

**Experiment Number:** 56348-01

**Test Type:** 90-DAY

**Species/Strain:** Rat/F 344/N

**P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Compound:** Citral

**CAS Number:** 5392-40-5

**Date Report Requested:** 10/23/2014

**Time Report Requested:** 05:12:14

**First Dose M/F:** NA / NA

**Lab:** BAT

<b>C Number:</b>	C56348A
<b>Lock Date:</b>	01/02/1996
<b>Cage Range:</b>	All
<b>Date Range:</b>	All
<b>Reasons For Removal:</b>	All
<b>Removal Date Range:</b>	All
<b>Treatment Groups:</b>	All
<b>Study Gender:</b>	Both
<b>PWG Approval Date</b>	NONE

Experiment Number: 56348-01

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Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male UNTREAT CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
		0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		3	3	3	3	3	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	0	0	
		0	0	0	0	0	0	0	0	1	0	
		1	2	3	4	5	6	7	8	9	0	

Alimentary System

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

Cardiovascular System

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

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male UNTREAT CONTROL	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	3	3	3	3	3	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	0	0	
	0	0	0	0	0	0	0	0	0	1	
	1	2	3	4	5	6	7	8	9	0	
Pituitary Gland	+	M	+	+	+	+	+	+	+	+	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
<b>General Body System</b>											
NONE											
<b>Genital System</b>											
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
<b>Hematopoietic System</b>											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
<b>Integumentary System</b>											
Mammary Gland	+	+	+	+	+	+	+	+	M	+	9
Skin	+	+	+	+	+	+	+	+	+	+	10
<b>Musculoskeletal System</b>											

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

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P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male UNTREAT CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		3	3	3	3	3	3	3	3	3	3	
		0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	1	0	
		1	2	3	4	5	6	7	8	9	0	
Bone		+	+	+	+	+	+	+	+	+	+	10
<b>Nervous System</b>												
Brain		+	+	+	+	+	+	+	+	+	+	10
<b>Respiratory System</b>												
Lung		+	+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	+	10
<b>Special Senses System</b>												
NONE												
<b>Urinary System</b>												
Kidney		+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	10
<b>SYSTEMIC LESIONS</b>												
Multiple Organ		+	+	+	+	+	+	+	+	+	+	10

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

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Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male VEHICLE CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		3	3	3	3	3	3	3	3	3	3	
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	*TOTALS
	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	2		
	1	2	3	4	5	6	7	8	9	0		

Alimentary System

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

Cardiovascular System

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

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	M	+	M	+	+	+	+	+	M	+	7

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

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Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male VEHICLE CONTROL	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	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	
	1	1	1	1	1	1	1	1	1	2	
	1	2	3	4	5	6	7	8	9	0	
Pituitary Gland	+	+	+	+	+	+	+	M	+	+	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
<b>General Body System</b>											
NONE											
<b>Genital System</b>											
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
<b>Hematopoietic System</b>											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
<b>Integumentary System</b>											
Mammary Gland	+	+	+	+	M	+	M	+	+	+	8
Skin	+	+	+	+	+	+	+	+	+	+	10
<b>Musculoskeletal System</b>											

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

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Date Report Requested: 10/23/2014

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Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male VEHICLE CONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
Bone		+	+	+	+	+	+	+	+	+	+	10
<b>Nervous System</b>												
Brain		+	+	+	+	+	+	+	+	+	+	10
<b>Respiratory System</b>												
Lung		+	+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	+	10
<b>Special Senses System</b>												
NONE												
<b>Urinary System</b>												
Kidney		+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	10
<b>SYSTEMIC LESIONS</b>												
Multiple Organ		+	+	+	+	+	+	+	+	+	+	10

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
3900 PPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	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	0	0
	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Liver + 1

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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

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I ..Insufficient tissue



Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
3900 PPM

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	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	0	0
	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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

+ ..Tissue examined microscopically

X ..Lesion present

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Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
7800 PPM

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

\*TOTALS

Alimentary System

NONE

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

Bone Marrow + + + + + + + + + +

10

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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

+ ..Tissue examined microscopically

X ..Lesion present

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Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
7800 PPM

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

\*TOTALS

Respiratory System

NONE

Special Senses System

NONE

Urinary System

Kidney

+ + + + + + + + + + 10

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + + 10

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

+ ..Tissue examined microscopically

X ..Lesion present

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Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
15600 PPM

