

Experiment Number: 20727 - 01
Test Type: 90-DAY
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
ortho-Phthalaldehyde
CAS Number: 643-79-8

Date Report Requested: 02/10/2012
Time Report Requested: 11:42:10
First Dose M/F: 01/19/09 / 01/20/09
Lab: BNW

F1_HSD

NTP Study Number: C20727
Lock Date: 08/21/2009
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.6.0.0_007
PWG Approval Date: NONE

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HARLAN SPRAGUE DAWLEY RATS MALE CONTROL	DAY ON TEST										ANIMAL ID		
	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3			
	0	0	0	0	0	0	0	0	0	0	0 0 0 0 1		
	* TOTALS												
Heart	+	+	+	+	+	+	+	+	+	+			10
ENDOCRINE SYSTEM													
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+			10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+			10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+			10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+			10
Pituitary Gland	+	+	+	+	+	+	+	+	+	+			10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+			10
GENERAL BODY SYSTEM													
NONE													
GENITAL SYSTEM													
Epididymis	+	+	+	+	+	+	+	+	+	+			10
Preputial Gland	+	+	+	+	+	+	+	+	+	+			10
Prostate	+	+	+	+	+	+	+	+	+	+			10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+			10

* .. Total animals with tissue examined microscopically; Total animals with tumor
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID													
	9	9	9	9	9	9	9	9	9	9														
HARLAN SPRAGUE DAWLEY RATS MALE CONTROL	3	3	3	3	3	3	3	3	3	3	1	2	3	4	5	6	7	8	9	0	* TOTALS			
Testes	+	+	+	+	+	+	+	+	+	+											10			
HEMATOPOIETIC SYSTEM																								
Bone Marrow	+	+	+	+	+	+	+	+	+	+											10			
Lymph Node, Bronchial	+	M	+	+	+	M	+	M	+	+											7			
Lymph Node, Mandibular	M	+	+	+	+	+	+	+	+	+											9			
Lymph Node, Mediastinal	+	M	+	+	+	+	+	+	M	+											8			
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+											10			
Spleen	+	+	+	+	+	+	+	+	+	+											10			
Thymus	+	+	+	+	+	+	+	+	+	+											10			
INTEGUMENTARY SYSTEM																								
Mammary Gland	M	M	+	M	+	+	+	+	+	M											6			
Skin	+	+	+	+	+	+	+	+	+	+											10			
MUSCULOSKELETAL SYSTEM																								
Bone	+	+	+	+	+	+	+	+	+	+											10			
NERVOUS SYSTEM																								

* .. Total animals with tissue examined microscopically; Total animals with tumor
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HARLAN SPRAGUE DAWLEY RATS MALE CONTROL	DAY ON TEST										ANIMAL ID	
	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 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	
	1	2	3	4	5	6	7	8	9	0		
	* TOTALS											
Brain	+	+	+	+	+	+	+	+	+	+		10
RESPIRATORY SYSTEM												
Larynx	+	+	+	+	+	+	+	+	+	+		10
Lung	+	+	+	+	+	+	+	+	+	+		10
Nose	+	+	+	+	+	+	+	+	+	+		10
Trachea	+	+	+	+	+	+	+	+	+	+		10
SPECIAL SENSES SYSTEM												
Eye	+	+	+	+	+	+	+	+	+	+		10
Harderian Gland	+	+	+	+	+	+	+	+	+	+		10
URINARY SYSTEM												
Kidney	+	+	+	+	+	+	+	+	+	+		10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+		10
SYSTEMIC LESIONS												
Multiple Organ	+	+	+	+	+	+	+	+	+	+		10

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	HARLAN SPRAGUE DAWLEY RATS MALE 0.44 ppm	ANIMAL ID	0	0	0	0	0	0	0	0	0		
	9	9	9	9	9	9	9	9	9	9			2	2	2	2	2	2	2	2	2		
	3	3	3	3	3	3	3	3	3	3			1	2	3	4	5	6	7	8	9	0	* TOTALS

ALIMENTARY SYSTEM

Liver + 1

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Lymph Node + 1
 Spleen + + + + + + + + + 9
 Thymus + + + + + + + + + 10

INTEGUMENTARY SYSTEM

Skin + + + + + + + + + 10

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DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE 0.44 ppm	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	
	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	1	
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	-----------

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	-----------

SYSTEMIC LESIONS

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

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DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE 0.88 ppm	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	4	4	4	4	4	4	4	4	4	4
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

