

**Experiment Number:** 03038 - 03

**Test Type:** CHRONIC

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

**Lab:** BAT

Final Version 2

**NTP Study Number:** C03038

**Lock Date:** 05/25/2016

**Cage Range:** ALL

**Date Range:** ALL

**Reasons For Removal:** ALL

**Removal Date Range:** ALL

**Treatment Groups:** Include ALL

**Study Gender:** Both

**TDMSE Version:** 3.0.2.3\_002

**PWG Approval Date:** NONE

Note: Animals arranged according to days on test.

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Lab BAT

## ALIMENTARY SYSTEM

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

+ .. Tissue examined microscopically

X - Lesion present

#### I. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK - Not examined microscopically



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DAY ON TEST		HARLAN SPRAGUE DAWLEY RATS MALE																									
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0mg/L male	ANIMAL ID	1	1	4	4	4	4	4	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	6	6	
		8	8	4	5	5	8	9	0	5	6	7	7	7	8	9	0	1	4	5	9	2	3	3	4	5	
		7	9	5	0	6	2	3	1	1	8	1	4	5	8	3	0	0	4	5	9	2	6	3	4	5	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		1	4	0	2	2	4	2	3	3	3	3	3	4	5	4	2	1	3	0	0	2	3	3	0	2	1
		3	3	2	5	4	8	7	1	4	8	0	6	0	2	0	1	3	8	1	8	9	2	6	2	2	

males  
(cont...)

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

Epididymis

+

Preputial Gland

+

Prostate

+

Seminal Vesicle  
Hemangiosarcoma

+

Testis  
Interstitial Cell, Adenoma

+

X

## HEMATOPOIETIC SYSTEM

Bone Marrow

+

Lymph Node

+

+

Lymph Node, Mandibular

+

Lymph Node, Mesenteric

+

Spleen

+

Thymus

+

M

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

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CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

DAY ON TEST																									males (cont...)	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1	1	4	4	4	4	4	4	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	
8	8	4	5	5	8	9	0	5	6	7	7	7	8	9	0	1	4	5	9	2	3	3	4	4	5	
7	9	5	0	6	2	3	1	1	8	1	4	5	8	3	0	0	4	5	9	2	3	6	9	8	2	
<b>HARLAN SPRAGUE DAWLEY RATS MALE</b>	<b>ANIMAL ID</b>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
<b>0mg/L male</b>		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		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	4	0	2	2	4	2	3	3	3	3	4	5	4	2	1	3	0	0	2	3	3	0	2	1
		3	3	2	5	4	8	7	1	4	8	0	6	0	2	0	1	3	8	1	8	9	2	6	2	2

**INTEGUMENTARY SYSTEM**

Mammary Gland

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

Skin

+ +

Keratoacanthoma

Subcutaneous Tissue, Fibroma

**MUSCULOSKELETAL SYSTEM**

Bone

+ +

**NERVOUS SYSTEM**

Brain

+ X

Glioma Malignant

Granular Cell Tumor Malignant

Peripheral Nerve

+

Spinal Cord

+

**RESPIRATORY SYSTEM**

Lung

+ +

Alveolar/Bronchiolar Adenoma

Alveolar/Bronchiolar Carcinoma

Nose

+ +

Trachea

+ +

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

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**Date Report Requested:** 06/26/2019

**Test Type:** CHRONIC

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

Lab BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>0mg/L male | DAY ON TEST | ANIMAL ID |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |        |
|--|-------------|-----------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|
|  |             |           | 0<br>6<br>5<br>2 | 0<br>6<br>5<br>2 | 0<br>0<br>0<br>0 |        |
|  |             |           | 0<br>6<br>5<br>2 | 0<br>6<br>5<br>2 | 0<br>0<br>0<br>0 |        |
|  |             |           | 1<br>9           | 5<br>1           | 6<br>6           | 6<br>4           | 5<br>9           | 0<br>0           | 3<br>0           | 0<br>1           | 9<br>9           | 5<br>0           | 9<br>0           | 5<br>0           | 9<br>5           | 7<br>9           | 8<br>4           | 4<br>4           | 5<br>7           | 4<br>4           | 3<br>7           | 6<br>7           | 7<br>7 |

# ALIMENTARY SYSTEM

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I. Insufficient tissue

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First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

|                                    | DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS<br>MALE |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |    |
|------------------------------------|-------------|------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----|
|                                    |             | 0<br>6<br>5<br>2                   | 0<br>6<br>5<br>2      | 0<br>6<br>5<br>4      | 0<br>6<br>6<br>9      | 0<br>6<br>6<br>1      | 0<br>6<br>6<br>6      | 0<br>6<br>7<br>3      | 0<br>6<br>7<br>7      | 0<br>6<br>8<br>2      | 0<br>6<br>8<br>5      | 0<br>6<br>9<br>0      | 0<br>7<br>2<br>2      | 0<br>7<br>2<br>2      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>9      | 0<br>7<br>2<br>9      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      |          |    |
| 0mg/L male                         | ANIMAL ID   | 0<br>0<br>0<br>2<br>1              | 0<br>0<br>0<br>3<br>5 | 0<br>0<br>0<br>4<br>1 | 0<br>0<br>0<br>4<br>6 | 0<br>0<br>0<br>5<br>4 | 0<br>0<br>0<br>5<br>9 | 0<br>0<br>0<br>0<br>0 |          |    |
|                                    |             | 1<br>9                             | 5                     | 1                     | 6                     | 6                     | 4                     | 5                     | 9                     | 0                     | 3                     | 0                     | 9                     | 5                     | 9                     | 7                     | 8                     | 4                     | 5                     | 7                     | 4                     | 3        | 6  |
| Stomach, Glandular                 |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| <b>CARDIOVASCULAR SYSTEM</b>       |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    |
| Blood Vessel                       |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| Heart                              |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| <b>ENDOCRINE SYSTEM</b>            |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    |
| Adrenal Cortex                     |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| Adrenal Medulla                    |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| Ganglioneuroma                     |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Pheochromocytoma Benign            |             | X                                  | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 10 |
| Pheochromocytoma Malignant         |             |                                    |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 2  |
| Islets, Pancreatic                 |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| Adenoma                            |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Adenoma, Multiple                  |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Carcinoma                          |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Parathyroid Gland                  |             | +                                  | +                     | +                     | +                     | M                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 43 |
| Pituitary Gland                    |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| Pars Distalis, Adenoma             |             | X                                  | X                     | X                     |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 8  |
| Pars Distalis, Carcinoma           |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Pars Intermedia, Adenoma           |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Pars Nervosa, Schwannoma Malignant |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Thyroid Gland                      |             | +                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |
| C-cell, Adenoma                    |             |                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 4  |

\* .. 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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I .. Insufficient tissue

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**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

## **HEMATOPOIETIC SYSTEM**

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| DAY ON TEST   |                  |                  |                       |                       |                       |                       |                       |                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|---|------------------|------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|   | 0<br>6<br>5<br>2 | 0<br>6<br>5<br>2 | 0<br>6<br>5<br>4      | 0<br>6<br>5<br>9      | 0<br>6<br>6<br>1      | 0<br>6<br>6<br>6      | 0<br>7<br>7           | 0<br>7<br>7           | 0<br>8<br>2      | 0<br>8<br>5      | 0<br>6<br>9      | 0<br>6<br>9      | 0<br>1           | 0<br>2           |
| <b>HARLAN SPRAGUE DAWLEY RATS<br/>MALE<br/>0mg/L male</b> |                  |                  |                       |                       |                       |                       |                       |                       |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |
|   |                  | ANIMAL ID        | 0<br>0<br>0<br>2<br>1 | 0<br>0<br>0<br>2<br>9 | 0<br>0<br>0<br>3<br>5 | 0<br>0<br>0<br>4<br>1 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>5 | 0<br>0<br>0<br>9 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>4 | 0<br>0<br>0<br>4 | 0<br>0<br>0<br>3 |
| *   | TOTALS           |                  | 0<br>0<br>0<br>2<br>1 | 0<br>0<br>0<br>3<br>5 | 0<br>0<br>0<br>4<br>1 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>5      | 0<br>0<br>0<br>9 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>0 | 0<br>0<br>0<br>1 | 0<br>0<br>0<br>4 | 0<br>0<br>0<br>4 | 0<br>0<br>0<br>3 | 0<br>0<br>0<br>6 |

## **INTEGUMENTARY SYSTEM**

## MUSCULOSKELETAL SYSTEM

## **NERVOUS SYSTEM**

## **RESPIRATORY SYSTEM**

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| DAY ON TEST                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|                                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| HARLAN SPRAGUE DAWLEY RATS<br>MALE | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 0mg/L male                         | 5 | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| ANIMAL ID                          | 2 | 2 | 4 | 9 | 1 | 6 | 3 | 7 | 2 | 5 | 0 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
|                                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                    | 0 | 0 | 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 | 3 | 4 | 2 | 1 | 0 | 1 | 4 | 4 | 0 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 4 | 4 | 0 | 1 | 2 | 3 | 3 | 4 |
|                                    | 1 | 9 | 5 | 1 | 6 | 6 | 4 | 5 | 9 | 0 | 3 | 0 | 9 | 5 | 9 | 7 | 8 | 4 | 5 | 7 | 4 | 3 | 6 | 7 | 7 | 7 |

