



National Toxicology Program  
Department of Health and Human Services

# NTP Historical Controls Report

By Route and Vehicle

Harlan Sprague-Dawley RATS

August 2016

# REPORT DESCRIPTION

This report shows the tumor rates of control group animals from selected studies. The studies used are shown on the Study Summary page.

This report is broken up into sections based on the route and vehicle used to deliver the chemical. The Table of Contents on Page 3 shows the different Route/Vehicle combinations. To see the data from all routes and vehicles combined into one set, you must run the "All Routes" report.

The individual tumor rates shown on the data pages of the report relate to the Study Summary page as follows: the tumor rates are shown in the same order as the Study Summary page, except that they are grouped horizontally in sets of three, with the males in the first set of three and the females in the second set. For example if the study summary showed the studies like this:

**Male**

M1  
M2  
M3  
M4  
M5

**Female**

F1  
F2  
F3  
F4  
F5

the data would be shown as:

<b>Male</b>			<b>Female</b>		
M1	M2	M3	F1	F2	F3
M4	M5		F4	F5	

Directly beneath the individual tumor rates on the data pages are the overall totals for that tumor/site combination. This includes the total tumors/animals, the overall mean (in parentheses), the mean of the study means, and the standard deviation of the study means.

Studies with no control animals of a particular gender are listed on the summary page with the Number of Animals shown as zero and the Start Date and Length of Study shown as "N/A". On the data pages there are blank spaces where tumor rates for these studies would normally be found, so that the male and female rates for the remaining studies can be easily compared.

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**Version:** Aug2016  
**Contract/Lab:** All Laboratories  
**Species:** RATS  
**Strain:** Harlan Sprague-Dawley  
**Length of Study:** CHRONIC

**Toxicology Data Management System**  
Tumor Incidence for Selected Control Animal Groups  
**Route:** GAVAGE  
**Vehicle:** CORN OIL

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### Study Summary

Laboratory Name	Study Number	Study Start Date	Length of Study in Days	Number of Animals Total and (#/Cage)	Number Surviving and (Mean Life Span)	Maximum Mean Weekly Body Weight	Chemical
<b>Male</b>							
Battelle Columbus Laboratory	052000603	03/14/07	727	50(3)	20(644)	584.8	Indole-3-carbinol
<b>Female</b>							
Battelle Columbus Laboratory	052000603	03/15/07	729	50(5)	21(637)	353.0	Indole-3-carbinol

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 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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	Male				Female			
<b>#All Organs:</b>								
<b>Benign Tumors</b>								
		27/50 (54%)			40/50 (80%)			
<b>Overall Incidence</b>	Total	27/50 (54%)	Mean 54%	SD 0%	Total	40/50 (80%)	Mean 80%	SD 0%
.....								
<b>#All Organs:</b>								
<b>Malignant Tumors</b>								
		12/50 (24%)			14/50 (28%)			
<b>Overall Incidence</b>	Total	12/50 (24%)	Mean 24%	SD 0%	Total	14/50 (28%)	Mean 28%	SD 0%
.....								
<b>#All Organs:</b>								
<b>Malignant and Benign Tumors</b>								
		33/50 (66%)			46/50 (92%)			
<b>Overall Incidence</b>	Total	33/50 (66%)	Mean 66%	SD 0%	Total	46/50 (92%)	Mean 92%	SD 0%
.....								
<b>#All Organs:</b>								
<b>Hemangioma</b>								
		0/50 (0%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#All Organs:</b>								
<b>Hemangiosarcoma</b>								
		1/50 (2%)			1/50 (2%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
.....								
<b>#All Organs:</b>								
<b>Hemangiosarcoma or Hemangioma</b>								
		1/50 (2%)			1/50 (2%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
.....								