Heart + 1

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Testes + 1

HEMATOPOIETIC SYSTEM

Spleen + + + + + + + + + 10

Thymus + + + + + + + + + 10

INTEGUMENTARY SYSTEM

Skin + + + + + + + + + 10

MUSCULOSKELETAL SYSTEM

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HARLAN SPRAGUE DAWLEY RATS MALE 0.88 ppm	DAY ON TEST	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		4	4	4	4	4	4	4	4	4	4	4	4	4	4
		0	0	0	0	0	0	0	0	0	0	0	0	1	0
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

SYSTEMIC LESIONS

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

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DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS MALE		0	0	0	0	0	0	0	0	0	0
	1.75 ppm	9	9	9	9	9	9	9	9	9	9
	ANIMAL ID	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		6	6	6	6	6	6	6	6	6	
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	0
* TOTALS											

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	M	+	+	9
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
--------------	---	---	---	---	---	---	---	---	---	---	-----------

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	9	9	9	9	9	9	9	9	9	9			
HARLAN SPRAGUE DAWLEY RATS MALE 1.75 ppm	3	3	3	3	3	3	3	3	3	3	6	6	6
	0	0	0	0	0	0	0	0	0	0	0	0	0
	1	2	3	4	5	6	7	8	9	0	1	2	3
												* TOTALS	
Heart	+	+	+	+	+	+	+	+	+	+			10
ENDOCRINE SYSTEM													
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+			10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+			10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+			10
Parathyroid Gland	+	+	+	+	+	+	M	M	+	+			8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+			10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+			10
GENERAL BODY SYSTEM													
NONE													
GENITAL SYSTEM													
Epididymis	+	+	+	+	+	+	+	+	+	+			10
Preputial Gland	+	+	+	+	+	+	+	M	+	+			9
Prostate	+	+	+	+	+	+	+	+	+	+			10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+			10

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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID	
	9	9	9	9	9	9	9	9	9	9		
HARLAN SPRAGUE DAWLEY RATS MALE 1.75 ppm	3	3	3	3	3	3	3	3	3	3		
	0	0	0	0	0	0	0	0	0	0		
	0	0	0	0	0	0	0	0	0	0		
	6	6	6	6	6	6	6	6	6	6		
	0	0	0	0	0	0	0	0	0	1		
	1	2	3	4	5	6	7	8	9	0		* TOTALS
Testes	+	+	+	+	+	+	+	+	+	+		10
HEMATOPOIETIC SYSTEM												
Bone Marrow	+	+	+	+	+	+	+	+	+	+		10
Lymph Node, Bronchial	+	M	M	+	+	M	+	+	+	M		6
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+		10
Lymph Node, Mediastinal	M	M	+	+	M	M	+	M	+	M		4
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+		10
Spleen	+	+	+	+	+	+	+	+	+	+		10
Thymus	+	+	+	+	+	+	+	+	+	+		10
INTEGUMENTARY SYSTEM												
Mammary Gland	M	M	+	+	M	+	+	+	+	+		7
Skin	+	+	+	+	+	+	+	+	+	+		10
MUSCULOSKELETAL SYSTEM												
Bone	+	+	+	+	+	+	+	+	+	+		10
NERVOUS SYSTEM												

* .. Total animals with tissue examined microscopically; Total animals with tumor
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS MALE	3	3	3	3	3	3	3	3	3	3	
1.75 ppm											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	6	6	6	6	6	6	6	6	6	6	
	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	
	* TOTALS										
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											
Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS											
Multiple Organ	+	+	+	+	+	+	+	+	+	+	10

* .. Total animals with tissue examined microscopically; Total animals with tumor
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DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS MALE 3.5 ppm		0	0	0	0	0	0	0	0	0	0
		4	1	0	3	9	9	3	0	0	9
		7	0	4	9	3	3	9	4	3	3
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	8	8	8	8	8	8	8	8	8	8	
	0	0	0	0	0	0	0	0	0	1	
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											

ALIMENTARY SYSTEM

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

CARDIOVASCULAR SYSTEM

Heart	+	+	+	+	+	+	+	+	+	+	10
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* .. 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS MALE	4	1	0	3	9	9	3	0	0
3.5 ppm	7	0	4	9	3	3	9	4	3	3
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	8	8	8	8	8	8	8	8	8	8
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ENDOCRINE SYSTEM