\* TOTALS

**SPECIAL SENSES SYSTEM**

|                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Eye                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Harderian Gland                  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Zymbal's Gland<br>Adenocarcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 1 |

**URINARY SYSTEM**

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Kidney<br>Renal Tubule, Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Urinary Bladder                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**SYSTEMIC LESIONS**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Multiple Organ<br>Leukemia Mononuclear<br>Lymphoma Malignant | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  | 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: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Date Report Requested:** 06/26/2019

**Test Type:** CHRONIC

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## ALIMENTARY SYSTEM

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

+ .. Tissue examined microscopically

X - Lesion present

#### I. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

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 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
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 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>250mg/L male | DAY ON TEST<br>ANIMAL ID | males<br>(cont...) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--------------------------|--------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |                          | 0                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 1                        | 3                  | 3 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 |
|  | 5                        | 4                  | 5 | 2 | 6 | 5 | 5 | 7 | 6 | 6 | 3 | 5 | 0 | 1 | 6 | 6 | 7 | 6 | 7 | 8 | 8 | 5 | 7 | 9 | 2 |
|  | 6                        | 8                  | 8 | 8 | 0 | 0 | 7 | 6 | 6 | 3 | 5 | 0 | 0 | 1 | 6 | 6 | 7 | 6 | 7 | 8 | 8 | 5 | 7 | 9 | 9 |
|  | 0                        | 0                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0                        | 0                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 9                        | 9                  | 5 | 5 | 7 | 8 | 9 | 7 | 9 | 5 | 6 | 6 | 6 | 5 | 8 | 8 | 5 | 7 | 7 | 5 | 9 | 7 | 6 | 7 | 6 |
|  | 6                        | 2                  | 5 | 8 | 3 | 1 | 3 | 2 | 1 | 7 | 7 | 0 | 9 | 1 | 3 | 4 | 2 | 7 | 1 | 9 | 5 | 5 | 1 | 9 | 3 |

C-cell, Carcinoma

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

Epididymis

+

Preputial Gland

+

Prostate

+

Schwannoma Malignant, Metastatic, Spinal Cord

X

Seminal Vesicle

+

Testis

+

Interstitial Cell, Adenoma

## HEMATOPOIETIC SYSTEM

Bone Marrow

+

Carcinosarcoma, Metastatic, Zymbal's Gland

X

Lymph Node

+

+

+

Lymph Node, Mandibular

+

Lymph Node, Mesenteric

+

Spleen

+

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

M .. Missing tissue

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**Experiment Number:** 03038 - 03

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**Test Type: CHRONIC**

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## Sodium Tungstate Dihydrate

**CAS Number:** 10213-10-2

**Date Report Requested:** 06/26/2019

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**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## Thymus Thymoma Malignant

## **INTEGUMENTARY SYSTEM**

## Mammary Gland Fibroadenoma

- Skin
  - Squamous Cell Papilloma
  - Subcutaneous Tissue, Fibroma
  - Subcutaneous Tissue, Lipoma
  - Subcutaneous Tissue, Sarcoma
  - Subcutaneous Tissue, Schwannoma
  - Malignant, Metastatic, Spinal Cord

## MUSCULOSKELETAL SYSTEM

Bone

## Skeletal Muscle

## **NERVOUS SYSTEM**

Brain

#### Cranial Nerve, Schwannoma Malignant

## Peripheral Nerve

## Spinal Cord Schwannoma Malignant

+

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I., Insufficient tissue

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| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>250mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | * TOTALS |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----------|
|  |                       | 0<br>7<br>2<br>9      |                       |          |          |
| ANIMAL ID  | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>6<br>5 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>5<br>5 | 0<br>0<br>0<br>5<br>5 | 0<br>0<br>0<br>6<br>6 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | 0<br>0<br>0<br>9<br>9 | * TOTALS |          |
| Esophagus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Large, Cecum                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Large, Colon                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Large, Rectum                            | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Small, Duodenum                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Small, Ileum                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Small, Jejunum                           | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Liver  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Carcinosarcoma, Metastatic, Zymbal'S Gland         |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |          |
| Mesentery  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 5        |          |
| Paraganglioma                                      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |          |
| Pancreas   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Acinus, Adenocarcinoma                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 3        |          |
| Acinus, Adenoma                                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 5        |          |
| Acinus, Adenoma, Multiple                          |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 15       |          |
| Salivary Glands                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Stomach, Forestomach                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Stomach, Glandular                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |

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

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|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|----------|
|  |                       | 0<br>7<br>2<br>9      |                       |                       |  |          |
| ANIMAL ID  | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>6<br>5 | 0<br>0<br>0<br>6<br>8 | 0<br>0<br>0<br>7<br>4 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>8<br>0 | 0<br>0<br>0<br>8<br>2 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>8<br>6 | 0<br>0<br>0<br>8<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>5<br>4 | 0<br>0<br>0<br>5<br>6 | 0<br>0<br>0<br>5<br>7 | 0<br>0<br>0<br>7<br>2 | 0<br>0<br>0<br>7<br>6 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>8<br>0 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>9<br>0 | 0<br>0<br>0<br>9<br>4 | 0<br>0<br>0<br>9<br>9 |  |          |
| Tongue   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  | 1        |

### CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

### ENDOCRINE SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Adrenal Cortex                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adrenal Medulla                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | 50 |
| Pheochromocytoma Benign                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8  |
| Pheochromocytoma Malignant                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Islets, Pancreatic                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Adenoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Adenoma, Multiple                                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Carcinoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Parathyroid Gland                                  | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | 45 |
| Adenoma  | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pituitary Gland                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Schwannoma Malignant, Metastatic, Peripheral Nerve |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Pars Distalis, Adenoma                             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5  |
| Pars Distalis, Carcinoma                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2  |
| Thyroid Gland                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| C-cell, Adenoma                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |

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

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| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>250mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|  |                       | 0<br>7<br>2<br>9      |                       |                       |          |
| ANIMAL ID  | 0<br>0<br>0<br>6<br>4 | 0<br>0<br>0<br>6<br>5 | 0<br>0<br>0<br>6<br>8 | 0<br>0<br>0<br>7<br>4 | 0<br>0<br>0<br>7<br>8 | 0<br>0<br>0<br>8<br>0 | 0<br>0<br>0<br>8<br>2 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>8<br>6 | 0<br>0<br>0<br>8<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>8<br>5 | 0<br>0<br>0<br>5<br>4 | 0<br>0<br>0<br>6<br>3 | 0<br>0<br>0<br>6<br>2 | 0<br>0<br>0<br>7<br>0 | 0<br>0<br>0<br>7<br>6 | 0<br>0<br>0<br>7<br>7 | 0<br>0<br>0<br>8<br>8 | 0<br>0<br>0<br>8<br>9 | 0<br>0<br>0<br>9<br>0 | 0<br>0<br>0<br>9<br>4 | 0<br>0<br>0<br>9<br>9 |          |
| C-cell, Carcinoma                                  | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Preputial Gland                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Prostate                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Schwannoma Malignant, Metastatic, Spinal Cord |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Seminal Vesicle                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testis<br>Interstitial Cell, Adenoma          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 1  |

## HEMATOPOIETIC SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow<br>Carcinosarcoma, Metastatic, Zymbal's Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Lymph Node, Mandibular                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mesenteric                                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

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+ .. Tissue examined microscopically

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 Lab: BAT

| 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 |
| HARLAN SPRAGUE DAWLEY RATS | 7        | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| MALE                       | 2        | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 250mg/L male               | 9        | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 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 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 0        | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 0        | 0 | 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 | 7 | 7 | 8 | 8 | 8 | 8 | 9 | 9 | 5 | 5 | 5 | 5 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 0 |
|                            | 4        | 5 | 6 | 8 | 4 | 8 | 0 | 2 | 5 | 6 | 7 | 8 | 3 | 4 | 6 | 2 | 0 | 6 | 7 | 8 | 9 | 0 | 4 | 9 | 9 | 0 |
|                            | * TOTALS |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## RESPIRATORY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Lung                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Alveolar/Bronchiolar Adenoma               | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Carcinosarcoma, Metastatic, Zymbal'S Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |

Nose

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

## SPECIAL SENSES SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Eye                                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Schwannoma Malignant, Metastatic, Brain |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |

## URINARY SYSTEM

|                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|-----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Kidney                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Renal Tubule, Adenoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |

## SYSTEMIC LESIONS

|                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Multiple Organ | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

Experiment Number: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Date Report Requested:** 06/26/2019

**Test Type:** CHRONIC

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

**CAS Number:** 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

**Species/Strain:** RATS/HSD

## Lab: BAT

## ALIMENTARY SYSTEM

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| 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 |
| HARLAN SPRAGUE DAWLEY RATS | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 |
| MALE                       | 1 | 7 | 7 | 9 | 1 | 7 | 5 | 7 | 8 | 3 | 5 | 1 | 7 | 2 | 2 | 4 | 4 | 6 | 6 | 7 | 8 | 8 | 9 | 8 | 2 |
| 500mg/L male               | 3 | 3 | 7 | 1 | 7 | 5 | 8 | 3 | 5 | 1 | 7 | 2 | 2 | 4 | 6 | 8 | 6 | 6 | 7 | 8 | 8 | 9 | 8 | 3 | 7 |
| ANIMAL ID                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                            | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                            | 3 | 2 | 0 | 4 | 4 | 1 | 1 | 2 | 3 | 4 | 3 | 1 | 1 | 4 | 3 | 2 | 2 | 0 | 2 | 4 | 0 | 1 | 4 | 1 | 3 |
|                            | 4 | 8 | 7 | 6 | 1 | 1 | 2 | 6 | 2 | 0 | 8 | 8 | 9 | 2 | 3 | 1 | 4 | 3 | 9 | 9 | 1 | 6 | 7 | 0 | 5 |

males  
(cont...)

