number: 88148-05

**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachlorozobenzene  
**CAS Number:** 14047-09-7

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| *TOTALS | 1 | 1 | 1.0 |

### Interstitial, Infiltration Cellular, Mononuclear

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### Special Senses System

NONE

### Urinary System

NONE

---

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

1) Minimal  
2) Mild  
3) Moderate  
4) Marked

Page 4
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene

**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:22  
**First Dose M/F:** NA / NA  
**Lab:** BAT

### Alimentary System

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<th>Lesion</th>
<th>HSD Rat Male 0.1 MG/KG</th>
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<td>Bile Duct, Hyperplasia</td>
<td>1 1 1 1 1 1 1 1 1 1</td>
<td>6 1.0</td>
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<tr>
<td>Clear Cell Focus</td>
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<tr>
<td>Hematopoietic Cell Proliferation</td>
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<td>2 1.0</td>
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<tr>
<td>Infiltration Cellular, Mixed Cell</td>
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<td>Necrosis</td>
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### Cardiovascular System

NONE

### Endocrine System

NONE

### General Body System

NONE

### Genital System

NONE

### Hematopoietic System

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* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
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### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

#### DAY ON TEST

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*TOTALS*

### Integumentary System

NONE

### Musculoskeletal System

NONE

### Nervous System

NONE

### Respiratory System

**Lung**

| + | + | + | + | + | + | + | + | + | 10 |

Interstitium, Infiltration Cellular, Mononuclear  
1  1  1  3  1.0

### Special Senses System

NONE

### Urinary System

NONE

---

*..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:

1) Minimal  2) Mild

3) Moderate  4) Marked

X..Lesion present

A..Autolysis precludes evaluation

---
### Alimentary System

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### Cardiovascular System

NONE

### Endocrine System

NONE

### General Body System

NONE

### Genital System

NONE

### Hematopoietic System

Spleen                                      +     +     +     +     +     +     +     +     +     +     +     10

---

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M ..Missing tissue
X ..Lesion present
A ..Autolysis precludes evaluation
1-4 ..Lesion qualified as:
1) Minimal  3) Moderate
2) Mild  4) Marked
### Non-Neoplastic Lesions by Individual Animal

**Test Compound:** 3,3’,4,4’-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  
**Experiment Number:** 88148-05

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

#### HSD Rat Male  
**0.3 MG/KG**

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*TOTALS*  

| Hematopoietic Cell Proliferation | 1 | 2 | 2 | 1.5 |
| Thymus                      | + | + | + | + | + | + | + | + | 10 |
| Atrophy                     | 1 | 1 | 1 | 3 | 1.0 |

**Integumentary System**  
**NONE**

**Musculoskeletal System**  
**NONE**

**Nervous System**  
**NONE**

**Respiratory System**

| Lung                          | + | + | + | + | + | + | + | 9 |
| Alveolar Epith, Metaplasia, Bronchiolar | 1 | 1 | 1 | 3 | 1.0 |
| Infiltration Cellular, Histiocyte | 1 | 1 | 1 | 3 | 1.0 |
| Interstitium, Infiltration Cellular, Mononuclear | 1 | 1 | 1 | 3 | 1.0 |

**Cl Special Senses System**  
**NONE**

**Urinary System**  
**NONE**

---

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+ ..Tissue examined microscopically  
M ..Missing tissue  
X ..Lesion present  
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Experiment Number: 88148-05
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Species/Strain: Rat/HSD

Test Compound: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:23
First Dose M/F: NA / NA
Lab: BAT

HSD Rat Male
1.0 MG/KG

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*TOTALS

Alimentary System

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Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

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* ..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:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

### Test Compound: 3,3',4,4'-Tetrachloroazobenzene

**CAS Number:** 14047-09-7

---

**Day on Test** | HSD Rat Male | 1.0 MG/KG |
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0 0 0 0 0 0 0 0 | 9 9 9 9 9 9 9 9 | 3 3 3 3 3 3 3 3 |
9 9 9 9 9 9 9 9 | 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 0 |
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**Special Senses System**  
NONE

**Urinary System**  
NONE

---

*..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:  
1) Minimal  3) Moderate  
2) Mild  4) Marked  
X..Lesion present  
A..Autolysis precludes evaluation  
I..Insufficient tissue  
BLANK..Not examined microscopically

---

Page 10
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  

---

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

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  
**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT  

### Alimentary System

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### Cardiovascular System

**NONE**

### Endocrine System

**NONE**

### General Body System

**NONE**

### Genital System

**NONE**

### Hematopoietic System

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* ..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  
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BLANK ..Not examined microscopically  
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2) Mild  
3) Moderate  
4) Marked
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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