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

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Penis							+				1
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	4	1	0	3	9	9	3	0	0	9	
HARLAN SPRAGUE DAWLEY RATS MALE	7	0	4	9	3	3	9	4	3	3	
3.5 ppm											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	8	8	8	8	8	8	8	8	8	8	
	0	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											
Testes	+	+	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC SYSTEM											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial	+	+	+	+	+	M	+	+	M	M	7
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mediastinal	+	+	+	+	+	+	M	+	+	+	9
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	M	+	+	+	+	M	M	M	+	+	6
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											
Bone	+	+	+	+	+	+	+	+	+	+	10
NERVOUS 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	ANIMAL ID		
	4	1	0	3	9	9	3	0	0	9			
HARLAN SPRAGUE DAWLEY RATS MALE	7	0	4	9	3	3	9	4	3	3			
3.5 ppm	0	0	0	0	0	0	0	0	0	0			
	0	0	0	0	0	0	0	0	0	0			
	8	8	8	8	8	8	8	8	8	8			
	0	0	0	0	0	0	0	0	0	1			
	1	2	3	4	5	6	7	8	9	0			* TOTALS
Brain	+	+	+	+	+	+	+	+	+	+			10
RESPIRATORY SYSTEM													
Larynx	+	+	+	+	+	+	+	+	+	+			10
Lung	+	+	+	+	+	+	+	+	+	+			10
Nose	+	+	+	+	+	+	+	+	+	+			10
Trachea	+	+	+	+	+	+	+	+	+	+			10
SPECIAL SENSES SYSTEM													
Eye	+	+	+	+	+	+	+	+	+	+			10
Harderian Gland	+	+	+	+	+	+	+	+	+	+			10
URINARY SYSTEM													
Kidney	+	+	+	+	+	+	+	+	+	+			10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+			10
SYSTEMIC LESIONS													
Multiple Organ	+	+	+	+	+	+	+	+	+	+			10

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS	0	0	0	0	0	0	0	0	0	0	0
	7	3	6	3	3	3	0	6	4	5	
MALE											
7.0 ppm	ANIMAL ID	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0	
* TOTALS											

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	A	+	+	+	A	+	+	8
Intestine Large, Colon	+	+	+	A	+	+	+	A	+	+	8
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	A	+	+	+	A	+	+	8
Intestine Small, Jejunum	+	+	+	A	A	+	+	A	+	+	7
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

Heart	+	+	+	+	+	+	+	+	+	+	10
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* .. 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS MALE	0	0	0	0	0	0	0	0	0
7.0 ppm	7	3	6	3	3	3	0	6	4	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	M	+	+		9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	3	6	3	3	3	0	6	4	5				
MALE														
7.0 ppm	ANIMAL ID	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
	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0	1	0
	1	2	3	4	5	6	7	8	9	0				
													* TOTALS	

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+				10
Lymph Node, Bronchial	+	+	+	M	M	M	M	+	+	+				6
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+				10
Lymph Node, Mediastinal	+	+	M	+	M	+	+	+	+	M				7
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+				10
Spleen	+	+	+	+	+	+	+	+	+	+				10
Thymus	+	+	+	+	+	+	+	+	+	+				10

INTEGUMENTARY SYSTEM

Mammary Gland	M	M	+	M	M	M	M	M	+	M				2
Skin	+	+	+	+	+	+	+	+	+	+				10

MUSCULOSKELETAL SYSTEM

Bone	+	+	+	+	+	+	+	+	+	+				10
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NERVOUS SYSTEM

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

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS MALE	0	0	0	0	0	0	0	0	0
7.0 ppm	7	3	6	3	3	3	0	6	4	5
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10

URINARY SYSTEM

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

SYSTEMIC LESIONS

Multiple Organ	+	+	+	+	+	+	+	+	+	+	10
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*** END OF MALE DATA ***

* .. 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE CONTROL	9	9	9	9	9	9	9	9	9
ANIMAL ID	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ALIMENTARY SYSTEM