## CARDIOVASCULAR SYSTEM

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

## ENDOCRINE SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Adrenal Cortex                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adrenal Medulla                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pheochromocytoma Benign            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pheochromocytoma Malignant         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Bilateral, Pheochromocytoma Benign |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Islets, Pancreatic                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Adenoma                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Adenoma, Multiple                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Carcinoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Parathyroid Gland                  | + | + | + | + | + | + | M | + | + | + | + | + | M | M | + | + | + | + | + | + | + | + | + | + | + |
| Pituitary Gland                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Pars Distalis, Adenoma             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pars Distalis, Carcinoma           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pars Intermedia, Carcinoma         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Thyroid Gland                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| C-cell, Adenoma                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| C-cell, Carcinoma                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

## GENERAL BODY SYSTEM

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

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

Experiment Number: 03038 - 03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: RATS/HSD

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 06/26/2019

Time Report Requested: 10:13:17

First Dose M/F: 01/30/12 / 01/31/12

Lab: BAT

| 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 |
| HARLAN SPRAGUE DAWLEY RATS<br>MALE | 3 | 3 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 500mg/L male                       | 1 | 7 | 7 | 9 | 1 | 7 | 5 | 7 | 0 | 0 | 1 | 2 | 3 | 4 | 4 | 6 | 6 | 7 | 8 | 8 | 9 | 9 | 1 | 1 |
| ANIMAL ID                          | 3 | 3 | 7 | 1 | 7 | 5 | 8 | 3 | 5 | 1 | 7 | 2 | 2 | 2 | 6 | 8 | 6 | 3 | 2 | 8 | 4 | 8 | 3 | 7 |
|                                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                    | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|                                    | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|                                    | 3 | 2 | 0 | 4 | 4 | 1 | 1 | 2 | 3 | 4 | 3 | 1 | 1 | 4 | 3 | 2 | 2 | 0 | 2 | 4 | 0 | 1 | 4 | 1 |
|                                    | 4 | 8 | 7 | 6 | 1 | 1 | 2 | 6 | 2 | 0 | 8 | 8 | 9 | 2 | 3 | 1 | 4 | 3 | 9 | 9 | 1 | 6 | 7 | 0 |

males  
(cont...)

NONE

## GENITAL SYSTEM

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Penis           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Prostate        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Testis          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

## HEMATOPOIETIC SYSTEM

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone Marrow                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Lymph Node                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lymph Node, Mandibular               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Lymph Node, Mesenteric               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Spleen                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Thymus                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |   |

\* .. 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

Time Report Requested: 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## Harderian Gland

## Zymbal's Gland Adenoma

-  
X

## **URINARY SYSTEM**

Kidney  
Nephroblastoma

+

## Urinary Bladder

## **SYSTEMIC LESIONS**

Multiple Organ  
Leukemia Mononuclear  
Lymphoma Malignant

\* .. Total animals with tissue examined microscopically: Total animals with tumo

+ .. Tissue examined microscopically

X - Lesion present

X .. Lesion present

M .. Missing tissue

A .. Autolysis precludes evaluation

BIANK: Not examined microscopically

Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>500mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |    |   |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|----|---|
|  |                       | 0<br>7<br>2<br>5      | 0<br>7<br>2<br>9      |                       |    |    |   |
| ANIMAL ID  | * TOTALS              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |    |   |
|  | 0<br>0<br>1<br>2<br>2 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 | 0<br>0<br>1<br>1<br>6 | 0<br>0<br>1<br>1<br>7 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>6 | 0<br>0<br>1<br>1<br>7 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>6 | 0<br>0<br>1<br>1<br>7 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 |    |    |   |
| Esophagus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Intestine Large, Cecum                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 49 |   |
| Intestine Large, Colon                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Intestine Large, Rectum                            | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Intestine Small, Duodenum                          | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Intestine Small, Ileum                             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 49 |   |
| Intestine Small, Jejunum                           | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Liver  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Mesentery  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 2  |    |   |
| Pancreas   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Acinus, Adenoma                                    | X                     | X                     |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |    | 5 |
| Acinus, Adenoma, Multiple                          |                       |                       | X                     |                       | X                     |                       | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | X                     | 15 |    |   |
| Salivary Glands                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Stomach, Forestomach                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Stomach, Glandular                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50 |   |
| Tongue   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |    | 1 |
| Squamous Cell Papilloma                            |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |    | 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| DAY ON TEST                        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          |
|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|
|                                    | 0<br>7 |        |          |
| HARLAN SPRAGUE DAWLEY RATS<br>MALE | 2<br>2 |        |          |
| 500mg/L male                       | 0<br>0 |          |
| ANIMAL ID                          | 1<br>1 |          |
|                                    | 2<br>2 | 0<br>4 | 0<br>4 | 0<br>5 | 0<br>5 | 0<br>6 | 0<br>3 | 1<br>4 | 1<br>7 | 0<br>0 | 1<br>1 | 6<br>6 | 3<br>7 | 3<br>0 | 3<br>2 | 5<br>8 | 0<br>9 | 0<br>5 | 1<br>0 | 2<br>3 | 2<br>5 | 2<br>7 | 3<br>9 | 4<br>3 | 4<br>4 | 4<br>5 | 4<br>8 | * TOTALS |

### CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

### ENDOCRINE SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |    |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|
| Adrenal Cortex                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Adrenal Medulla                    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Pheochromocytoma Benign            | X |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 11 |
| Pheochromocytoma Malignant         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2  |
| Bilateral, Pheochromocytoma Benign |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  |
| Islets, Pancreatic                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |    |
| Adenoma                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 2  |
| Adenoma, Multiple                  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1  |
| Carcinoma                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 4  |
| Parathyroid Gland                  | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 45 |    |

|                            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Pituitary Gland            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Pars Distalis, Adenoma     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5 |
| Pars Distalis, Carcinoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Pars Intermedia, Carcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |

|                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|-------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Thyroid Gland     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| C-cell, Adenoma   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 5 |
| C-cell, Carcinoma |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 4 |

### GENERAL BODY SYSTEM

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

Experiment Number: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Date Report Requested: 06/26/2019

Test Type: CHRONIC

Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

Route: DOSED WATER

CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>500mg/L male | 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 |          |
| ANIMAL ID  | 7           | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7        |
|  | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2        |
|  | 5           | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9        |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0        |
|  | 1           | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1        |
|  | 2           | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | 5 | 0 | 0 | 0 | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 4 | 4        |
|  | 2           | 4 | 5 | 6 | 3 | 4 | 7 | 0 | 1 | 6 | 7 | 0 | 2 | 8 | 9 | 5 | 0 | 3 | 5 | 7 | 9 | 3 | 4 | 5 | 8 | 8        |

NONE

**GENITAL SYSTEM**

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Penis           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Prostate        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testis          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

**HEMATOPOIETIC SYSTEM**

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Lymph Node, Mandibular               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |
| Lymph Node, Mesenteric               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Spleen                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>500mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|  |                       | 0<br>7<br>2<br>5      | 0<br>7<br>2<br>9      |                       |                       |
| ANIMAL ID  | * TOTALS              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |
|  | 0<br>0<br>1<br>2<br>2 | 0<br>0<br>1<br>0<br>4 | 0<br>0<br>1<br>0<br>5 | 0<br>0<br>1<br>1<br>6 | 0<br>0<br>1<br>1<br>7 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>6 | 0<br>0<br>1<br>1<br>7 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>1 | 0<br>0<br>1<br>1<br>5 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>2 | 0<br>0<br>1<br>1<br>3 | 0<br>0<br>1<br>1<br>2 | 0<br>0<br>1<br>1<br>5 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>3 | 0<br>0<br>1<br>1<br>2 | 0<br>0<br>1<br>1<br>5 | 0<br>0<br>1<br>1<br>0 | 0<br>0<br>1<br>1<br>3 | 0<br>0<br>1<br>1<br>2 | 0<br>0<br>1<br>1<br>5 | 0<br>0<br>1<br>1<br>8 |

### INTEGUMENTARY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |        |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|--------|
| Mammary Gland<br>Fibroadenoma                                | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1 |        |
| Skin   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1 |        |
| Subcutaneous Tissue, Carcinoma, Metastatic,<br>Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |        |
| Subcutaneous Tissue, Fibroma                                 | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         | 2<br>1 |
| Subcutaneous Tissue, Schwannoma Malignant                    |   | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |        |

### MUSCULOSKELETAL SYSTEM

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

### NERVOUS SYSTEM

|                                     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|-------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Brain                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1 |
| Cranial Nerve, Schwannoma Malignant | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |

### RESPIRATORY SYSTEM

|                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|--------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Lung                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1 |
| Carcinoma, Metastatic, Thyroid Gland |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |

|      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Nose | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

|         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Trachea | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

|     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Eye | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|

\* .. 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: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Date Report Requested: 06/26/2019