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

Alimentary System

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

Cardiovascular System

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

Endocrine System

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

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
15600 PPM

| DAY ON TEST                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ANIMAL ID | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|-----------|---------|
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |         |
|                               | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |           |         |
|                               | 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 |           |         |
|                               | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |           |         |
|                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |           |         |
| Pituitary Gland               | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Thyroid Gland                 | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>General Body System</b>    |   |   |   |   |   |   |   |   |   |   |           |         |
| NONE                          |   |   |   |   |   |   |   |   |   |   |           |         |
| <b>Genital System</b>         |   |   |   |   |   |   |   |   |   |   |           |         |
| Epididymis                    | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Preputial Gland               | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Prostate                      | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Seminal Vesicle               | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Testes                        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Hematopoietic System</b>   |   |   |   |   |   |   |   |   |   |   |           |         |
| Bone Marrow                   | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Lymph Node, Mandibular        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Lymph Node, Mesenteric        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Spleen                        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Thymus                        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Integumentary System</b>   |   |   |   |   |   |   |   |   |   |   |           |         |
| Mammary Gland                 | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Skin                          | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |           |         |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
15600 PPM

| DAY ON TEST                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---------|
|                              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
| ANIMAL ID                    | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                              | 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 |         |
|                              | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 5 |         |
|                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Bone                         | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Nervous System</b>        |   |   |   |   |   |   |   |   |   |   |         |
| Brain                        | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Respiratory System</b>    |   |   |   |   |   |   |   |   |   |   |         |
| Lung                         | + | + | + | + | + | + | + | + | + | + | 10      |
| Nose                         | + | + | + | + | + | + | + | + | + | + | 10      |
| Trachea                      | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Special Senses System</b> |   |   |   |   |   |   |   |   |   |   |         |
| NONE                         |   |   |   |   |   |   |   |   |   |   |         |
| <b>Urinary System</b>        |   |   |   |   |   |   |   |   |   |   |         |
| Kidney                       | + | + | + | + | + | + | + | + | + | + | 10      |
| Urinary Bladder              | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>SYSTEMIC LESIONS</b>      |   |   |   |   |   |   |   |   |   |   |         |
| Multiple Organ               | + | + | + | + | + | + | + | + | + | + | 10      |

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
31300 PPM

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

Alimentary System

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

Cardiovascular System

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

Endocrine System

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

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:14

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
31300 PPM

| DAY ON TEST                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|-----------|---|---|---|---|---|---|---|---|---|----|---------|
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0  |         |
|                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |    |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5         | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 |    |         |
|                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |           |   |   |   |   |   |   |   |   |   |    |         |
| Pituitary Gland               | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Thyroid Gland                 | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| <b>General Body System</b>    |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |
| NONE                          |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |
| <b>Genital System</b>         |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |
| Epididymis                    | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Preputial Gland               | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Prostate                      | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Seminal Vesicle               | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Testes                        | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| <b>Hematopoietic System</b>   |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |
| Bone Marrow                   | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Lymph Node, Mandibular        | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Lymph Node, Mesenteric        | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Spleen                        | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| Thymus                        | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| <b>Integumentary System</b>   |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |
| Mammary Gland                 | + | + | + | + | M | M | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 8  |         |
| Skin                          | + | + | + | + | + | + | + | + | + | + |           |   |   |   |   |   |   |   |   |   | 10 |         |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |           |   |   |   |   |   |   |   |   |   |    |         |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue



Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male  
31300 PPM

| DAY ON TEST                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ANIMAL ID | *TOTALS |
|------------------------------|---|---|---|---|---|---|---|---|---|---|-----------|---------|
|                              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |           |         |
|                              | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |           |         |
|                              | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 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 | 6 |           |         |
|                              | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |           |         |
| Bone                         | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Nervous System</b>        |   |   |   |   |   |   |   |   |   |   |           |         |
| Brain                        | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Respiratory System</b>    |   |   |   |   |   |   |   |   |   |   |           |         |
| Lung                         | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Nose                         | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Trachea                      | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>Special Senses System</b> |   |   |   |   |   |   |   |   |   |   |           |         |
| NONE                         |   |   |   |   |   |   |   |   |   |   |           |         |
| <b>Urinary System</b>        |   |   |   |   |   |   |   |   |   |   |           |         |
| Kidney                       | + | + | + | + | + | + | + | + | + | + |           | 10      |
| Urinary Bladder              | + | + | + | + | + | + | + | + | + | + |           | 10      |
| <b>SYSTEMIC LESIONS</b>      |   |   |   |   |   |   |   |   |   |   |           |         |
| Multiple Organ               | + | + | + | + | + | + | + | + | + | + |           | 10      |