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

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
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* .. 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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Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE CONTROL	DAY ON TEST										ANIMAL ID	
	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3		
	0 0 1 0 1	0 0 1 0 2	0 0 1 0 3	0 0 1 0 4	0 0 1 0 5	0 0 1 0 6	0 0 1 0 7	0 0 1 0 8	0 0 1 0 9	0 0 1 0 0		
	* TOTALS											
Heart	+	+	+	+	+	+	+	+	+	+		10
ENDOCRINE SYSTEM												
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+		10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+		10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+		10
Parathyroid Gland	+	+	+	M	+	+	M	+	+	+		8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+		10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+		10
GENERAL BODY SYSTEM												
NONE												
GENITAL SYSTEM												
Clitoral Gland	+	+	+	+	+	+	+	+	+	+		10
Ovary	+	+	+	+	+	+	+	+	+	+		10
Uterus	+	+	+	+	+	+	+	+	+	+		10
HEMATOPOIETIC 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE CONTROL	DAY ON TEST										* TOTALS
	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	
	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial	+	+	+	M	+	+	+	+	M	+	8
Lymph Node, Mandibular	+	+	+	+	+	+	M	+	+	+	9
Lymph Node, Mediastinal	+	+	+	+	+	M	M	+	+	+	8
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											
Bone	+	+	+	+	+	+	+	+	+	+	10
NERVOUS SYSTEM											
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE CONTROL	DAY ON TEST										* TOTALS
	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	1	1	1	1	1	1	1	1	1	1	
	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	
Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS											
Multiple Organ	+	+	+	+	+	+	+	+	+	+	10

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 0.44 ppm	DAY ON TEST	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		3	3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	1	0
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

ALIMENTARY SYSTEM

Stomach, Glandular + + + + + + + + + 9

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Spleen + + + + + + + + + 10

Thymus + + + + + + + + + 10

INTEGUMENTARY SYSTEM

Skin + + + + + + + + + 10

MUSCULOSKELETAL 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS FEMALE		0	0	0	0	0	0	0	0	0	0
	0.44 ppm	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3
ANIMAL ID		0	0	0	0	0	0	0	0	0	
		0	0	0	0	0	0	0	0	0	
		3	3	3	3	3	3	3	3	3	
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	0
* TOTALS											

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	-----------

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	-----------

SYSTEMIC LESIONS

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

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 0.88 ppm	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0								
* TOTALS																			

ALIMENTARY SYSTEM

Mesentery																				1
Stomach, Glandular	+		+	+	+	+	+	+	+	+	+	+	+	+	+					9

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Spleen	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					10
Thymus	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					10

INTEGUMENTARY SYSTEM

Skin	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+					10
------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	--	--	--	--	----

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

M .. Missing tissue
 A .. Autolysis precludes evaluation
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Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE 0.88 ppm	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
ANIMAL ID	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

MUSCULOSKELETAL SYSTEM

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	-----------

URINARY SYSTEM

Kidney	+		+	+	+	+	+	+	+	+	9
--------	---	--	---	---	---	---	---	---	---	---	----------

SYSTEMIC LESIONS

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

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 1.75 ppm	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	9	9	9	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	7	7	7	7	7	7	7	7	7
		0	0	0	0	0	0	0	0	0	0	0	0	1
		1	2	3	4	5	6	7	8	9	0			
* TOTALS														

ALIMENTARY SYSTEM

Stomach, Glandular + + + + + + + + + + 10

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Uterus + 1

HEMATOPOIETIC SYSTEM

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

Thymus + + + + + + + + + + 10

INTEGUMENTARY SYSTEM

Skin + + + + + + + + + + 10

MUSCULOSKELETAL 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 1.75 ppm	DAY ON TEST	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
		9	9	9	9	9	9	9	9	9	9	9	9	9	9
		3	3	3	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		7	7	7	7	7	7	7	7	7	7	7	7	7	7
		0	0	0	0	0	0	0	0	0	0	0	0	1	0
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

Larynx	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Lung	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10

SPECIAL SENSES SYSTEM

Eye	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
-----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

URINARY SYSTEM

Kidney	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10
--------	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----

SYSTEMIC LESIONS

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

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0
3.5 ppm	4	9	1	9	9	9	9	9	9	9
ANIMAL ID	6	3	6	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ALIMENTARY SYSTEM

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

CARDIOVASCULAR SYSTEM

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
--------------	---	---	---	---	---	---	---	---	---	---	-----------

* .. 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	4	9	1	9	9	9	9	9	9	9	
HARLAN SPRAGUE DAWLEY RATS FEMALE	6	3	6	3	3	3	3	3	3	3	
3.5 ppm											
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	
	* TOTALS										
Heart	+	+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	M	+	+	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
GENERAL BODY SYSTEM											
NONE											
GENITAL SYSTEM											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus	+	+	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC 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: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 3.5 ppm	DAY ON TEST										* TOTALS
	0 4 6	0 9 3	0 1 6	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	0 9 3	
ANIMAL ID	0 9 0 1	0 9 9 2	0 9 9 3	0 9 9 4	0 9 9 5	0 9 9 6	0 9 9 7	0 9 9 8	0 9 9 9	0 9 0 0	
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Bronchial	+	+	+	M	+	M	+	M	+	+	7
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mediastinal	+	+	+	+	M	M	+	M	+	M	6
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	M	+	+	+	+	+	+	+	9
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											
Bone	+	+	+	+	+	+	+	+	+	+	10
NERVOUS SYSTEM											
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											