Test Type: CHRONIC

Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

Route: DOSED WATER

CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

|                           | DAY ON TEST | HARLAN SPRAGUE DAWLEY RATS<br>MALE |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        | * TOTALS |        |
|---------------------------|-------------|------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|----------|--------|
|                           |             | 0<br>7                             | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 | 0<br>7 |        |          |        |
| 500mg/L male              | ANIMAL ID   | 0<br>0                             | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 | 0<br>0 |          |        |
|                           |             | 1<br>1                             | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 | 1<br>1 |          |        |
| Harderian Gland           |             | +                                  | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | +      | 50       |        |
| Zymbal's Gland<br>Adenoma |             |                                    |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |        |          | 1<br>1 |

**URINARY SYSTEM**

|                          |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|--------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Kidney<br>Nephroblastoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>1 |
| Urinary Bladder          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |

**SYSTEMIC LESIONS**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |              |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|
| Multiple Organ<br>Leukemia Mononuclear<br>Lymphoma Malignant | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>2<br>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: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Date Report Requested:** 06/26/2019

**Test Type:** CHRONIC

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

**CAS Number:** 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

Lab BAT

| DAY ON TEST |   | HARLAN SPRAGUE DAWLEY RATS<br>MALE |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|-------------|---|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|             |   | 1000mg/L male                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|             |   | 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 | 4 | 4 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 0           | 2 | 5                                  | 5 | 3 | 6 | 7 | 6 | 6 | 1 | 8 | 8 | 8 | 2 | 0 | 1 | 3 | 6 | 1 | 6 | 5 | 2 | 6 | 7 | 3 | 8 | 2 | 5 | 7 |
| 4           | 9 | 1                                  | 6 | 7 | 6 | 6 | 1 | 8 | 8 | 8 | 2 | 0 | 1 | 3 | 6 | 1 | 6 | 7 | 2 | 6 | 6 | 7 | 9 | 2 | 5 | 7 | 9 | 2 |
| 0           | 0 | 0                                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0           | 0 | 0                                  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1           | 1 | 1                                  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| 8           | 7 | 5                                  | 5 | 9 | 6 | 9 | 7 | 7 | 6 | 1 | 7 | 7 | 4 | 8 | 1 | 6 | 9 | 9 | 8 | 5 | 2 | 6 | 1 | 5 | 0 | 8 | 5 | 6 |
| 7           | 7 | 3                                  | 3 | 2 | 4 | 0 | 3 | 6 | 1 | 1 | 4 | 8 | 1 | 6 | 9 | 9 | 0 | 2 | 6 | 1 | 0 | 0 | 8 | 5 | 3 | 5 | 6 | 6 |

## ALIMENTARY SYSTEM

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

#### A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically









Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>1000mg/L male        | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | * TOTALS |    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|----------|----|
|  |                       | 0<br>7<br>2<br>9      |                       |   |          |    |
| ANIMAL ID  | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 |   |          |    |
| Esophagus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Large, Cecum                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Large, Colon                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Large, Rectum                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Small, Duodenum                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Small, Ileum                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Intestine Small, Jejunum                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Liver  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Hepatocellular Adenoma                                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | X        | 1  |
| Mesentery  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | +        | 3  |
| Pheochromocytoma Malignant, Metastatic,<br>Adrenal Medulla |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | X        | 1  |
| Pancreas   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Acinus, Adenocarcinoma                                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | X        | 2  |
| Acinus, Adenocarcinoma, Multiple                           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |          | 1  |
| Acinus, Adenoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | X        | 5  |
| Acinus, Adenoma, Multiple                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   | X        | 11 |
| Salivary Glands  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |
| Stomach, Forestomach                                       | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | + | 50       |    |

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

+ .. Tissue examined microscopically

X .. Lesion present

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Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>1000mg/L male | DAY ON TEST<br>ANIMAL ID |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|----|----------|
|   |                          | 0<br>7<br>2<br>9 |   |    |          |
| Squamous Cell Papilloma                             |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | X  | 1        |
| Stomach, Glandular                                  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| <b>CARDIOVASCULAR SYSTEM</b>                        |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          |
| Blood Vessel  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 49 |          |
| Heart   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| Schwannoma Malignant                                |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 1        |
| <b>ENDOCRINE SYSTEM</b>                             |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          |
| Adrenal Cortex                                      |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| Adenoma   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 1        |
| Adrenal Medulla                                     |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| Pheochromocytoma Benign                             |                          | X                | X                | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 8        |
| Pheochromocytoma Complex                            |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 1        |
| Pheochromocytoma Malignant                          |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 3        |
| Islets, Pancreatic                                  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| Adenoma   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 5        |
| Adenoma, Multiple                                   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 1        |
| Parathyroid Gland                                   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | M                | +                | +                | +                | M                | +                | +                | +                | + | 45 |          |
| Adenoma   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 2        |
| Pituitary Gland                                     |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |
| Pars Distalis, Adenoma                              |                          | X                | X                | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 7        |
| Pars Intermedia, Adenoma                            |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | 1        |
| Thyroid Gland                                       |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |

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Experiment Number: 03038 - 03  
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P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
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Date Report Requested: 06/26/2019  
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| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>1000mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |   |   | * TOTALS |   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|---|----------|---|
|   |                       | 0<br>7<br>2<br>9      |   |   |          |   |
| ANIMAL ID   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X | X | X        | 5 |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X | 1 | 3        |   |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X |   |          |   |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X |   |          |   |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X |   |          |   |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>6 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | X |   |          |   |

### GENERAL BODY SYSTEM

NONE

### GENITAL SYSTEM

|                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|-----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Epididymis      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Preputial Gland | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Prostate        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Seminal Vesicle | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Testis          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |

### HEMATOPOIETIC SYSTEM

|                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Bone Marrow            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3  |
| Lymph Node, Mandibular | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Lymph Node, Mesenteric | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |
| Spleen                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Thymus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>MALE<br>1000mg/L male | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |  |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|--|--|
|   |                       | 0<br>7<br>2<br>9      |  |  |
| ANIMAL ID   | * TOTALS              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |  |  |
|   | 0<br>0<br>1<br>6<br>9 | 0<br>0<br>1<br>7<br>0 | 0<br>0<br>1<br>7<br>2 | 0<br>0<br>1<br>7<br>5 | 0<br>0<br>1<br>8<br>3 | 0<br>0<br>1<br>8<br>4 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>5 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>6 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>7 | 0<br>0<br>1<br>8<br>8 | 0<br>0<br>1<br>8<br>9 | 0<br>0<br>1<br>9<br>5 | 0<br>0<br>1<br>9<br>7 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>8 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>9 | 0<br>0<br>1<br>9<br>9 |  |  |

### INTEGUMENTARY SYSTEM

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Mammary Gland<br>Adenocarcinoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |   |
|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Skin                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Basal Cell Carcinoma            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Keratoacanthoma                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Subcutaneous Tissue, Fibroma    | X |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 2 |
| Subcutaneous Tissue, Lipoma     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 2 |

### MUSCULOSKELETAL SYSTEM

|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Bone<br>Tarsal, Osteoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
|                         |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |

### NERVOUS SYSTEM

|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Brain<br>Glioma Malignant<br>Oligodendrogloma Malignant | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
|   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |

### RESPIRATORY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Lung<br>Alveolar/Bronchiolar Adenoma<br>Alveolar/Bronchiolar Carcinoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X  | 1 |
| Nose   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Trachea  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |

\* .. 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

Time Report Requested: 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## **SPECIAL SENSES SYSTEM**

## **URINARY SYSTEM**

## **SYSTEMIC LESIONS**

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

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

+ .. Tissue examined microscopically

X - Lesion present

#### A.1.2. Lesion present

M .. Missing tissue

#### A .. Autolysis precludes evaluation

BLANK - Not examined microscopically

Experiment Number: 03038 - 03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: RATS/HSD

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 06/26/2019

Time Report Requested: 10:13:17

First Dose M/F: 01/30/12 / 01/31/12

Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0mg/L female | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID  | 2           | 3 | 3 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|  | 8           | 4 | 8 | 9 | 0 | 0 | 2 | 4 | 3 | 0 | 7 | 0 | 1 | 2 | 9 | 4 | 2 | 6 | 7 | 9 | 5 | 8 | 1 | 1 | 3 |
|  | 6           | 4 | 7 | 4 | 2 | 4 | 3 | 0 | 7 | 0 | 1 | 2 | 9 | 4 | 2 | 6 | 7 | 6 | 5 | 8 | 1 | 1 | 3 | 3 | 3 |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 2           | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  | 0           | 2 | 2 | 2 | 4 | 1 | 4 | 4 | 1 | 3 | 4 | 4 | 3 | 2 | 0 | 3 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 |
|  | 3           | 2 | 0 | 9 | 2 | 7 | 4 | 3 | 1 | 2 | 3 | 7 | 5 | 4 | 4 | 6 | 1 | 2 | 1 | 8 | 6 | 7 | 8 | 9 | 0 |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

females  
(cont...)

## ALIMENTARY SYSTEM

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Cecum                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Colon                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Rectum                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small                                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
| Intestine Small, Duodenum                            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Ileum                               | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Jejunum                             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Liver  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Hepatocellular Adenoma                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
| Mesentery  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Granulosa Cell Tumor Malignant, Metastatic,<br>Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Pancreas   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Granulosa Cell Tumor Malignant, Metastatic,<br>Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Salivary Glands                                      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Stomach, Forestomach                                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |

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

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

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 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0mg/L female | DAY ON TEST<br>ANIMAL ID | female<br>(cont...) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--------------------------|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |                          | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 2                   | 3 | 3 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 |
|  |                          | 8                   | 4 | 8 | 9 | 0 | 0 | 2 | 5 | 1 | 1 | 1 | 2 | 4 | 5 | 7 | 6 | 7 | 9 | 0 | 1 | 1 | 3 | 3 | 3 |
|  |                          | 6                   | 4 | 7 | 4 | 2 | 4 | 3 | 0 | 7 | 0 | 2 | 9 | 4 | 2 | 6 | 7 | 6 | 5 | 8 | 1 | 1 | 0 | 0 | 0 |
|  |                          | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  |                          | 2                   | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  |                          | 0                   | 2 | 2 | 2 | 4 | 1 | 4 | 4 | 1 | 3 | 4 | 4 | 3 | 2 | 0 | 3 | 4 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |
|  |                          | 3                   | 2 | 0 | 9 | 2 | 7 | 4 | 3 | 1 | 2 | 3 | 7 | 5 | 4 | 4 | 6 | 1 | 2 | 1 | 8 | 6 | 7 | 8 | 9 |

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

Clitoral Gland

+

Ovary

+

Granulosa Cell Tumor Malignant

X

Granulosa-Theca Tumor Malignant

Uterus

+

Adenocarcinoma

Granulosa Cell Tumor Malignant, Metastatic,  
Ovary

Squamous Cell Carcinoma

Cervix, Sarcoma Stromal

X

Cervix, Squamous Cell Carcinoma

X

Cervix, Endometrium, Polyp Stromal

X

Endometrium, Polyp Stromal

X

Endometrium, Polyp Stromal, Multiple

Vagina

+

Polyp

## HEMATOPOIETIC SYSTEM

Bone Marrow

+

Lymph Node

+

+

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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

+ .. Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

**Experiment Number:** 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## MUSCULOSKELETAL SYSTEM

Bone

## **NERVOUS SYSTEM**

Brain

## RESPIRATORY SYSTEM

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically



Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
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P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
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Date Report Requested: 06/26/2019  
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 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0mg/L female              | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | * TOTALS |   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----|----------|---|
|   |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      |          |    |          |   |
| ANIMAL ID   | 0<br>0<br>2<br>3<br>2 | 0<br>0<br>2<br>3<br>3 | 0<br>0<br>2<br>4<br>5 | 0<br>0<br>2<br>5<br>0 | 0<br>0<br>2<br>1<br>1 | * TOTALS |    |          |   |
| Esophagus   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Large, Cecum  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Large, Colon  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Large, Rectum   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | 1        |   |
| Intestine Small, Duodenum   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small, Ileum  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small, Jejunum  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Liver<br>Hepatocellular Adenoma                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
|   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | 1        |   |
| Mesentery<br>Granulosa Cell Tumor Malignant, Metastatic,<br>Ovary |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | 1        |   |
|   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | X        |   |
| Pancreas<br>Granulosa Cell Tumor Malignant, Metastatic,<br>Ovary  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
|   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | X        | 1 |
| Salivary Glands   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Stomach, Forestomach  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |

\* .. 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

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**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

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## Lab: BAT

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**Test Type:** CHRONIC

## Sodium Tungstate Dihydrate

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CAS Number: 10213-10-2

**First Dose M/F:** 01/30/12 / 01/31/12

**Species/Strain:** RATS/HSD

## Lab: BAT

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

|  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |   |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|
| Clitoral Gland                                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Ovary  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Granulosa Cell Tumor Malignant                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   | 1  |   |
| Granulosa-Theca Tumor Malignant                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1  |   |
| Uterus   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |   |
| Adenocarcinoma                                       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X | X  | 3 |
| Granulosa Cell Tumor Malignant, Metastatic,<br>Ovary |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |    | 1 |
| Squamous Cell Carcinoma                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Cervix, Sarcoma Stromal                              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Cervix, Squamous Cell Carcinoma                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Cervix, Endometrium, Polyp Stromal                   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Endometrium, Polyp Stromal                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 3 |
| Endometrium, Polyp Stromal, Multiple                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    | 1 |
| Vagina   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 |   |
| Polyp  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |    | 1 |

## **HEMATOPOIETIC SYSTEM**

\* Total animals with tissue examined microscopically: Total animals with tumor

± .. Tissue examined microscopically

X Lesion present

| Insufficient tissue

M Missing tissue

A .. Autolysis precludes evaluation

BLANK Not examined microscopically

**Experiment Number:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

**CAS Number:** 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## MUSCULOSKELETAL SYSTEM

# **NERVOUS SYSTEM**

# RESPIRATORY SYSTEM

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I., Insufficient tissue

### M .. Missing tissue

#### A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
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 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>0mg/L female | DAY ON TEST<br>ANIMAL ID |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    | * TOTALS |   |   |
|--|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|----|----------|---|---|
|  |                          | 0<br>7<br>3<br>0 | 0<br>7<br>3<br>0 | 0<br>7<br>3<br>0 | 0<br>7<br>3<br>1 |   |    |          |   |   |
| Lung   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50 |          |   |   |
| Adenocarcinoma, Metastatic, Mammary Gland            |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          | 1 |   |
| Granulosa Cell Tumor Malignant, Metastatic, Ovary    |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          | X | 1 |
| Nose   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| Trachea  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| <b>SPECIAL SENSES SYSTEM</b>                         |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          |   |   |
| Eye  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| Harderian Gland                                      |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| <b>URINARY SYSTEM</b>                                |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          |   |   |
| Kidney   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| Urinary Bladder                                      |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
| <b>SYSTEMIC LESIONS</b>                              |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          |   |   |
| Multiple Organ<br>Lymphoma Malignant                 |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | +  | 50       |   |   |
|  |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |    |          | 2 |   |

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X .. Lesion present

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 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>250mg/L female | DAY ON TEST<br>ANIMAL ID | female<br>(cont...) |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--------------------------|---------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |                          | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 3                        | 3                   | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|  | 0                        | 9                   | 0 | 3 | 5 | 2 | 3 | 3 | 4 | 5 | 8 | 0 | 1 | 1 | 4 | 9 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|  | 0                        | 0                   | 2 | 3 | 9 | 6 | 0 | 8 | 5 | 2 | 6 | 1 | 1 | 4 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0                        | 0                   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 2                        | 2                   | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  | 5                        | 7                   | 6 | 8 | 5 | 7 | 6 | 5 | 6 | 8 | 8 | 6 | 6 | 7 | 5 | 8 | 9 | 6 | 6 | 7 | 7 | 8 | 9 | 9 | 9 |
|  | 8                        | 8                   | 7 | 9 | 6 | 7 | 0 | 9 | 9 | 3 | 8 | 5 | 4 | 0 | 7 | 5 | 0 | 6 | 8 | 6 | 9 | 0 | 6 | 7 | 8 |

## ALIMENTARY SYSTEM

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Cecum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Colon          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Large, Rectum         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Duodenum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Ileum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Intestine Small, Jejunum        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Liver<br>Hepatocellular Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | X | + |
| Pancreas                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

## CARDIOVASCULAR SYSTEM

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

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**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>250mg/L female | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | females<br>(cont...) |   |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |   |
| ANIMAL ID  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    | 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 | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6                    | 6 |
|  | 0           | 9 | 0 | 3 | 9 | 6 | 2 | 0 | 0 | 8 | 8 | 5 | 2 | 6 | 1 | 1 | 4 | 9 | 1 | 2 | 3 | 0                    | 0 |
|  | 0           | 0 | 2 | 3 | 9 | 6 | 2 | 0 | 0 | 8 | 8 | 5 | 2 | 6 | 1 | 1 | 4 | 9 | 1 | 2 | 3 | 0                    | 0 |
|  | 2           | 2 | 2 | 2 | 2 | 5 | 7 | 6 | 0 | 9 | 9 | 3 | 8 | 5 | 4 | 7 | 0 | 5 | 7 | 3 | 0 | 3                    | 0 |
|  | 5           | 7 | 8 | 8 | 7 | 9 | 6 | 7 | 0 | 9 | 9 | 3 | 8 | 5 | 4 | 7 | 0 | 5 | 7 | 3 | 0 | 3                    | 0 |
|  | 8           | 8 | 7 | 7 | 9 | 6 | 7 | 0 | 0 | 9 | 9 | 3 | 8 | 5 | 4 | 7 | 0 | 5 | 7 | 3 | 0 | 3                    | 0 |

# **ENDOCRINE SYSTEM**

## Adrenal Cortex

## Adrenal Medulla

Pheochromocytoma Benign  
Pheochromocytoma Malignant

## Islets, Pancreatic Adenoma

Parathyroid Gland  
Carcinoma, Metastatic, Thyroid Gland

Pituitary Gland  
Pars Distalis, Adenoma  
Pars Distalis, Carcinoma

## Thyroid Gland

- Nerve
- Bilateral, C-cell, Adenoma
- C-cell, Adenoma
- C-cell, Adenoma, Multiple
- C-cell, Carcinoma

## **GENERAL BODY SYSTEM**

NONE

## **GENITAL SYSTEM**

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

+ .. Tissue examined microscopically

X .. Lesion present

#### I .. Insufficient tissue

M .. Missing tissue

#### A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically



Experiment Number: 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Date Report Requested: 06/26/2019

Test Type: CHRONIC

Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

Route: DOSED WATER

CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

| 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 |
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>250mg/L female | 3 | 3 | 4 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|  | 0 | 9 | 0 | 3 | 5 | 2 | 3 | 3 | 3 | 4 | 5 | 8 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
|  | 0 | 0 | 2 | 3 | 9 | 6 | 0 | 8 | 8 | 5 | 2 | 6 | 1 | 4 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|  | 0 | 0 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
|  | 5 | 7 | 6 | 8 | 5 | 7 | 6 | 5 | 6 | 8 | 8 | 6 | 6 | 7 | 5 | 8 | 9 | 6 | 6 | 7 | 7 | 8 | 9 | 9 | 9 |
|  | 8 | 8 | 7 | 9 | 6 | 7 | 0 | 9 | 9 | 3 | 8 | 5 | 4 | 0 | 7 | 5 | 0 | 6 | 8 | 6 | 9 | 0 | 6 | 7 | 8 |

females  
(cont...)

Subcutaneous Tissue, Fibroma

X

Subcutaneous Tissue, Schwannoma Malignant

X

## MUSCULOSKELETAL SYSTEM

Bone

+ +

## NERVOUS SYSTEM

Brain

+ +

Schwannoma Malignant, Metastatic, Peripheral Nerve

X

Peripheral Nerve

+

Trigeminal, Schwannoma Malignant

X

## RESPIRATORY SYSTEM

Lung

Nephroblastoma, Metastatic, Kidney

+ +

X

Nose

+ +

Trachea

+ +

## SPECIAL SENSES SYSTEM

Eye

+ +

Schwannoma Malignant, Metastatic, Peripheral Nerve

X

Harderian Gland

+ +

\* .. 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## Bilateral, Schwannoma Malignant, Metastatic Peripheral Nerve

3

## **URINARY SYSTEM**

Kidney  
Nephroblastoma

Urinary Bladder  
Urothelium, Papilloma

## **SYSTEMIC LESIONS**

Multiple Organ  
Lymphoma Malignant

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>250mg/L female | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|  |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |                       |          |
| ANIMAL ID  | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>5<br>0 | 0<br>0<br>2<br>5<br>1 | 0<br>0<br>2<br>5<br>2 | 0<br>0<br>2<br>5<br>3 | 0<br>0<br>2<br>5<br>4 | 0<br>0<br>2<br>8<br>5 | 0<br>0<br>2<br>8<br>6 | 0<br>0<br>2<br>8<br>7 | 0<br>0<br>2<br>8<br>8 | 0<br>0<br>2<br>8<br>9 | 0<br>0<br>2<br>6<br>7 | 0<br>0<br>2<br>6<br>8 | 0<br>0<br>2<br>7<br>7 | 0<br>0<br>2<br>7<br>8 | 0<br>0<br>2<br>7<br>9 | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>9<br>9 |          |
|  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |

## ALIMENTARY SYSTEM

|                                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |         |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------|
| Esophagus                       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Large, Cecum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Large, Colon          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Large, Rectum         | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Small, Duodenum       | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Small, Ileum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Intestine Small, Jejunum        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Liver<br>Hepatocellular Adenoma | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50<br>2 |
| Pancreas                        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Salivary Glands                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Stomach, Forestomach            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |
| Stomach, Glandular              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50      |

## CARDIOVASCULAR SYSTEM

|              |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |    |
|--------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|
| Blood Vessel | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |
| Heart        | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 |

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>250mg/L female | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |    |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----|
|  |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |                       |                       |          |    |
| ANIMAL ID  | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>5<br>0 | 0<br>0<br>2<br>5<br>2 | 0<br>0<br>2<br>5<br>3 | 0<br>0<br>2<br>5<br>4 | 0<br>0<br>2<br>8<br>5 | 0<br>0<br>2<br>8<br>6 | 0<br>0<br>2<br>8<br>7 | 0<br>0<br>2<br>8<br>8 | 0<br>0<br>2<br>8<br>9 | 0<br>0<br>2<br>6<br>6 | 0<br>0<br>2<br>7<br>7 | * TOTALS              |          |    |
|  | 0<br>0<br>2<br>9<br>9 | 0<br>0<br>2<br>5<br>0 | 0<br>0<br>2<br>5<br>2 | 0<br>0<br>2<br>5<br>3 | 0<br>0<br>2<br>5<br>4 | 0<br>0<br>2<br>8<br>5 | 0<br>0<br>2<br>8<br>6 | 0<br>0<br>2<br>8<br>7 | 0<br>0<br>2<br>8<br>8 | 0<br>0<br>2<br>8<br>9 | 0<br>0<br>2<br>6<br>6 | 0<br>0<br>2<br>7<br>7 |          |    |
| Adrenal Cortex   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |    |
| Adrenal Medulla  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |    |
| Pheochromocytoma Benign                                |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 3  |
| Pheochromocytoma Malignant                             |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Islets, Pancreatic                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |    |
| Adenoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Parathyroid Gland                                      | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | M                     | +                     | +                     | +                     | 47       |    |
| Carcinoma, Metastatic, Thyroid Gland                   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Pituitary Gland  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |    |
| Pars Distalis, Adenoma                                 |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 9  |
| Pars Distalis, Carcinoma                               |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 2  |
| Thyroid Gland  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |    |
| Schwannoma Malignant, Metastatic, Peripheral Nerve     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| Bilateral, C-cell, Adenoma                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| C-cell, Adenoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 11 |
| C-cell, Adenoma, Multiple                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |          | 1  |
| C-cell, Carcinoma                                      |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |                       |          | 2  |

## GENERAL BODY SYSTEM

NONE

## GENITAL SYSTEM

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

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

Experiment Number: 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Date Report Requested:** 06/26/2019

**Test Type:** CHRONIC

## Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

**Route:** DOSED WATER

**CAS Number:** 10213-10-2

**First Dose M/F:** 01/30/12 / 01/31/12

**Species/Strain:** RATS/HSD

## Lab: BAT

\* .. 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

| Insufficient tissue



**Experiment Number:** 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

Time Report Requested: 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## Bilateral, Schwannoma Malignant, Metastatic Peripheral Nerve

1

## **URINARY SYSTEM**

## **SYSTEMIC LESIONS**

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

+ .. Tissue examined microscopically

X .. Lesion present

#### X. Lesion present

M .. Missing tissue

#### A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>500mg/L female | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID  | 7           | 8 | 2 | 5 | 6 | 0 | 1 | 2 | 8 | 8 | 8 | 9 | 9 | 4 | 5 | 7 | 7 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
|  | 0           | 8 | 0 | 6 | 3 | 0 | 9 | 9 | 3 | 5 | 8 | 2 | 2 | 2 | 1 | 5 | 6 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0  | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3  | 3           | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0  | 1           | 4 | 2 | 0 | 3 | 2 | 1 | 1 | 4 | 0 | 1 | 2 | 3 | 0 | 4 | 4 | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7  | 0           | 1 | 5 | 3 | 3 | 1 | 7 | 1 | 3 | 6 | 9 | 6 | 0 | 5 | 8 | 2 | 9 | 4 | 8 | 2 | 3 | 4 | 5 | 6 |   |

females  
(cont...)

## ALIMENTARY SYSTEM

|                                    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Esophagus                          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Cecum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Colon             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Large, Rectum            | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Duodenum          | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Ileum             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Intestine Small, Jejunum           | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Liver                              | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |  |
| Cholangioma                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |
| Leiomyosarcoma, Metastatic, Vagina |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |  |

|                                    |   |
|------------------------------------|---|
| Mesentery                          | + |
| Leiomyosarcoma, Metastatic, Vagina | X |

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pancreas             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Salivary Glands      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Stomach, Glandular   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |

## CARDIOVASCULAR SYSTEM

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

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



Experiment Number: 03038 - 03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: RATS/HSD

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 06/26/2019

Time Report Requested: 10:13:17

First Dose M/F: 01/30/12 / 01/31/12

Lab: BAT

|   | DAY ON TEST   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | females<br>(cont...) |   |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|
|   |   | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |   |
| <b>HARLAN SPRAGUE DAWLEY RATS<br/>FEMALE</b>              | 500mg/L female  | 2 | 2 | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7                    | 7 |
|   |   | 7 | 8 | 2 | 5 | 6 | 0 | 1 | 2 | 8 | 8 | 8 | 9 | 4 | 5 | 7 | 6 | 1 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    | 0 |
|   |   | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3                    | 3 |
|   |   | 0 | 1 | 4 | 2 | 0 | 3 | 2 | 1 | 1 | 4 | 0 | 1 | 2 | 3 | 0 | 4 | 4 | 0 | 3 | 0 | 1 | 1 | 1 | 1 | 1                    | 1 |
|   |   | 7 | 0 | 1 | 5 | 3 | 3 | 1 | 7 | 1 | 3 | 6 | 9 | 6 | 0 | 5 | 8 | 2 | 9 | 4 | 8 | 2 | 3 | 4 | 5 | 6                    | 6 |
| Ovary   |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Paraovarian Tissue, Leiomyosarcoma,<br>Metastatic, Vagina |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |                      |   |
| Uterus  |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Adenocarcinoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |                      |   |
| Leiomyosarcoma, Metastatic, Vagina                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |                      |   |
| Endometrium, Polyp Stromal                                |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |                      | X |
| Vagina  |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Leiomyosarcoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |                      |   |
| <b>HEMATOPOIETIC SYSTEM</b>                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Bone Marrow   |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Lymph Node  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Renal, Leiomyosarcoma, Metastatic, Vagina                 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Lymph Node, Mandibular                                    |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | +                    |   |
| Lymph Node, Mesenteric                                    |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Leiomyosarcoma, Metastatic, Vagina                        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |   |   |                      |   |
| Spleen  |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Thymus  |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + | +                    |   |
| <b>INTEGUMENTARY SYSTEM</b>                               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Mammary Gland   |   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Adenocarcinoma  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| *   | .. 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:** 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

Zymbal's Gland  
Adenocarcinoma

-  
X

## **URINARY SYSTEM**

Kidney

## Urinary Bladder

## Leiomyosarcoma, Metastatic, Vagina

## **SYSTEMIC LESIONS**

Multiple Organ  
Leukemia Mononuclear  
Lymphoma Malignant

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>500mg/L female | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | * TOTALS |   |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----|----------|---|
|  |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |          |    |          |   |
| ANIMAL ID  | 0<br>0<br>3<br>1<br>8 | 0<br>0<br>3<br>3<br>1 | 0<br>0<br>3<br>3<br>0 | 0<br>0<br>3<br>3<br>1 | 0<br>0<br>3<br>3<br>0 | 0<br>0<br>3<br>3<br>1 | 0<br>0<br>3<br>3<br>0 | 0<br>0<br>3<br>3<br>1 | 0<br>0<br>3<br>3<br>0 | 0<br>0<br>3<br>3<br>2 | * TOTALS |    |          |   |
| Esophagus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 49 |          |   |
| Intestine Large, Cecum                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Large, Colon                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Large, Rectum                                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small, Duodenum                              | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small, Ileum                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Intestine Small, Jejunum                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Liver  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Cholangioma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    | X        | 1 |
| Leiomyosarcoma, Metastatic, Vagina                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    |          | 1 |
| Mesentery  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 1  |          |   |
| Leiomyosarcoma, Metastatic, Vagina                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |    |          | 1 |
| Pancreas   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Salivary Glands  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 49 |          |   |
| Stomach, Forestomach                                   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |
| Stomach, Glandular                                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +        | 50 |          |   |

### CARDIOVASCULAR SYSTEM

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

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



Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

### P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>500mg/L female    | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|   |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |                       |          |
| ANIMAL ID   | 0<br>0<br>3<br>1<br>8 | 0<br>0<br>3<br>2<br>0 | 0<br>0<br>3<br>4<br>6 | 0<br>0<br>3<br>4<br>7 | 0<br>0<br>3<br>5<br>9 | 0<br>0<br>3<br>0<br>0 | 0<br>0<br>3<br>1<br>1 | 0<br>0<br>3<br>2<br>2 | 0<br>0<br>3<br>3<br>4 | 0<br>0<br>3<br>4<br>5 | 0<br>0<br>3<br>3<br>4 | 0<br>0<br>3<br>3<br>5 | 0<br>0<br>3<br>3<br>4 |          |
| Ovary   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Paraovarian Tissue, Leiomyosarcoma,<br>Metastatic, Vagina |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Uterus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Adenocarcinoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2        |
| Leiomyosarcoma, Metastatic, Vagina                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Endometrium, Polyp Stromal                                |                       |                       | X                     | X                     |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 7        |
| Vagina  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Leiomyosarcoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| <b>HEMATOPOIETIC SYSTEM</b>                               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Bone Marrow   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Lymph Node  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Renal, Leiomyosarcoma, Metastatic, Vagina                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Lymph Node, Mandibular                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49       |
| Lymph Node, Mesenteric                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Leiomyosarcoma, Metastatic, Vagina                        |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Spleen  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Thymus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49       |
| <b>INTEGUMENTARY SYSTEM</b>                               |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Mammary Gland   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |
| Adenocarcinoma  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 2        |

\* .. 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: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Date Report Requested: 06/26/2019

Test Type: CHRONIC

Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

Route: DOSED WATER

CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

|  | DAY ON TEST |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | * TOTALS              |          |
|--|-------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|
|  |             | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |                       |                       |          |
| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>500mg/L female | ANIMAL ID   | 0<br>0<br>3<br>1<br>8 | 0<br>0<br>3<br>2<br>0 | 0<br>0<br>3<br>4<br>6 | 0<br>0<br>3<br>4<br>7 | 0<br>0<br>3<br>5<br>9 | 0<br>0<br>4<br>0<br>0 | 0<br>0<br>3<br>0<br>1 | 0<br>0<br>3<br>2<br>2 | 0<br>0<br>3<br>3<br>4 | 0<br>0<br>3<br>4<br>5 | 0<br>0<br>3<br>3<br>0 | 0<br>0<br>3<br>3<br>3 | * TOTALS |
|  |             | X                     | X                     | X                     |                       | X                     |                       | X                     |                       | X                     |                       | X                     |                       | X                     |                       | X                     |                       | X                     |                       | X                     |                       |                       |          |
| Adenoma  |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     | 3        |
| Fibroadenoma   |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     | 15       |
| Fibroadenoma, Multiple                                 |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     | 8        |
| Skin   |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| <b>MUSCULOSKELETAL SYSTEM</b>                          |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Bone   |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Skeletal Muscle  |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Diaphragm, Leiomyosarcoma, Metastatic,                 |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Vagina   |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| <b>NERVOUS SYSTEM</b>                                  |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Brain  |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| <b>RESPIRATORY SYSTEM</b>                              |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Lung   |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49                    |          |
| Adenocarcinoma, Metastatic, Uterus                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Leiomyosarcoma, Metastatic, Vagina                     |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | 1        |
| Nose   |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Trachea  |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49                    |          |
| <b>SPECIAL SENSES SYSTEM</b>                           |             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          |
| Eye  |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |
| Harderian Gland  |             | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50                    |          |

\* .. 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>500mg/L female | DAY ON TEST | ANIMAL ID | Data Rows |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|-------------|-----------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |             |           | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7  | 7           | 7         | 7         | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 3  | 3           | 3         | 3         | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 0  | 0           | 0         | 0         | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 0  | 0           | 0         | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0  | 0           | 0         | 0         | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3  | 3           | 3         | 3         | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1  | 2           | 4         | 4         | 4 | 4 | 5 | 0 | 0 | 0 | 3 | 3 | 3 | 3 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 |
| 8  | 0           | 6         | 7         | 9 | 0 | 1 | 2 | 4 | 1 | 2 | 5 | 4 | 5 | 4 | 5 | 2 | 3 | 4 | 7 | 8 | 9 | 6 | 7 | 8 | 9 | 0 |

## Zymbal's Gland Adenocarcinoma

1

1

## **URINARY SYSTEM**

Kidney

## Urinary Bladder

## Leiomyosarcoma, Metastatic, Vagina

50

1

## **SYSTEMIC LESIONS**

Multiple Organ  
Leukemia Mononuclear  
Lymphoma Malignant

X

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>1000mg/L female | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANIMAL ID   | 2           | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
|   | 0           | 1 | 5 | 7 | 1 | 1 | 5 | 8 | 0 | 2 | 4 | 2 | 2 | 8 | 6 | 9 | 4 | 8 | 6 | 4 | 0 | 3 | 3 | 3 | 3 |
| 0   | 0           | 3 | 4 | 8 | 1 | 8 | 3 | 3 | 1 | 4 | 2 | 2 | 8 | 6 | 9 | 4 | 8 | 6 | 4 | 0 | 3 | 3 | 3 | 3 | 3 |
| 0   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0   | 0           | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3   | 3           | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 8   | 6           | 0 | 8 | 7 | 8 | 7 | 9 | 6 | 7 | 9 | 8 | 5 | 6 | 5 | 5 | 9 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 8 |
| 0   | 0           | 3 | 0 | 1 | 5 | 9 | 0 | 8 | 2 | 7 | 7 | 8 | 7 | 6 | 2 | 3 | 3 | 7 | 9 | 6 | 8 | 0 | 8 | 9 | 6 |

females  
(cont...)

## ALIMENTARY SYSTEM

|                           |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|---------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Esophagus                 | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Cecum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Colon    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Large, Rectum   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Duodenum | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Ileum    | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | + | + | + | + | + | + |   |
| Intestine Small, Jejunum  | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Liver                     | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Cholangioma               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |
| Hepatocellular Adenoma    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

|                      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|----------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mesentery            |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | + |
| Pancreas             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Salivary Glands      | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Stomach, Forestomach | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |
| Stomach, Glandular   | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |   |

## CARDIOVASCULAR SYSTEM

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

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

Experiment Number: 03038 - 03

**P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)**

Date Report Requested: 06/26/2019

Test Type: CHRONIC

Sodium Tungstate Dihydrate

Time Report Requested: 10:13:17

Route: DOSED WATER

CAS Number: 10213-10-2

First Dose M/F: 01/30/12 / 01/31/12

Species/Strain: RATS/HSD

Lab: BAT

|                                   | DAY ON TEST |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | females<br>(cont...) |   |
|-----------------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------------|---|
|                                   |             | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |   |
| <b>HARLAN SPRAGUE DAWLEY RATS</b> | 2           | 4 | 4 | 4 | 5 | 5 | 5 | 5 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7                    | 7 |
| <b>FEMALE</b>                     | 0           | 1 | 5 | 7 | 1 | 1 | 5 | 8 | 0 | 2 | 4 | 2 | 2 | 8 | 6 | 9 | 4 | 8 | 6 | 4 | 2 | 3 | 3 | 3 | 3 | 3                    | 3 |
| <b>1000mg/L female</b>            | 0           | 3 | 4 | 8 | 1 | 8 | 3 | 3 | 1 | 4 | 2 | 2 | 8 | 6 | 9 | 4 | 8 | 6 | 4 | 2 | 3 | 0 | 3 | 0 | 3 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0                    |   |
|                                   |             | 3 | 3 | 4 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3                    |   |
|                                   |             | 8 | 6 | 0 | 8 | 7 | 8 | 7 | 9 | 6 | 7 | 9 | 8 | 5 | 6 | 5 | 5 | 9 | 6 | 5 | 5 | 6 | 6 | 6 | 6 | 8                    |   |
|                                   |             | 0 | 3 | 0 | 1 | 5 | 9 | 0 | 8 | 2 | 7 | 7 | 8 | 7 | 6 | 2 | 3 | 3 | 7 | 9 | 6 | 8 | 0 | 8 | 9 | 6                    |   |
| Blood Vessel                      |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Heart                             |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| <b>ENDOCRINE SYSTEM</b>           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Adrenal Cortex                    |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Adrenal Medulla                   |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Pheochromocytoma Benign           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      | X |
| Islets, Pancreatic                |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Adenoma                           |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Carcinoma                         |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| Parathyroid Gland                 |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | M | + | + | + | M | +                    |   |
| Pituitary Gland                   |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | X | + | + | + | + | +                    |   |
| Pars Distalis, Adenoma            |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X |   |   |   |   |                      |   |
| Pars Distalis, Adenoma, Multiple  |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | X | X | X | X | X | X                    |   |
| Thyroid Gland                     |             | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | +                    |   |
| Bilateral, C-cell, Adenoma        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      | X |
| C-cell, Adenoma                   |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      | X |
| C-cell, Carcinoma                 |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      | X |
| <b>GENERAL BODY SYSTEM</b>        |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| NONE                              |             |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                      |   |
| <b>GENITAL 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:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Date Report Requested:** 06/26/2019

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

## Lab: BAT

## Urinary Bladder

## **SYSTEMIC LESIONS**

Multiple Organ  
Lymphoma Malignant

**females  
(cont...)**

\* .. 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: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>1000mg/L female | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | * TOTALS |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------|----------|
|   |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      | 0<br>7<br>3<br>2      |                       |          |          |
| ANIMAL ID   | 0<br>0<br>3<br>8<br>7 | 0<br>0<br>3<br>9<br>0 | 0<br>0<br>3<br>9<br>5 | 0<br>0<br>3<br>6<br>1 | 0<br>0<br>3<br>6<br>4 | 0<br>0<br>3<br>6<br>5 | 0<br>0<br>3<br>7<br>1 | 0<br>0<br>3<br>7<br>2 | 0<br>0<br>3<br>7<br>3 | 0<br>0<br>3<br>7<br>4 | 0<br>0<br>3<br>7<br>6 | 0<br>0<br>3<br>7<br>7 | 0<br>0<br>3<br>7<br>7 | 0<br>0<br>3<br>7<br>7 | 0<br>0<br>3<br>7<br>8 | 0<br>0<br>3<br>7<br>8 | 0<br>0<br>3<br>7<br>8 | 0<br>0<br>3<br>7<br>9 | * TOTALS |          |
| Esophagus   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Large, Cecum                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49       |          |
| Intestine Large, Colon                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Large, Rectum                                 | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Small, Duodenum                               | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Intestine Small, Ileum                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49       |          |
| Intestine Small, Jejunum                                | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Liver   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Cholangioma   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | X                     |                       |                       |                       |                       |                       |                       |          | 1        |
| Hepatocellular Adenoma                                  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |          | 1        |
| Mesentery   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       | +                     |                       |                       |                       |                       |                       |                       |          | 2        |
| Pancreas  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Salivary Glands   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Stomach, Forestomach                                    | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |
| Stomach, Glandular                                      | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50       |          |

## CARDIOVASCULAR SYSTEM

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

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

**Experiment Number:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Date Report Requested:** 06/26/2019

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Time Report Requested:** 10:13:17

**First Dose M/F:** 01/30/12 / 01/31/12

Lab: BAT

## **GENERAL BODY SYSTEM**

**NONE**

## **GENITAL SYSTEM**

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

+ .. Tissue examined microscopically

X .. Lesion present

## I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
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### P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>1000mg/L female | DAY ON TEST           |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | * TOTALS |   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----|----------|---|
|   |                       | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>0      | 0<br>7<br>3<br>1      |                       |    |          |   |
| ANIMAL ID   | 0<br>0<br>3<br>8<br>7 | 0<br>0<br>3<br>9<br>0 | 0<br>0<br>3<br>9<br>5 | 0<br>0<br>3<br>6<br>1 | 0<br>0<br>3<br>6<br>4 | 0<br>0<br>3<br>5<br>1 | 0<br>0<br>3<br>5<br>2 | 0<br>0<br>3<br>3<br>3 | 0<br>0<br>3<br>3<br>4 | 0<br>0<br>3<br>7<br>3 | 0<br>0<br>7<br>7<br>4 | 0<br>0<br>7<br>6<br>6 | 0<br>0<br>7<br>7<br>7 | 0<br>0<br>5<br>5<br>6 | 0<br>0<br>5<br>5<br>6 | 0<br>0<br>5<br>5<br>7 | 0<br>0<br>5<br>5<br>8 | 0<br>0<br>5<br>5<br>9 |    |          |   |
| Clitoral Gland  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 49 |          |   |
| Ovary   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50 |          |   |
| Uterus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50 |          |   |
| Adenocarcinoma  |                       |                       |                       |                       |                       |                       |                       | X                     |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 5        |   |
| Adenoma   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 1        |   |
| Squamous Cell Carcinoma                                 |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 2        |   |
| Endometrium, Polyp Stromal                              |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 7        |   |
| Endometrium, Polyp Stromal, Multiple                    |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 1        |   |
| Vagina  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | 50 |          |   |
| <b>HEMATOPOIETIC SYSTEM</b>                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |          |   |
| Bone Marrow   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| Lymph Node  |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |          | 2 |
| Lymph Node, Mandibular                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| Lymph Node, Mesenteric                                  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| Spleen  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| Thymus  | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| <b>INTEGUMENTARY SYSTEM</b>                             |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    |          |   |
| Mammary Gland   | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +                     | +  | 50       |   |
| Adenocarcinoma  |                       |                       |                       |                       |                       |                       |                       | X                     |                       | X                     |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 2        |   |
| Adenoma   |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |                       |    | 2        |   |

\* .. 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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Experiment Number: 03038 - 03  
 Test Type: CHRONIC  
 Route: DOSED WATER  
 Species/Strain: RATS/HSD

P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)  
 Sodium Tungstate Dihydrate  
 CAS Number: 10213-10-2

Date Report Requested: 06/26/2019  
 Time Report Requested: 10:13:17  
 First Dose M/F: 01/30/12 / 01/31/12  
 Lab: BAT

| HARLAN SPRAGUE DAWLEY RATS<br>FEMALE<br>1000mg/L female | DAY ON TEST<br>ANIMAL ID |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | * TOTALS |
|---|--------------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|---|----------|
|   |                          | 0<br>7<br>3<br>0 | 0<br>7<br>3<br>0 | 0<br>7<br>3<br>1 | 0<br>7<br>3<br>2 |   |          |
| Fibroadenoma  |                          | X                | X                |                  |                  | X                |                  | X                |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | 15       |
| Fibroadenoma, Multiple                                  |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | 3        |
| Skin  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| <b>MUSCULOSKELETAL SYSTEM</b>                           |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |          |
| Bone  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| <b>NERVOUS SYSTEM</b>                                   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |          |
| Brain   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| Glioma Malignant  |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   | 1        |
| <b>RESPIRATORY SYSTEM</b>                               |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |          |
| Lung  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| Nose  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| Trachea   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| <b>SPECIAL SENSES SYSTEM</b>                            |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |          |
| Eye   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| Harderian Gland   |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| <b>URINARY SYSTEM</b>                                   |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |   |          |
| Kidney  |                          | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | +                | + | 50       |
| Lipoma  |                          |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  | X | 1        |

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

+ .. Tissue examined microscopically

X .. Lesion present

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**Experiment Number:** 03038 - 03

## P17: NEOPLASMS BY INDIVIDUAL ANIMAL (SYSTEMIC LESIONS ABRIDGED)

**Test Type: CHRONIC**

**Route:** DOSED WATER

**Species/Strain:** RATS/HSD

## Sodium Tungstate Dihydrate

CAS Number: 10213-10-2

**Date Report Requested:** 06/26/2019

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## Lab: BAT

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

\* .. Total animals with tissue examined microscopically: Total animals with tumo

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| Insufficient tissue

M .. Missing tissue

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