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#### HSD Rat Male

**3.0 MG/KG**

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**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

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**Special Senses System**

NONE

**Urinary System**

NONE

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* ..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:
1) Minimal  
3) Moderate
2) Mild  
4) Marked
X ..Lesion present  
A ..Autolysis precludes evaluation  
I ..Insufficient tissue  
BLANK ..Not examined microscopically
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

---

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

---

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**DAYS ON TEST**

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**Alimentary System**

- **Liver**
  - Bile Duct, Hyperplasia: + + + + + + + + + 10
  - Fatty Change: + + + + + + + + + + + + + + + 10
  - Hematopoietic Cell Proliferation: + + + + + + + + + + + + + + + 10
  - Hepatocyte, Hypertrophy: + + + + + + + + + + + + + + + 10
  - Infiltration Cellular, Mixed Cell: + + + + + + + + + + + + + + + 10
  - Necrosis: + + + + + + + + + + + + + + + 10

- **Cardiovascular System**
  - NONE

- **Endocrine System**
  - NONE

- **General Body System**
  - NONE

- **Genital System**
  - NONE

- **Hematopoietic System**
  - Spleen: + + + + + + + + + + + + + + + 10
  - Hematopoietic Cell Proliferation: 1 1 2 1 1 2 1 1 9 1.3

---

* ..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  
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4) Marked
### Experiment Number: 88148-05
**Test Type:** 90-DAY
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### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014
**Time Report Requested:** 07:51:23
**First Dose M/F:** NA / NA
**Lab:** BAT

#### DAY ON TEST

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| Thymus | + | + | + | + | + | + | + | + | 10 |
| Atrophy | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 7 | 1.0 |

### Integumentary System

NONE

### Musculoskeletal System

NONE

### Nervous System

NONE

### Respiratory System

| Lung | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Alveolar Epith, Metaplasia, Bronchiolar | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 8 | 1.0 |
| Alveolus, Hyperplasia, Focal | 3 | 1 | 3.0 |
| Infiltration Cellular, Histiocyte | 1 | 1 | 2 | 3 | 1.3 |
| Interstitium, Infiltration Cellular, Mononuclear | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 9 | 1.0 |

### Special Senses System

NONE

### Urinary System

NONE

---

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

Page 14
**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

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**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

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

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

Page 15
# P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

---

**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

---

**Days on Test**

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<th>Day</th>
<th>HSD Rat Male 30.0 MG/KG</th>
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**Animal ID**

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**Integumentary System**

- **NONE**

---

**Musculoskeletal System**

- **NONE**

---

**Nervous System**

- **NONE**

---

**Respiratory System**

- **Lung**
  - Alveolar Epith, Metaplasia, Bronchiolar
    - Total: 10, Grade: 1.0
  - Interstitial, Infiltration Cellular, Mononuclear
    - Total: 10, Grade: 1.0

---

**Special Senses System**

- **NONE**

---

**Urinary System**

- **NONE**

---

* ..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:
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  2) Mild  
  3) Moderate  
  4) Marked
### Experiment Number: 88148-05
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

#### Alimentary System

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#### Cardiovascular System

**NONE**

#### Endocrine System

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* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
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M ..Missing tissue  
X ..Lesion present  
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1-4 ..Lesion qualified as:  
1) Minimal  3) Moderate  
2) Mild  4) Marked  
I ..Insufficient tissue  
BLANK ..Not examined microscopically
P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:23
First Dose M/F: NA / NA
Lab: BAT

HSD Rat Male
100.00 MG/KG

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General Body System
NONE

Genital System
NONE

Hematopoietic System

Spleen + + M + + + + + + + + 9
Hematopoietic Cell Proliferation
Thymus + + M M + + + + + + 8
Atrophy 1 1 1 1 1 1 6 1.0

Integumentary System

Mammary Gland + + + + + + + + + + 10
Skin + + + + + + + + + + 10

Musculoskeletal System
NONE

Nervous System
NONE

Respiratory System
NONE

Lung + + + + + + + + + 10
Alveolar Epith, Metaplasia, Bronchiolar 1 1 1 1 1 1 1 1 1 10 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
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1-4 ..Lesion qualified as:
1) Minimal
2) Mild
3) Moderate
4) Marked

Page 18
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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**HSD Rat Male**  
**100.00 MG/KG**

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**Special Senses System**

NONE

**Urinary System**

NONE

***END OF MALE DATA***
### P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  
**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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#### Alimentary System