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

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

Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

HARLAN SPRAGUE DAWLEY RATS FEMALE 3.5 ppm	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANIMAL ID	4	9	1	9	9	9	9	9	9	9	9	9	9	9
		6	3	6	3	3	3	3	3	3	3	3	3	3	3
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0	0	0	0	0
		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	1	0
		1	2	3	4	5	6	7	8	9	0				
* TOTALS															
Larynx		+	+	+	+	+	+	+	+	+	+	+	+	+	10
Lung		+	+	+	+	+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM															
Eye		+	+	+	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland		+	+	+	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM															
Kidney		+	+	+	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS															
Multiple Organ		+	+	+	+	+	+	+	+	+	+	+	+	+	10

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

M .. Missing tissue
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Experiment Number: 20727 - 01
 Test Type: 90-DAY
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
 ortho-Phthalaldehyde
 CAS Number: 643-79-8

Date Report Requested: 02/10/2012
 Time Report Requested: 11:42:10
 First Dose M/F: 01/19/09 / 01/20/09
 Lab: BNW

DAY ON TEST		0	0	0	0	0	0	0	0	0	0
HARLAN SPRAGUE DAWLEY RATS FEMALE 7.0 ppm		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0	0
		4	4	9	6	9	4	5	5	5	6
ANIMAL ID		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	
		0	0	0	0	0	0	0	0	1	
		1	2	3	4	5	6	7	8	9	0
* TOTALS											

ALIMENTARY SYSTEM

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	A	+	+	+	+	A	+	A	M	6
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

CARDIOVASCULAR SYSTEM

Heart	+	+	+	+	+	+	+	+	+	+	10
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DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0
7.0 ppm	4	4	9	6	9	4	5	5	5	6
ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	1	1	1	1	1	1	1	1	1	1
	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0
* TOTALS										

ENDOCRINE SYSTEM

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	M	+	+	+	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus	+	+	+	+	+	+	+	+	+	+	10

HEMATOPOIETIC SYSTEM

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
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HARLAN SPRAGUE DAWLEY RATS FEMALE 7.0 ppm	DAY ON TEST										* TOTALS
	0 4	0 4	0 9	0 6	0 9	0 4	0 5	0 5	0 5	0 6	
ANIMAL ID	0 1 1 0 1	0 1 1 0 2	0 1 1 0 3	0 1 1 0 4	0 1 1 0 5	0 1 1 0 6	0 1 1 0 7	0 1 1 0 8	0 1 1 0 9	0 1 1 0 0	
Lymph Node, Bronchial	+	+	M	M	M	+	+	+	M	M	5
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mediastinal	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	M	+	+	+	+	+	+	+	+	+	9
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
INTEGUMENTARY SYSTEM											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
MUSCULOSKELETAL SYSTEM											
Bone	+	+	+	+	+	+	+	+	+	+	10
NERVOUS SYSTEM											
Brain	+	+	+	+	+	+	+	+	+	+	10
RESPIRATORY SYSTEM											
Larynx	+	+	+	+	+	+	+	+	+	+	10

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HARLAN SPRAGUE DAWLEY RATS FEMALE 7.0 ppm	DAY ON TEST										* TOTALS
	0 4	0 4	0 9	0 6	0 9	0 4	0 5	0 5	0 5	0 6	
ANIMAL ID	0 1 1 0 1	0 1 1 0 2	0 1 1 0 3	0 1 1 0 4	0 1 1 0 5	0 1 1 0 6	0 1 1 0 7	0 1 1 0 8	0 1 1 0 9	0 1 1 0 0	
Lung	+	+	+	+	+	+	+	+	+	+	10
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
SPECIAL SENSES SYSTEM											
Eye	+	+	+	+	+	+	+	+	+	+	10
Harderian Gland	+	+	+	+	+	+	+	+	+	+	10
URINARY SYSTEM											
Kidney	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10
SYSTEMIC LESIONS											
Multiple Organ	+	+	+	+	+	+	+	+	+	+	10

*** END OF REPORT ***

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