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

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 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
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		Male			Female		
<b>#All Organs:</b>							
<b>Histiocytic Sarcoma</b>							
		0/50	(0%)		1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)
							Mean 2%
							SD 0%
.....							
<b>#All Organs:</b>							
<b>Leukemia: Granulocytic</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>#All Organs:</b>							
<b>Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>#All Organs:</b>							
<b>Mesothelioma: Benign, Malignant, NOS</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>#All Organs:</b>							
<b>Mesothelioma: Malignant</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>*Adrenal Cortex:</b>							
<b>Adenoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
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**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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		Male			Female		
<b>*Adrenal Medulla:</b>							
<b>Pheochromocytoma Benign</b>							
		5/50 (10%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>Pheochromocytoma Complex</b>							
		1/50 (2%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>Pheochromocytoma Malignant</b>							
		2/50 (4%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>Pheochromocytoma: Benign, Complex, Malignant, NOS</b>							
		8/50 (16%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	8/50 (16%)	Mean 16%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>*Brain:</b>							
<b>Glioma Malignant</b>							
		0/50 (0%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>*Brain:</b>							
<b>Granular Cell Tumor Benign</b>							
		0/50 (0%)			1/50 (2%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
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 Tumor Incidence for Selected Control Animal Groups  
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	Male				Female			
<b>*Brain:</b>								
<b>Oligodendroglioma, Glioma, or Astrocytoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>*Brain:</b>								
<b>Schwannoma Malignant</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>*Epididymis:</b>								
<b>Sarcoma</b>								
		0/50	(0%)					
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%			
.....								
<b>#Eye:</b>								
<b>Leiomyoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>*Heart:</b>								
<b>Schwannoma Malignant</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Intestine Large: Colon/Rectum:</b>								
<b>Leiomyoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied



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		Male			Female		
<b>#Intestine Small: Jejunum:</b>							
<b>Leiomyosarcoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>#Intestine Small: Site Unspecified:</b>							
<b>Leiomyosarcoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>*Islets, Pancreatic:</b>							
<b>Adenoma</b>							
		2/50	(4%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>*Islets, Pancreatic:</b>							
<b>Carcinoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>*Islets, Pancreatic:</b>							
<b>Carcinoma or Adenoma</b>							
		2/50	(4%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>*Kidney: Renal Tubule:</b>							
<b>Adenoma</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

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		Male			Female		
<b>*Kidney: Renal Tubule:</b>							
<b>  Carcinoma or Adenoma</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>*Liver:</b>							
<b>  Hepatocellular Adenoma</b>							
		1/50	(2%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
.....							
<b>*Liver:</b>							
<b>  Hepatocellular Carcinoma or Hepatocellular Adenoma</b>							
		1/50	(2%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
.....							
<b>*Liver:</b>							
<b>  Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma</b>							
		1/50	(2%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
.....							
<b>*Lung:</b>							
<b>  Alveolar/Bronchiolar Adenoma</b>							
		0/49	(0%)		1/50	(2%)	
<b>Overall Incidence</b>	Total	0/49	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)
							Mean 2%
							SD 0%
.....							
<b>*Lung:</b>							
<b>  Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma</b>							
		0/49	(0%)		1/50	(2%)	
<b>Overall Incidence</b>	Total	0/49	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)
							Mean 2%
							SD 0%
.....							

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

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		Male			Female		
<b>*Lung:</b>							
<b>Sarcoma</b>							
		0/49 (0%)			1/50 (2%)		
<b>Overall Incidence</b>	Total	0/49 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....							
<b>#Lymph Node, Mesenteric:</b>							
<b>Hemangiosarcoma</b>							
		1/50 (2%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Adenoma</b>							
		0/50 (0%)			3/50 (6%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	3/50 (6%)	Mean 6% SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Carcinoma</b>							
		0/50 (0%)			3/50 (6%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	3/50 (6%)	Mean 6% SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Carcinoma or Adenoma</b>							
		0/50 (0%)			6/50 (12%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	6/50 (12%)	Mean 12% SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Fibroadenoma</b>							
		1/50 (2%)			29/50 (58%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	29/50 (58%)	Mean 58% SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

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 Contract/Lab: All Laboratories  
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	Male				Female			
<b>#Mammary Gland:</b>								
Fibroma, Fibroadenoma or Adenoma								
		1/50	(2%)			30/50	(60%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	30/50 (60%)	Mean 60% SD 0%
.....								
<b>#Mammary Gland:</b>								
Fibroma, Fibroadenoma, Carcinoma, or Adenoma								
		1/50	(2%)			32/50	(64%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	32/50 (64%)	Mean 64% SD 0%
.....								
<b>#Mammary Gland:</b>								
Myoepithelioma								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....								
<b>#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):</b>								
Squamous Cell Carcinoma								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....								
<b>#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):</b>								
Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....								
<b>#Oral Mucosa:</b>								
Squamous Cell Carcinoma								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
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**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
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				Male					Female
<b>*Ovary:</b>									
<b>Granulosa Cell Tumor Benign</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total	0/50	(0%)		Mean 0%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Granulosa Cell Tumor: Benign, Malignant, NOS</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total	0/50	(0%)		Mean 0%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Granulosa-Theca Tumor Benign</b>									
						1/50	(2%)		
<b>Overall Incidence</b>				Total	1/50	(2%)		Mean 2%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Thecoma Benign</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total	0/50	(0%)		Mean 0%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Tubulostromal Carcinoma</b>									
						1/50	(2%)		
<b>Overall Incidence</b>				Total	1/50	(2%)		Mean 2%	SD 0%
.....									
<b>*Pancreas:</b>									
<b>Adenoma</b>									
						5/50	(10%)		
<b>Overall Incidence</b>	Total	5/50	(10%)	Mean	10%	SD	0%	Total	0/50
									(0%)
								Mean	0%
								SD	0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