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

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

|                                       |             |   |   |   |   |   |   |   |   |   |   |         |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
| F 344/N Rat Female<br>UNTREAT CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|                                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 3 | 3 | 3 | 3 | 3 | 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 | 0 | 0 |         |
|                                       |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |

Alimentary System

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

Cardiovascular System

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

Endocrine System

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

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

| F 344/N Rat Female<br>UNTREAT CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
|                                       | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 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 |         |
|                                       |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Pituitary Gland                       |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                         |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>            |             |   |   |   |   |   |   |   |   |   |   |         |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Uterus                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>           |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                           |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mesenteric                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>           |             |   |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                         |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Skin                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b>         |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

| F 344/N Rat Female<br>UNTREAT CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
|                                       | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 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 |         |
|                                       |             | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| <b>Nervous System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Brain                                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Respiratory System</b>             |             |   |   |   |   |   |   |   |   |   |   |         |
| Lung                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Nose                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Trachea                               |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Special Senses System</b>          |             |   |   |   |   |   |   |   |   |   |   |         |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |         |
| <b>Urinary System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Kidney                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Urinary Bladder                       |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>SYSTEMIC LESIONS</b>               |             |   |   |   |   |   |   |   |   |   |   |         |
| Multiple Organ                        |             | + | + | + | + | + | + | + | + | + | + | 10      |

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

|                                       |             |   |   |   |   |   |   |   |   |   |   |         |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
| F 344/N Rat Female<br>VEHICLE CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|                                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 3 | 3 | 3 | 3 | 3 | 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 | 0 | 0 |         |
|                                       |             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |

Alimentary System

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

Cardiovascular System

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

Endocrine System

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | + | + | + | + | + | M | + | + | + | M | 8  |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

| F 344/N Rat Female<br>VEHICLE CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
|                                       | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 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 |         |
|                                       |             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Pituitary Gland                       |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                         |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>            |             |   |   |   |   |   |   |   |   |   |   |         |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                        |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Uterus                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>           |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                           |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mesenteric                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>           |             |   |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                         |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Skin                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b>         |             |   |   |   |   |   |   |   |   |   |   |         |
| Bone                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |

\* ..Total animals with tissue examined microscopically; Total animals with tumor  
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue

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

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

| F 344/N Rat Female<br>VEHICLE CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|---------------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---------|
|                                       | ANIMAL ID   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                                       |             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                                       |             | 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 |         |
|                                       |             | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 8 |         |
|                                       |             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| <b>Nervous System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Brain                                 |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Respiratory System</b>             |             |   |   |   |   |   |   |   |   |   |   |         |
| Lung                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Nose                                  |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Trachea                               |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Special Senses System</b>          |             |   |   |   |   |   |   |   |   |   |   |         |
| NONE                                  |             |   |   |   |   |   |   |   |   |   |   |         |
| <b>Urinary System</b>                 |             |   |   |   |   |   |   |   |   |   |   |         |
| Kidney                                |             | + | + | + | + | + | + | + | + | + | + | 10      |
| Urinary Bladder                       |             | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>SYSTEMIC LESIONS</b>               |             |   |   |   |   |   |   |   |   |   |   |         |
| Multiple Organ                        |             | + | + | + | + | + | + | + | + | + | + | 10      |

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
3900 PPM

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

Alimentary System

Liver + 1

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue



Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
3900 PPM

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

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ 1

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
7800 PPM

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

Alimentary System

|                        |  |  |  |  |  |  |  |  |  |  |   |   |
|------------------------|--|--|--|--|--|--|--|--|--|--|---|---|
| Intestine Large, Colon |  |  |  |  |  |  |  |  |  |  | + | 1 |
| Leiomyosarcoma         |  |  |  |  |  |  |  |  |  |  | X | 1 |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

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

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
7800 PPM

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

\*TOTALS

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + + + + + +

10

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
15600 PPM

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

Alimentary System

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

Cardiovascular System

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

Endocrine System

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

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
15600 PPM

| DAY ON TEST                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | *TOTALS |
|-------------------------------|---|---|---|---|---|---|---|---|---|---|---------|
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
| ANIMAL ID                     | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
|                               | 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 |         |
|                               | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |         |
|                               | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |         |
|                               | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Pituitary Gland               | + | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                 | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>    |   |   |   |   |   |   |   |   |   |   |         |
| NONE                          |   |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>         |   |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                | + | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                         | + | + | + | + | + | + | + | + | + | + | 10      |
| Uterus                        | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>   |   |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                   | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular        | + | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mesenteric        | + | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                        | + | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                        | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>   |   |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                 | + | + | + | + | + | + | + | + | + | + | 10      |
| Skin                          | + | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b> |   |   |   |   |   |   |   |   |   |   |         |
| Bone                          | + | + | + | + | + | + | + | + | + | + | 10      |