- **Intestine Small, Duodenum:** 10
- **Liver:** 10
- **Bile Duct, Hyperplasia:** 4 (1.0)
- **Hematopoietic Cell Proliferation:** 2 (1.0)
- **Infiltration Cellular, Mixed Cell:** 10 (1.0)
- **Pancreas:** 10
- **Stomach, Foregut:** 10
- **Diverticulum:** 1
- **Epithelium, Hyperplasia, Focal:** 1 (1.0)
- **Tongue:** 10

#### Cardiovascular System

- **NONE**

#### Endocrine System

- **Adrenal Cortex:** 10
- **Hypertrophy:** 2 (1.5)
- **Adrenal Medulla:** 10
- **Pituitary Gland:** 10
- **Thyroid Gland:** 10
- **Ultimobranchial Cyst:** 2 (1.0)

#### General Body 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:  
1) Minimal  3) Moderate  
2) Mild    4) Marked  
X ..Lesion present  
A ..Autolysis precludes evaluation  
I ..Insufficient tissue  
BLANK ..Not examined microscopically
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:23  
**First Dose M/F:** NA / NA

**Lab:** BAT

---

**DAY ON TEST**

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**HSD Rat Female**

**0 MG/KG**

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**Genital System**

- **Ovary:** + + + + + + + + + + 10
- **Uterus:** + + + + + + + + + + 10
- **Endometrium, Hyperplasia, Cystic:** 1 1.0
- **Vagina:** + + + + + + + + + + 10

**Hematopoietic System**

- **Spleen:** + + + + + + + + + + 10
- **Hematopoietic Cell Proliferation:** 2 2 1 3.7
- **Thymus:** + + + + + + + + + + 10

**Integumentary System**

- **Mammary Gland:** + + + + + + + I + 9
- **Skin:** + + + + + + + + + + 10
- **Subcut Tiss, Inflammation, Suppurative:** 2 1.2

**Musculoskeletal System**

**NONE**

**Nervous System**

**NONE**

**Respiratory System**

**NONE**

---

* ..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:
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Experiment Number: 88148-05
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Route: GAVAGE
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P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:24
First Dose M/F: NA / NA
Lab: BAT

DAY ON TEST

HSD Rat Female
0 MG/KG

ANIMAL ID

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*TOTALS

Lung

Alveolar Epith, Metaplasia, Bronchiolar

Perivascular, Infiltration Cellular,

Polymorphnucl

Nose

Nerve, Degeneration

Squam Epithel, Inflammation

Special Senses System

NONE

Urinary System

NONE

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

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

---

#### EXPERIMENTAL INFORMATION

- **Experiment Number:** 88148-05  
- **Test Type:** 90-DAY  
- **Route:** GAVAGE  
- **Species/Strain:** Rat/HSD

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#### ALIMENTARY SYSTEM

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<td>Infiltration Cellular, Mixed Cell</td>
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<td>Necrosis</td>
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#### CARDIOVASCULAR SYSTEM

NONE

---

#### ENDOCRINE SYSTEM

NONE

---

#### GENERAL BODY SYSTEM

NONE

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#### GENITAL SYSTEM

NONE

---

#### HEMATOPOIETIC SYSTEM

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* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade  
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue  
M ..Missing tissue  
A ..Autolysis precludes evaluation  
1-4 ..Lesion qualified as:  
1) Minimal  2) Mild  3) Moderate  4) Marked  
BLANK ..Not examined microscopically
### Experiment Number: 88148-05
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

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

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

---

#### Date Report Requested:  10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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#### Atrophy

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#### HSD Rat Female

**0.1 MG/KG**

---

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

<table>
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<th>Lung</th>
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**CI**

**Special Senses System**

Eye

| + | 1 |

Inflammation, Chronic Active

| 4 | 1 | 4.0 |

**Urinary System**

NONE

---

* ..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

---

Page 24
**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

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**Alimentary System**

- **Liver**: + + + + + + + + + + 10  
  - Bile Duct, Hyperplasia: 1 1 1 1 1 1 1 1 9 1.0  
  - Hematopoietic Cell Proliferation: 1 1 2 1.0  
  - Infiltration Cellular, Mixed Cell: 1 1 1 1 1 1 1 1 10 1.0

**Cardiovascular System**

- NONE

**Endocrine System**

- Adrenal Cortex: + + 2

**General Body System**

- NONE

**Genital System**

- Uterus: + 1  
  - Atrophy: 4 1 4.0

**Hematopoietic System**

- Spleen: + + + + + + + + + + 10  
  - Hematopoietic Cell Proliferation: 1 2 2 1.5  
  - Pigmentation, Hemosiderin: 1 1 1.0  
  - Thymus: + + + + + + + + + + 10

* ..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:  
1) Minimal 3) Moderate  
2) Mild 4) Marked  
X ..Lesion present  
A ..Autolysis precludes evaluation  
I ..Insufficient tissue  
BLANK ..Not examined microscopically
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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

#### HSD Rat Female

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**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

Lung + + + + + + + + + 10

- Infiltration Cellular, Histiocyte 1 1 1 3 1.0
- Interstitium, Infiltration Cellular, Mononuclear 1 1 2 1.0

**Special Senses System**

NONE

**Urinary System**

NONE
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  

**P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**  
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**CAS Number:** 14047-09-7  

**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT  

### Alimentary System

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### Cardiovascular System

NONE

### Endocrine System

NONE

### General Body System

NONE

### Genital System

NONE

### Hematopoietic System

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* ..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
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked
I ..Insufficient tissue
BLANK ..Not examined microscopically
Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: 3,3',4,4'-Tetrachloroazobenzene
CAS Number: 14047-09-7

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:24
First Dose M/F: NA / NA
Lab: BAT

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*TOTALS

Integumentary System
NONE

Musculoskeletal System
NONE

Nervous System
NONE

Respiratory System

Lung

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<td>Interstitium, Infiltration Cellular, Mononuclear</td>
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CI

Special Senses System
NONE

Urinary System
NONE

* ..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 2) Mild 3) Moderate 4) Marked
## Animal Data: HSD Rat Female 3.0 MG/KG

### Alimentary System

<table>
<thead>
<tr>
<th>Tissue Type</th>
<th>DAY ON TEST</th>
<th>ANIMAL ID</th>
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<td>0 0 0 0 0 0 0 0 0 0</td>
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<td>1 1 1 1 1 1 1 1 1 1</td>
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<td>1 2 1 1 1 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1</td>
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<tr>
<td>Hepatocyte, Hypertrophy</td>
<td>1 1 1 1 1 1 1 1 1 1</td>
<td>1 1 1 1 1 1 1 1 1 1</td>
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<tr>
<td>Infiltration Cellular, Mixed Cell</td>
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### Cardiovascular System

NONE

### Endocrine System

NONE

### General Body System

NONE

### Genital System

NONE

### Hematopoietic System

<table>
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<tr>
<th>Tissue Type</th>
<th>DAY ON TEST</th>
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*TOTALS:*

Liver: 10

Bile Duct, Hyperplasia: 8

Hematopoietic Cell Proliferation: 3

Hepatocyte, Hypertrophy: 1

Infiltration Cellular, Mixed Cell: 8

Spleen: 2

Pigmentation, Hemosiderin: 1

Thymus: 10

---

**Notes:**
- **TOTALS:** 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, 2) Mild, 3) Moderate, 4) Marked.
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  
**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

### HSD Rat Female  
#### 3.0 MG/KG

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**TOTALS**  

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**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

| Lung         | + | + | + | + | + | + | + | 10 |

Infiltration Cellular, Histiocyte  
Interstitium, Infiltration Cellular, Mononuclear  

| CI           | 1 | 2 | 1.0 |

**Special Senses System**

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**Urinary System**

NONE

---

* ..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:  
1) Minimal  
2) Mild  
3) Moderate  
4) Marked  

---

Page 30
**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  
**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7  
**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

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### HSD Rat Female  
**10.0 MG/KG**

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**Alimentary System**

- **Liver**
  - Bile Duct, Hyperplasia  
  - Clear Cell Focus  
  - Hematopoietic Cell Proliferation  
  - Hepatocyte, Hypertrophy  
  - Infiltration Cellular, Mixed Cell

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<th>Total</th>
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<tr>
<td>Bile Duct, Hyperplasia</td>
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<tr>
<td>Hematopoietic Cell Proliferation</td>
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<td>Hepatocyte, Hypertrophy</td>
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<td>Infiltration Cellular, Mixed Cell</td>
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**Cardiovascular System**

NONE

**Endocrine System**

NONE

**General Body System**

NONE

**Genital System**

NONE

**Hematopoietic System**

- **Spleen**
  - Hematopoietic Cell Proliferation  
  - Pigmentation, Hemosiderin

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*..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:  
1) Minimal  
2) Mild  
3) Moderate  
4) Marked  
X..Lesion present  
A..Autolysis precludes evaluation  
I..Insufficient tissue  
BLANK..Not examined microscopically
P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: 3,3',4,4'-Tetrachloroazobenzene

CAS Number: 14047-09-7

Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:24
First Dose M/F: NA / NA
Lab: BAT

HSD Rat Female
10.0 MG/KG

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*TOTALS

HSD Rat Female
10.0 MG/KG

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**Thymus**

+ + + + + + + + + 10

**Atrophy**

1 1 1 1 1 1 1 1 8 1.0

**Cyst**

1 1 1.0

**Integumentary System**

NONE

**Musculoskeletal System**

NONE

**Nervous System**

NONE

**Respiratory System**

NONE

**Lung**

+ + + + + + + + + 9

**Special Senses System**

**Eye**

+ 1

**Inflammation, Chronic Active**

4 1 4.0

**Urinary System**

NONE

*..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 2) Mild
3) Moderate 4) Marked

Page 32
Experiment Number: 88148-05
Test Type: 90-DAY
Route: GAVAGE
Species/Strain: Rat/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: 3,3’,4,4’-Tetrachloroazobenzene
CAS Number: 14047-09-7

Date Report Requested: 10/20/2014
Time Report Requested: 07:51:24
First Dose M/F: NA / NA
Lab: BAT

Day on Test

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*TOTALS

Alimentary System

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Cardiovascular System

NONE

Endocrine System

NONE

Adrenal Cortex                                  | + | 1 |

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

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

Page 33
### Thymus
- Atrophy: 10
- Cyst: 1

### Integumentary System
- NONE

### Musculoskeletal System
- NONE

### Nervous System
- NONE

### Respiratory System
- Lung
  - Alveolar Epith, Metaplasia, Bronchiolar: 3
  - Interstitium, Infiltration Cellular, Mononuclear: 2

### Special Senses System
- NONE

### Urinary System
- NONE

---

* ..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
I ..Insufficient tissue
BLANK ..Not examined microscopically
1) Minimal  3) Moderate
2) Mild     4) Marked

---

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

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

**Experiment Number:** 88148-05  
**Test Type:** 90-DAY  
**Route:** GAVAGE  
**Species/Strain:** Rat/HSD  
**Date Report Requested:** 10/20/2014  
**Time Report Requested:** 07:51:24  
**First Dose M/F:** NA / NA  
**Lab:** BAT

**HSD Rat Female**  
**100.0 MG/KG**

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**Alimentary System**

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<td>Clear Cell Focus</td>
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<td>Hepatocyte, Hypertrophy</td>
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<td>Infiltration Cellular, Mixed Cell</td>
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<td>Tongue</td>
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**Cardiovascular System**

NONE

**Endocrine System**

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<th>Tissue</th>
<th>Lesion Present</th>
<th>Lesion Absent</th>
<th>Total</th>
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<td>Adrenal Cortex</td>
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<td>Hyperplasia</td>
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* ..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:  
1) Minimal 3) Moderate  
X ..Lesion present  
A ..Autolysis precludes evaluation  
I ..Insufficient tissue  
BLANK ..Not examined microscopically  
2) Mild 4) Marked
### Experiment Number: 88148-05
### Test Type: 90-DAY
### Route: GAVAGE
### Species/Strain: Rat/HSD
### Test Compound: 3,3',4,4'-Tetrachloroazobenzene
### CAS Number: 14047-09-7
### Date Report Requested: 10/20/2014
### Time Report Requested: 07:51:24
### First Dose M/F: NA / NA
### Lab: BAT

#### HSD Rat Female

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**ANIMAL ID**

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**TOTALS**

| Adrenal Medulla | + + + + + + + + + + 10 |
| Pituitary Gland | + + + + + + + + + + 10 |
| Thyroid Gland   | + + + + + + + + + + 10 |
| Ultimobranchial Cyst | 2 2 2 2.0 |

**General Body System**

- NONE

**Genital System**

- Ovary: + + + + + + + + + + 10
- Uterus: + + + + + + + + + + 10
- Vagina: + + + + + + + + + + 10

**Hematopoietic System**

- Spleen: + + + + + + + + + + 10
- Fibrosis: 1 1.0
- Pigmentation, Hemosiderin: 1 1 1 1 1 1 1 1 1 1 1.0
- Thymus: + + + + + + + + + + 10
- Atrophy: 1 2 1 1 2 1 7 1.3

**Integumentary System**

- Mammary Gland: + + + + + + + + + + 10
- Skin: + + + + + + + + + + 10

**Musculoskeletal System**

- NONE

---

* ..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
**NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL**

**Test Compound:** 3,3',4,4'-Tetrachloroazobenzene  
**CAS Number:** 14047-09-7

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*TOTALS

**HSD Rat Female**  
**100.0 MG/KG**

**Nervous System**

NONE

**Respiratory System**

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<tr>
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<td>Infiltration Cellular, Mononuclear Cl</td>
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**Cl**

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**Special Senses System**

NONE

**Urinary System**

NONE

**END OF REPORT**