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 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
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	Male				Female			
<b>*Pancreas:</b>								
<b>Carcinoma or Adenoma</b>								
		5/50 (10%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>*Pituitary Gland: Pars Distalis or Unspecified Site:</b>								
<b>Adenoma</b>								
		5/50 (10%)			18/50 (36%)			
<b>Overall Incidence</b>	Total	5/50 (10%)	Mean 10%	SD 0%	Total	18/50 (36%)	Mean 36%	SD 0%
.....								
<b>*Pituitary Gland: Pars Distalis or Unspecified Site:</b>								
<b>Carcinoma or Adenoma</b>								
		5/50 (10%)			18/50 (36%)			
<b>Overall Incidence</b>	Total	5/50 (10%)	Mean 10%	SD 0%	Total	18/50 (36%)	Mean 36%	SD 0%
.....								
<b>*Salivary Glands:</b>								
<b>Schwannoma Malignant</b>								
		1/50 (2%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skeletal Muscle:</b>								
<b>Liposarcoma</b>								
		0/50 (0%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skeletal Muscle:</b>								
<b>Sarcoma</b>								
		0/50 (0%)			1/50 (2%)			
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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	Male				Female			
<b>#Skin:</b>								
<b>Basal Cell Carcinoma</b>								
		1/50 (2%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Basal Cell Carcinoma or Basosquamous Tumor (malignant or NOS)</b>								
		1/50 (2%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma</b>								
		1/50 (2%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma</b>								
		6/50 (12%)			0/50 (0%)			
<b>Overall Incidence</b>	Total	6/50 (12%)	Mean 12%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Fibroma</b>								
		5/50 (10%)			1/50 (2%)			
<b>Overall Incidence</b>	Total	5/50 (10%)	Mean 10%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
.....								
<b>#Skin:</b>								
<b>Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma</b>								
		7/50 (14%)			2/50 (4%)			
<b>Overall Incidence</b>	Total	7/50 (14%)	Mean 14%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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 Report Date: 08/09/2016

	Male				Female			
<b>#Skin:</b>								
<b>Fibrosarcoma</b>								
		1/50	(2%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	1/50	(2%)
								Mean 2%
								SD 0%
<b>#Skin:</b>								
<b>Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma</b>								
		2/50	(4%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	1/50	(2%)
								Mean 2%
								SD 0%
<b>#Skin:</b>								
<b>Fibrous Histiocytoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
<b>#Skin:</b>								
<b>Hemangioma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
<b>#Skin:</b>								
<b>Hemangiosarcoma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
								Mean 2%
								SD 0%
<b>#Skin:</b>								
<b>Keratoacanthoma</b>								
		4/50	(8%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	4/50	(8%)	Mean 8%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied



Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
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	Male				Female			
<b>#Skin:</b>								
Lipoma								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
.....								
<b>#Skin:</b>								
Neurofibrosarcoma or Schwannoma (malignant or NOS)								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
.....								
<b>#Skin:</b>								
Neurofibrosarcoma, Neurofibroma, or Schwannoma (benign, malignant or NOS)								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
.....								
<b>#Skin:</b>								
Schwannoma Malignant								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
.....								
<b>#Skin:</b>								
Squamous Cell Carcinoma								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
.....								
<b>#Skin:</b>								
Squamous Cell Carcinoma, Basal Cell Carcinoma, Basosquamous Tumor (malignant or NOS), or Carcinoma								
		2/50	(4%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	0/50	(0%)

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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	Male				Female			
<b>#Skin:</b>								
<b>Squamous Cell Papilloma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma or Papilloma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma</b>								
		5/50	(10%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	5/50	(10%)	Mean 10%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma, Papilloma, or Keratoacanthoma</b>								
		5/50	(10%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	5/50	(10%)	Mean 10%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin: Sebaceous Gland:</b>								
<b>Adenoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin: Sebaceous Gland:</b>								
<b>Carcinoma or Adenoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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	Male				Female			
<b>#Stomach, Forestomach:</b>								
<b>Squamous Cell Carcinoma</b>								
		1/50	(2%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	1/50	(2%)
								Mean 2%
								SD 0%
<b>#Stomach, Forestomach:</b>								
<b>Squamous Cell Carcinoma or Papilloma Squamous</b>								
		1/50	(2%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	1/50	(2%)
								Mean 2%
								SD 0%
<b>*Testes:</b>								
<b>Adenoma</b>								
		3/49	(6%)					
<b>Overall Incidence</b>	Total	3/49	(6.12%)	Mean 6.12%	SD 0%			
<b>*Thymus:</b>								
<b>Thymoma Benign</b>								
		1/46	(2%)			0/47	(0%)	
<b>Overall Incidence</b>	Total	1/46	(2.17%)	Mean 2.17%	SD 0%	Total	0/47	(0%)
								Mean 0%
								SD 0%
<b>*Thymus:</b>								
<b>Thymoma: Benign, Malignant, NOS</b>								
		1/46	(2%)			0/47	(0%)	
<b>Overall Incidence</b>	Total	1/46	(2.17%)	Mean 2.17%	SD 0%	Total	0/47	(0%)
								Mean 0%
								SD 0%
<b>*Thyroid Gland: C-Cell:</b>								
<b>Adenoma</b>								
		13/50	(26%)			11/49	(22%)	
<b>Overall Incidence</b>	Total	13/50	(26%)	Mean 26%	SD 0%	Total	11/49	(22.45%)
								Mean 22.45%
								SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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	Male				Female			
<b>*Thyroid Gland: C-Cell: Carcinoma</b>								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%
.....								
<b>*Thyroid Gland: C-Cell: Carcinoma or Adenoma</b>								
Overall Incidence	Total	13/50 (26%)	Mean 26%	SD 0%	Total	11/49 (22.45%)	Mean 22.45%	SD 0%
.....								
<b>#Tooth: Odontoma</b>								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Uterus: Carcinoma</b>								
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Uterus: Polyp Stromal</b>								
Overall Incidence					Total	10/50 (20%)	Mean 20%	SD 0%
.....								
<b>#Uterus: Sarcoma Stromal</b>								
Overall Incidence					Total	2/50 (4%)	Mean 4%	SD 0%
.....								

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: GAVAGE  
 Vehicle: CORN OIL

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Male				Female						
<b>#Uterus:</b>										
<b>Sarcoma Stromal or Polyp Stromal</b>										
				12/50	(24%)					
<b>Overall Incidence</b>			Total	12/50	(24%)	Mean 24%	SD 0%			
.....										
<b>#Uterus:</b>										
<b>Squamous Cell Carcinoma</b>										
				0/50	(0%)					
<b>Overall Incidence</b>			Total	0/50	(0%)	Mean 0%	SD 0%			
.....										
<b>#Vagina:</b>										
<b>Granular Cell Tumor Benign</b>										
				0/50	(0%)					
<b>Overall Incidence</b>			Total	0/50	(0%)	Mean 0%	SD 0%			
.....										
<b>#Vagina:</b>										
<b>Polyp</b>										
				1/50	(2%)					
<b>Overall Incidence</b>			Total	1/50	(2%)	Mean 2%	SD 0%			
.....										
<b>#Vagina:</b>										
<b>Schwannoma Malignant</b>										
				1/50	(2%)					
<b>Overall Incidence</b>			Total	1/50	(2%)	Mean 2%	SD 0%			
.....										
<b>#Zymbal's Gland:</b>										
<b>Carcinoma</b>										
				0/50	(0%)					
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)	Mean 0%	SD 0%
.....										

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

**Version:** Aug2016  
**Contract/Lab:** All Laboratories  
**Species:** RATS  
**Strain:** Harlan Sprague-Dawley  
**Length of Study:** CHRONIC

**Toxicology Data Management System**  
Tumor Incidence for Selected Control Animal Groups  
**Route:** GAVAGE  
**Vehicle:** CORN OIL

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**Report Date:** 08/09/2016

---

	<b>Male</b>				<b>Female</b>			
<b>#Zymbal's Gland:</b>								
<b>Carcinoma or Adenoma</b>		0/50 (0%)				0/50 (0%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

---

\*: Denominator is number of animals with tissues examined microscopically  
#: Denominator is number of animals necropsied

Version: Aug2016  
Contract/Lab: All Laboratories  
Species: RATS  
Strain: Harlan Sprague-Dawley  
Length of Study: CHRONIC

**Toxicology Data Management System**  
Tumor Incidence for Selected Control Animal Groups  
Route: INHALATION  
Vehicle: AIR

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**Study Summary**

Laboratory Name	Study Number	Study Start Date	Length of Study in Days	Number of Animals Total and (#/Cage)	Number Surviving and (Mean Life Span)	Maximum Mean Weekly Body Weight	Chemical
<b>Male</b>							
Battelle Northwest	051047203	01/17/11	729	50(5)	25(661)	609.4	p-Chloro-a,a,a-trifluorotoluene
<b>Female</b>							
Battelle Northwest	051047203	01/17/11	731	50(5)	22(626)	377.3	p-Chloro-a,a,a-trifluorotoluene

NOTE: The text on page 2 ("Report Description") describes how the studies listed here are displayed on the data pages that follow.

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: INHALATION  
 Vehicle: AIR

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		Male			Female		
<b>#All Organs:</b>							
<b>Benign Tumors</b>							
		30/50 (60%)			39/50 (78%)		
<b>Overall Incidence</b>	Total	30/50 (60%)	Mean 60%	SD 0%	Total	39/50 (78%)	Mean 78% SD 0%
.....							
<b>#All Organs:</b>							
<b>Malignant Tumors</b>							
		12/50 (24%)			11/50 (22%)		
<b>Overall Incidence</b>	Total	12/50 (24%)	Mean 24%	SD 0%	Total	11/50 (22%)	Mean 22% SD 0%
.....							
<b>#All Organs:</b>							
<b>Malignant and Benign Tumors</b>							
		37/50 (74%)			41/50 (82%)		
<b>Overall Incidence</b>	Total	37/50 (74%)	Mean 74%	SD 0%	Total	41/50 (82%)	Mean 82% SD 0%
.....							
<b>#All Organs:</b>							
<b>Hemangioma</b>							
		1/50 (2%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>#All Organs:</b>							
<b>Hemangiosarcoma</b>							
		0/50 (0%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							
<b>#All Organs:</b>							
<b>Hemangiosarcoma or Hemangioma</b>							
		1/50 (2%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....							

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied



Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
**Route: INHALATION**  
**Vehicle: AIR**

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		Male			Female		
<b>#All Organs:</b>							
<b>Histiocytic Sarcoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							
<b>#All Organs:</b>							
<b>Leukemia: Granulocytic</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							
<b>#All Organs:</b>							
<b>Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated</b>							
		3/50	(6%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	3/50	(6%)	Mean 6%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							
<b>#All Organs:</b>							
<b>Mesothelioma: Benign, Malignant, NOS</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							
<b>#All Organs:</b>							
<b>Mesothelioma: Malignant</b>							
		1/50	(2%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							
<b>*Adrenal Cortex:</b>							
<b>Adenoma</b>							
		3/50	(6%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	3/50	(6%)	Mean 6%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
.....							

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
**Route: INHALATION**  
**Vehicle: AIR**

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		Male			Female		
<b>*Adrenal Medulla:</b>							
<b>  Pheochromocytoma Benign</b>							
		12/50 (24%)			0/49 (0%)		
<b>Overall Incidence</b>	Total	12/50 (24%)	Mean 24%	SD 0%	Total	0/49 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>  Pheochromocytoma Complex</b>							
		0/50 (0%)			0/49 (0%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>  Pheochromocytoma Malignant</b>							
		2/50 (4%)			0/49 (0%)		
<b>Overall Incidence</b>	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/49 (0%)	Mean 0% SD 0%
.....							
<b>*Adrenal Medulla:</b>							
<b>  Pheochromocytoma: Benign, Complex, Malignant, NOS</b>							
		14/50 (28%)			0/49 (0%)		
<b>Overall Incidence</b>	Total	14/50 (28%)	Mean 28%	SD 0%	Total	0/49 (0%)	Mean 0% SD 0%
.....							
<b>*Brain:</b>							
<b>  Glioma Malignant</b>							
		2/50 (4%)			1/50 (2%)		
<b>Overall Incidence</b>	Total	2/50 (4%)	Mean 4%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....							
<b>*Brain:</b>							
<b>  Granular Cell Tumor Benign</b>							
		0/50 (0%)			0/50 (0%)		
<b>Overall Incidence</b>	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: INHALATION  
 Vehicle: AIR

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 Report Date: 08/09/2016

	Male				Female			
<b>*Brain:</b>								
<b>Oligodendroglioma, Glioma, or Astrocytoma</b>								
		2/50	(4%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%
.....								
<b>*Brain:</b>								
<b>Schwannoma Malignant</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%
.....								
<b>*Epididymis:</b>								
<b>Sarcoma</b>								
		1/50	(2%)					
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%			
.....								
<b>#Eye:</b>								
<b>Leiomyoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>*Heart:</b>								
<b>Schwannoma Malignant</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Intestine Large: Colon/Rectum:</b>								
<b>Leiomyoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

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	Male				Female			
<b>#Intestine Small: Jejunum:</b>								
<b>Leiomyosarcoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Intestine Small: Site Unspecified:</b>								
<b>Leiomyosarcoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>*Islets, Pancreatic:</b>								
<b>Adenoma</b>								
		8/50	(16%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	8/50	(16%)	Mean 16%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%
.....								
<b>*Islets, Pancreatic:</b>								
<b>Carcinoma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%
.....								
<b>*Islets, Pancreatic:</b>								
<b>Carcinoma or Adenoma</b>								
		8/50	(16%)			2/50	(4%)	
<b>Overall Incidence</b>	Total	8/50	(16%)	Mean 16%	SD 0%	Total	2/50	(4%)
							Mean 4%	SD 0%
.....								
<b>*Kidney: Renal Tubule:</b>								
<b>Adenoma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

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**Route: INHALATION**  
**Vehicle: AIR**

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		Male			Female		
<b>*Kidney: Renal Tubule:</b>							
<b>  Carcinoma or Adenoma</b>							
		0/50	(0%)		1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)
							Mean 2%
							SD 0%
<b>*Liver:</b>							
<b>  Hepatocellular Adenoma</b>							
		0/50	(0%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
<b>*Liver:</b>							
<b>  Hepatocellular Carcinoma or Hepatocellular Adenoma</b>							
		0/50	(0%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
<b>*Liver:</b>							
<b>  Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma</b>							
		0/50	(0%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	2/50 (4%)
							Mean 4%
							SD 0%
<b>*Lung:</b>							
<b>  Alveolar/Bronchiolar Adenoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
<b>*Lung:</b>							
<b>  Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

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**Vehicle: AIR**

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		Male			Female		
<b>*Lung:</b>							
<b>Sarcoma</b>							
		0/50	(0%)			0/50	(0%)
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>#Lymph Node, Mesenteric:</b>							
<b>Hemangiosarcoma</b>							
		0/50	(0%)			0/50	(0%)
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
							Mean 0%
							SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Adenoma</b>							
		0/50	(0%)			4/50	(8%)
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	4/50 (8%)
							Mean 8%
							SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Carcinoma</b>							
		0/50	(0%)			5/50	(10%)
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	5/50 (10%)
							Mean 10%
							SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Carcinoma or Adenoma</b>							
		0/50	(0%)			9/50	(18%)
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	9/50 (18%)
							Mean 18%
							SD 0%
.....							
<b>#Mammary Gland:</b>							
<b>Fibroadenoma</b>							
		2/50	(4%)			20/50	(40%)
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	20/50 (40%)
							Mean 40%
							SD 0%
.....							

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
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**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
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	Male				Female				
<b>#Mammary Gland:</b>									
<b>Fibroma, Fibroadenoma or Adenoma</b>									
		2/50	(4%)			23/50	(46%)		
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	23/50 (46%)	Mean 46%	SD 0%
.....									
<b>#Mammary Gland:</b>									
<b>Fibroma, Fibroadenoma, Carcinoma, or Adenoma</b>									
		2/50	(4%)			27/50	(54%)		
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	27/50 (54%)	Mean 54%	SD 0%
.....									
<b>#Mammary Gland:</b>									
<b>Myoepithelioma</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....									
<b>#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):</b>									
<b>Squamous Cell Carcinoma</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....									
<b>#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):</b>									
<b>Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....									
<b>#Oral Mucosa:</b>									
<b>Squamous Cell Carcinoma</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
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				Male					Female
<b>*Ovary:</b>									
<b>Granulosa Cell Tumor Benign</b>									
						3/50	(6%)		
<b>Overall Incidence</b>				Total		3/50	(6%)	Mean 6%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Granulosa Cell Tumor: Benign, Malignant, NOS</b>									
						3/50	(6%)		
<b>Overall Incidence</b>				Total		3/50	(6%)	Mean 6%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Granulosa-Theca Tumor Benign</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total		0/50	(0%)	Mean 0%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Thecoma Benign</b>									
						1/50	(2%)		
<b>Overall Incidence</b>				Total		1/50	(2%)	Mean 2%	SD 0%
.....									
<b>*Ovary:</b>									
<b>Tubulostromal Carcinoma</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total		0/50	(0%)	Mean 0%	SD 0%
.....									
<b>*Pancreas:</b>									
<b>Adenoma</b>									
						0/50	(0%)		
<b>Overall Incidence</b>				Total		0/50	(0%)	Mean 0%	SD 0%
.....									

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied



Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
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 Length of Study: CHRONIC

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	Male				Female			
<b>*Pancreas:</b>								
<b>Carcinoma or Adenoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>*Pituitary Gland: Pars Distalis or Unspecified Site:</b>								
<b>Adenoma</b>								
		11/50	(22%)			18/50	(36%)	
<b>Overall Incidence</b>	Total	11/50	(22%)	Mean 22%	SD 0%	Total	18/50	(36%)
							Mean 36%	SD 0%
.....								
<b>*Pituitary Gland: Pars Distalis or Unspecified Site:</b>								
<b>Carcinoma or Adenoma</b>								
		11/50	(22%)			18/50	(36%)	
<b>Overall Incidence</b>	Total	11/50	(22%)	Mean 22%	SD 0%	Total	18/50	(36%)
							Mean 36%	SD 0%
.....								
<b>*Salivary Glands:</b>								
<b>Schwannoma Malignant</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skeletal Muscle:</b>								
<b>Liposarcoma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)
							Mean 2%	SD 0%
.....								
<b>#Skeletal Muscle:</b>								
<b>Sarcoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

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	Male				Female			
<b>#Skin:</b>								
<b>Basal Cell Carcinoma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....								
<b>#Skin:</b>								
<b>Basal Cell Carcinoma or Basosquamous Tumor (malignant or NOS)</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....								
<b>#Skin:</b>								
<b>Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma</b>								
		0/50	(0%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....								
<b>#Skin:</b>								
<b>Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma</b>								
		4/50	(8%)			1/50	(2%)	
<b>Overall Incidence</b>	Total	4/50	(8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2% SD 0%
.....								
<b>#Skin:</b>								
<b>Fibroma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%
.....								
<b>#Skin:</b>								
<b>Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0% SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
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	Male				Female			
<b>#Skin:</b>								
<b>Fibrosarcoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Skin:</b>								
<b>Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Skin:</b>								
<b>Fibrous Histiocytoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Skin:</b>								
<b>Hemangioma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Skin:</b>								
<b>Hemangiosarcoma</b>								
		0/50	(0%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%
.....								
<b>#Skin:</b>								
<b>Keratoacanthoma</b>								
		3/50	(6%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	3/50	(6%)	Mean 6%	SD 0%	Total	0/50	(0%)
								Mean 0%
								SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
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		Male				Female			
<b>#Skin:</b>									
<b>Lipoma</b>									
		1/50	(2%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)	Mean 0% SD 0%
.....									
<b>#Skin:</b>									
<b>Neurofibrosarcoma or Schwannoma (malignant or NOS)</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)	Mean 0% SD 0%
.....									
<b>#Skin:</b>									
<b>Neurofibrosarcoma, Neurofibroma, or Schwannoma (benign, malignant or NOS)</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)	Mean 0% SD 0%
.....									
<b>#Skin:</b>									
<b>Schwannoma Malignant</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)	Mean 0% SD 0%
.....									
<b>#Skin:</b>									
<b>Squamous Cell Carcinoma</b>									
		0/50	(0%)			0/50	(0%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50	(0%)	Mean 0% SD 0%
.....									
<b>#Skin:</b>									
<b>Squamous Cell Carcinoma, Basal Cell Carcinoma, Basosquamous Tumor (malignant or NOS), or Carcinoma</b>									
		0/50	(0%)			1/50	(2%)		
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	1/50	(2%)	Mean 2% SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
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	Male				Female			
<b>#Skin:</b>								
<b>Squamous Cell Papilloma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma or Papilloma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma</b>								
		4/50	(8%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	4/50	(8%)	Mean 8%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin:</b>								
<b>Squamous Cell Papilloma, Papilloma, or Keratoacanthoma</b>								
		4/50	(8%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	4/50	(8%)	Mean 8%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin: Sebaceous Gland:</b>								
<b>Adenoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%
.....								
<b>#Skin: Sebaceous Gland:</b>								
<b>Carcinoma or Adenoma</b>								
		1/50	(2%)			0/50	(0%)	
<b>Overall Incidence</b>	Total	1/50	(2%)	Mean 2%	SD 0%	Total	0/50	(0%)
							Mean 0%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied

		Male			Female		
<b>#Stomach, Forestomach:</b>							
<b>Squamous Cell Carcinoma</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
<b>#Stomach, Forestomach:</b>							
<b>Squamous Cell Carcinoma or Papilloma Squamous</b>							
		0/50	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
<b>*Testes:</b>							
<b>Adenoma</b>							
		0/50	(0%)				
<b>Overall Incidence</b>	Total	0/50	(0%)	Mean 0%	SD 0%		
<b>*Thymus:</b>							
<b>Thymoma Benign</b>							
		0/48	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/48	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
<b>*Thymus:</b>							
<b>Thymoma: Benign, Malignant, NOS</b>							
		0/48	(0%)		0/50	(0%)	
<b>Overall Incidence</b>	Total	0/48	(0%)	Mean 0%	SD 0%	Total	0/50 (0%)
						Mean 0%	SD 0%
<b>*Thyroid Gland: C-Cell:</b>							
<b>Adenoma</b>							
		2/50	(4%)		2/50	(4%)	
<b>Overall Incidence</b>	Total	2/50	(4%)	Mean 4%	SD 0%	Total	2/50 (4%)
						Mean 4%	SD 0%

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
**Route: INHALATION**  
**Vehicle: AIR**

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	Male				Female			
<b>*Thyroid Gland: C-Cell: Carcinoma</b>								
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>*Thyroid Gland: C-Cell: Carcinoma or Adenoma</b>								
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%
.....								
<b>#Tooth: Odontoma</b>								
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
.....								
<b>#Uterus: Carcinoma</b>								
Overall Incidence					Total	1/50 (2%)	Mean 2%	SD 0%
.....								
<b>#Uterus: Polyp Stromal</b>								
Overall Incidence					Total	7/50 (14%)	Mean 14%	SD 0%
.....								
<b>#Uterus: Sarcoma Stromal</b>								
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%
.....								

\*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Aug2016  
 Contract/Lab: All Laboratories  
 Species: RATS  
 Strain: Harlan Sprague-Dawley  
 Length of Study: CHRONIC

**Toxicology Data Management System**  
 Tumor Incidence for Selected Control Animal Groups  
 Route: INHALATION  
 Vehicle: AIR

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 Report Date: 08/09/2016

Male				Female			
<b>#Uterus:</b>							
<b>Sarcoma Stromal or Polyp Stromal</b>							
				7/50	(14%)		
<b>Overall Incidence</b>				Total	7/50 (14%)	Mean 14%	SD 0%
.....							
<b>#Uterus:</b>							
<b>Squamous Cell Carcinoma</b>							
				1/50	(2%)		
<b>Overall Incidence</b>				Total	1/50 (2%)	Mean 2%	SD 0%
.....							
<b>#Vagina:</b>							
<b>Granular Cell Tumor Benign</b>							
				1/50	(2%)		
<b>Overall Incidence</b>				Total	1/50 (2%)	Mean 2%	SD 0%
.....							
<b>#Vagina:</b>							
<b>Polyp</b>							
				0/50	(0%)		
<b>Overall Incidence</b>				Total	0/50 (0%)	Mean 0%	SD 0%
.....							
<b>#Vagina:</b>							
<b>Schwannoma Malignant</b>							
				1/50	(2%)		
<b>Overall Incidence</b>				Total	1/50 (2%)	Mean 2%	SD 0%
.....							
<b>#Zymbal's Gland:</b>							
<b>Carcinoma</b>							
		1/50	(2%)				
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%
						SD 0%	

\*: Denominator is number of animals with tissues examined microscopically  
 #: Denominator is number of animals necropsied



Version: Aug2016  
Contract/Lab: All Laboratories  
Species: RATS  
Strain: Harlan Sprague-Dawley  
Length of Study: CHRONIC

**Toxicology Data Management System**  
Tumor Incidence for Selected Control Animal Groups  
Route: INHALATION  
Vehicle: AIR

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Report Date: 08/09/2016

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	Male				Female			
<b>#Zymbal's Gland:</b>								
<b>Carcinoma or Adenoma</b>								
		1/50 (2%)				0/50 (0%)		
<b>Overall Incidence</b>	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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\*: Denominator is number of animals with tissues examined microscopically  
#: Denominator is number of animals necropsied