\* ..Total animals with tissue examined microscopically; Total animals with tumor  
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue

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

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
15600 PPM

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

**Nervous System**

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

**Respiratory System**

|         |   |   |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|---|---|----|
| Lung    | + | + | + | + | + | + | + | + | + | + | 10 |
| Nose    | + | + | + | + | + | + | + | + | + | + | 10 |
| Trachea | + | + | + | + | + | + | + | + | + | + | 10 |

**Special Senses System**

NONE

**Urinary System**

|                 |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|----|
| Kidney          | + | + | + | + | + | + | + | + | + | + | 10 |
| Urinary Bladder | + | + | + | + | + | + | + | + | + | + | 10 |

**SYSTEMIC LESIONS**

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

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
31300 PPM

| 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 |
|             | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID   | 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 | 2 |
|             | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |

\*TOTALS

**Alimentary System**

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

**Cardiovascular System**

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

**Endocrine System**

|                    |   |   |   |   |   |   |   |   |   |   |    |
|--------------------|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex     | + | + | + | + | + | + | + | + | + | + | 10 |
| Adrenal Medulla    | + | + | + | + | + | + | + | + | + | + | 10 |
| Islets, Pancreatic | + | + | + | + | + | + | + | + | + | + | 10 |
| Parathyroid Gland  | M | + | + | + | + | + | + | + | M | + | 8  |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue

Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
31300 PPM

|                               | 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 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |         |
|                               | 9           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |         |
| ANIMAL ID                     | 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 | 2 |         |
|                               | 1           | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |         |
| Pituitary Gland               | +           | + | + | + | + | + | + | + | + | + | 10      |
| Thyroid Gland                 | +           | + | + | + | + | + | + | + | + | + | 10      |
| <b>General Body System</b>    |             |   |   |   |   |   |   |   |   |   |         |
| NONE                          |             |   |   |   |   |   |   |   |   |   |         |
| <b>Genital System</b>         |             |   |   |   |   |   |   |   |   |   |         |
| Clitoral Gland                | +           | + | + | + | + | + | + | + | + | + | 10      |
| Ovary                         | +           | + | + | + | + | + | + | + | + | + | 10      |
| Uterus                        | +           | + | + | + | + | + | + | + | + | + | 10      |
| <b>Hematopoietic System</b>   |             |   |   |   |   |   |   |   |   |   |         |
| Bone Marrow                   | +           | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mandibular        | +           | + | + | + | + | + | + | + | + | + | 10      |
| Lymph Node, Mesenteric        | +           | + | + | + | + | + | + | + | + | + | 10      |
| Spleen                        | +           | + | + | + | + | + | + | + | + | + | 10      |
| Thymus                        | +           | + | + | + | + | + | + | + | + | + | 10      |
| <b>Integumentary System</b>   |             |   |   |   |   |   |   |   |   |   |         |
| Mammary Gland                 | +           | + | + | + | + | + | M | M | + | + | 8       |
| Skin                          | +           | + | + | + | + | + | + | + | + | + | 10      |
| <b>Musculoskeletal System</b> |             |   |   |   |   |   |   |   |   |   |         |
| Bone                          | +           | + | + | + | + | + | + | + | + | + | 10      |

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

M ..Missing tissue

+ ..Tissue examined microscopically

A ..Autolysis precludes evaluation

X ..Lesion present

BLANK ..Not examined microscopically

I ..Insufficient tissue



Experiment Number: 56348-01

P07: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 10/23/2014

Test Type: 90-DAY

Test Compound: Citral

Time Report Requested: 05:12:15

Species/Strain: Rat/F 344/N

CAS Number: 5392-40-5

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female  
31300 PPM

| 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 |
|             | 9       | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| ANIMAL ID   | 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 | 2 |
|             | 1       | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 0 |
|             | *TOTALS |   |   |   |   |   |   |   |   |   |

**Nervous System**

Brain + + + + + + + + + + 10

**Respiratory System**

Lung + + + + + + + + + + 10

Nose + + + + + + + + + + 10

Trachea + + + + + + + + + + 10

**Special Senses System**

NONE

**Urinary System**

Kidney + + + + + + + + + + 10

Urinary Bladder + + + + + + + + + + 10

**SYSTEMIC LESIONS**

Multiple Organ + + + + + + + + + + 10

\*\* END OF REPORT \*\*

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

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically