

Version: Jun2013
Contract/Lab: All Laboratories
Species: RATS
Strain: F 344/N
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
Male							
Battelle Northwest	052001105	07/14/03	729	50(5)	23(678)	526.9	1-Bromopropane
Battelle Northwest	059901705	08/25/03	729	50(5)	28(686)	525.6	Diethylamine
Battelle Northwest	059302507	06/16/03	729	50(5)	20(668)	536.2	Tetralin
Battelle Northwest	052030305	06/06/05	729	50(5)	25(680)	532.1	Vinylidene chloride
Female							
Battelle Northwest	052001105	07/14/03	730	50(5)	34(702)	386.5	1-Bromopropane
Battelle Northwest	059901705	08/25/03	730	50(5)	31(687)	378.3	Diethylamine
Battelle Northwest	059302507	06/16/03	730	50(5)	31(682)	370.8	Tetralin
Battelle Northwest	052030305	06/06/05	731	50(5)	30(705)	375.6	Vinylidene chloride

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		Male				Female			
#All Organs:									
Benign Tumors									
		48/50 (96%)	44/50 (88%)	48/50 (96%)		45/50 (90%)	43/50 (86%)	40/50 (80%)	
		47/50 (94%)				47/50 (94%)			
Overall Incidence	Total	187/200 (93.5%)	Mean 93.5%	SD 3.79%	Total	175/200 (87.5%)	Mean 87.5%	SD 5.97%	
.....									
#All Organs:									
Malignant Tumors									
		38/50 (76%)	31/50 (62%)	33/50 (66%)		26/50 (52%)	24/50 (48%)	25/50 (50%)	
		27/50 (54%)				24/50 (48%)			
Overall Incidence	Total	129/200 (64.5%)	Mean 64.5%	SD 9.15%	Total	99/200 (49.5%)	Mean 49.5%	SD 1.91%	
.....									
#All Organs:									
Malignant and Benign Tumors									
		50/50 (100%)	49/50 (98%)	50/50 (100%)		49/50 (98%)	48/50 (96%)	46/50 (92%)	
		50/50 (100%)				49/50 (98%)			
Overall Incidence	Total	199/200 (99.5%)	Mean 99.5%	SD 1%	Total	192/200 (96%)	Mean 96%	SD 2.83%	
.....									
#All Organs:									
Hemangioma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#All Organs:									
Hemangiosarcoma									
		0/50 (0%)	1/50 (2%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	0/200 (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			
#All Organs:									
Hemangiosarcoma or Hemangioma									
		0/50 (0%)	1/50 (2%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#All Organs:									
Histiocytic Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	2/50 (4%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	2/200 (1%)	Mean 1%	SD 2%	
.....									
#All Organs:									
Leukemia: Lymphocytic, Monocytic, Mononuclear, or Undifferentiated									
		29/50 (58%)	25/50 (50%)	25/50 (50%)		16/50 (32%)	15/50 (30%)	17/50 (34%)	
		17/50 (34%)				10/50 (20%)			
Overall Incidence	Total	96/200 (48%)	Mean 48%	SD 10.07%	Total	58/200 (29%)	Mean 29%	SD 6.22%	
.....									
#All Organs:									
Malignant Lymphoma: Histiocytic, Lymphocytic, Mixed, NOS, or Undifferentiated Cell Type									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#All Organs:									
Mesothelioma: Benign, Malignant, NOS									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	

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		Male				Female			
#All Organs:									
Mesothelioma: Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#All Organs:									
Osteoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#All Organs:									
Osteosarcoma									
		2/50 (4%)	0/50 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 2.58%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#All Organs:									
Osteosarcoma or Osteoma									
		2/50 (4%)	0/50 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		2/50 (4%)				1/50 (2%)			
Overall Incidence	Total	7/200 (3.5%)	Mean 3.5%	SD 2.52%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Adrenal Cortex:									
Adenoma									
		1/50 (2%)	1/50 (2%)	0/50 (0%)		3/50 (6%)	4/50 (8%)	8/50 (16%)	
		4/49 (8%)				2/50 (4%)			
Overall Incidence	Total	6/199 (3.02%)	Mean 3.04%	SD 3.54%	Total	17/200 (8.5%)	Mean 8.5%	SD 5.26%	

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		Male				Female			
*Adrenal Cortex:									
 Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				1/50 (2%)			
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Adrenal Medulla:									
 Pheochromocytoma Benign									
		10/50 (20%)	7/50 (14%)	9/50 (18%)		2/50 (4%)	0/50 (0%)	2/50 (4%)	
		5/49 (10%)				0/50 (0%)			
Overall Incidence	Total	31/199 (15.58%)	Mean 15.55%	SD 4.35%	Total	4/200 (2%)	Mean 2%	SD 2.31%	
.....									
*Adrenal Medulla:									
 Pheochromocytoma Complex									
		1/50 (2%)	2/50 (4%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	3/199 (1.51%)	Mean 1.5%	SD 1.91%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Adrenal Medulla:									
 Pheochromocytoma Malignant									
		0/50 (0%)	1/50 (2%)	4/50 (8%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	
		2/49 (4%)				1/50 (2%)			
Overall Incidence	Total	7/199 (3.52%)	Mean 3.52%	SD 3.42%	Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
*Adrenal Medulla:									
 Pheochromocytoma: Benign, Complex, Malignant, NOS									
		11/50 (22%)	10/50 (20%)	12/50 (24%)		3/50 (6%)	0/50 (0%)	3/50 (6%)	
		6/49 (12%)				1/50 (2%)			
Overall Incidence	Total	39/199 (19.6%)	Mean 19.56%	SD 5.14%	Total	7/200 (3.5%)	Mean 3.5%	SD 3%	

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		Male				Female			
#Blood Vessel:									
Leiomyosarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Bone:									
Chordoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Bone:									
Osteoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Bone:									
Osteosarcoma									
		1/50 (2%)	0/50 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 2.52%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Bone:									
Osteosarcoma or Osteoma									
		1/50 (2%)	0/50 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		2/50 (4%)				1/50 (2%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 2.58%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	

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		Male				Female			
*Brain:									
Glioma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Brain:									
Glioma Benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Brain:									
Glioma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Brain:									
Oligodendroglioma, Glioma, or Astrocytoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Brain:									
Osteosarcoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	

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		Male				Female			
*Clitoral/Preputial Gland:									
Adenoma									
		4/50 (8%)	0/50 (0%)	0/50 (0%)		3/49 (6%)	1/50 (2%)	0/50 (0%)	
		2/50 (4%)				4/47 (9%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 3.83%	Total	8/196 (4.08%)	Mean 4.16%	SD 3.86%	
.....									
*Clitoral/Preputial Gland:									
Carcinoma									
		2/50 (4%)	1/50 (2%)	0/50 (0%)		1/49 (2%)	0/50 (0%)	4/50 (8%)	
		2/50 (4%)				1/47 (2%)			
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 1.91%	Total	6/196 (3.06%)	Mean 3.04%	SD 3.45%	
.....									
*Clitoral/Preputial Gland:									
Carcinoma or Adenoma									
		6/50 (12%)	1/50 (2%)	0/50 (0%)		4/49 (8%)	1/50 (2%)	4/50 (8%)	
		4/50 (8%)				5/47 (11%)			
Overall Incidence	Total	11/200 (5.5%)	Mean 5.5%	SD 5.51%	Total	14/196 (7.14%)	Mean 7.2%	SD 3.67%	
.....									
*Clitoral/Preputial Gland:									
Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/47 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/196 (0%)	Mean 0%	SD 0%	
.....									
#Ear:									
Neural Crest Tumor									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

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		Male				Female			
#Eye:									
Melanoma Benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Eye:									
Melanoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Harderian Gland:									
Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Harderian Gland:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Harderian Gland:									
Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

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		Male				Female			
*Heart:									
Schwannoma Benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Heart:									
Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Large: Colon/Rectum:									
Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Large: Colon/Rectum:									
Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Duodenum:									
Leiomyoma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	

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		Male				Female			
#Intestine Small: Duodenum:									
Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Ileum:									
Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Jejunum:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Jejunum:									
Leiomyoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Jejunum:									
Leiomyosarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
 Route: INHALATION
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		Male				Female			
#Intestine Small: Site Unspecified:									
Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Site Unspecified:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Site Unspecified:									
Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Site Unspecified:									
Leiomyoma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Intestine Small: Site Unspecified:									
Leiomyosarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Intestine Small: Site Unspecified:									
Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Islets, Pancreatic:									
Adenoma									
		0/50 (0%)	6/50 (12%)	3/50 (6%)		0/50 (0%)	2/50 (4%)	0/50 (0%)	
		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	11/200 (5.5%)	Mean 5.5%	SD 5%	Total	2/200 (1%)	Mean 1%	SD 2%	
.....									
*Islets, Pancreatic:									
Carcinoma									
		3/50 (6%)	1/50 (2%)	1/50 (2%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	7/200 (3.5%)	Mean 3.5%	SD 1.91%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Islets, Pancreatic:									
Carcinoma or Adenoma									
		3/50 (6%)	7/50 (14%)	4/50 (8%)		1/50 (2%)	2/50 (4%)	0/50 (0%)	
		4/50 (8%)				0/50 (0%)			
Overall Incidence	Total	18/200 (9%)	Mean 9%	SD 3.46%	Total	3/200 (1.5%)	Mean 1.5%	SD 1.91%	
.....									
*Kidney: Pelvis and Transitional Epithelium:									
Papilloma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/199 (0%)	Mean 0%	SD 0%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
*Kidney: Renal Tubule: Adenoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/199 (0%)	Mean 0%	SD 0%	
.....									
*Kidney: Renal Tubule: Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		1/49 (2%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/199 (0.5%)	Mean 0.51%	SD 1.02%	
.....									
*Kidney: Renal Tubule: Carcinoma or Adenoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		1/49 (2%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	1/199 (0.5%)	Mean 0.51%	SD 1.02%	
.....									
*Kidney: Renal Tubule: Lipoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0%	SD 0%	
.....									
*Kidney: Renal Tubule: Mesenchymal Tumor Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/199 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
*Kidney: Renal Tubule:									
Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0%	SD 0%	
.....									
*Liver:									
Hepatocellular Adenoma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	1/50 (2%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
*Liver:									
Hepatocellular Carcinoma									
		2/50 (4%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 2%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Liver:									
Hepatocellular Carcinoma or Hepatoblastoma									
		2/50 (4%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 2%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Liver:									
Hepatocellular Carcinoma or Hepatocellular Adenoma									
		2/50 (4%)	0/50 (0%)	1/50 (2%)		1/50 (2%)	1/50 (2%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	4/200 (2%)	Mean 2%	SD 1.63%	Total	3/200 (1.5%)	Mean 1.5%	SD 1%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
*Liver:									
Hepatocellular Carcinoma, Hepatocellular Adenoma, or Hepatoblastoma									
		2/50 (4%)	0/50 (0%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	0/50 (0%)		
		1/50 (2%)			1/50 (2%)				
Overall Incidence	Total	4/200 (2%)	Mean 2%	SD 1.63%	Total	3/200 (1.5%)	Mean 1.5%	SD 1%	
.....									
*Liver:									
Ito Cell Tumor Benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)			0/50 (0%)				
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Lung:									
Alveolar/Bronchiolar Adenoma									
		2/50 (4%)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)		
		3/50 (6%)			1/50 (2%)				
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 3%	Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
*Lung:									
Alveolar/Bronchiolar Carcinoma									
		1/50 (2%)	1/50 (2%)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)		
		0/50 (0%)			0/50 (0%)				
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 1%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
*Lung:									
Alveolar/Bronchiolar Carcinoma or Alveolar/Bronchiolar Adenoma									
		3/50 (6%)	1/50 (2%)	1/50 (2%)	2/50 (4%)	0/50 (0%)	0/50 (0%)		
		3/50 (6%)			1/50 (2%)				
Overall Incidence	Total	8/200 (4%)	Mean 4%	SD 2.31%	Total	3/200 (1.5%)	Mean 1.5%	SD 1.91%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
Route: INHALATION
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		Male				Female			
*Lung:									
Fibrosarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Mammary Gland:									
Adenolipoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Mammary Gland:									
Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Mammary Gland:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		4/50 (8%)	9/50 (18%)	3/50 (6%)	3/50 (6%)
		0/50 (0%)				5/50 (10%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	21/200 (10.5%)	Mean 10.5%	SD 5.26%	
.....									
#Mammary Gland:									
Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		4/50 (8%)	10/50 (20%)	3/50 (6%)	3/50 (6%)
		0/50 (0%)				5/50 (10%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	22/200 (11%)	Mean 11%	SD 6.22%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Mammary Gland:									
Fibroadenoma									
		2/50 (4%)	2/50 (4%)	1/50 (2%)		25/50 (50%)	27/50 (54%)	14/50 (28%)	
		1/50 (2%)				37/50 (74%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 1.15%	Total	103/200 (51.5%)	Mean 51.5%	SD 18.86%	
.....									
#Mammary Gland:									
Fibroma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Mammary Gland:									
Fibroma, Fibroadenoma or Adenoma									
		2/50 (4%)	2/50 (4%)	1/50 (2%)		25/50 (50%)	27/50 (54%)	14/50 (28%)	
		1/50 (2%)				37/50 (74%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 1.15%	Total	103/200 (51.5%)	Mean 51.5%	SD 18.86%	
.....									
#Mammary Gland:									
Fibroma, Fibroadenoma, Carcinoma, or Adenoma									
		2/50 (4%)	2/50 (4%)	1/50 (2%)		27/50 (54%)	30/50 (60%)	16/50 (32%)	
		1/50 (2%)				38/50 (76%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 1.15%	Total	111/200 (55.5%)	Mean 55.5%	SD 18.21%	
.....									
#Mesentery:									
Fibrous Histiocytoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
Route: INHALATION
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		Male				Female			
#Mesentery:									
Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Nose:									
Adenoma									
		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	0/198 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):									
Papilloma Squamous or Papilloma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):									
Squamous Cell Carcinoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	1/50 (2%)
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
#Oral Cavity (Oral Mucosa, Tongue, Pharynx, Tooth, Gingiva):									
Squamous Cell Carcinoma, Papilloma Squamous, or Papilloma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	1/50 (2%)
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	2/200 (1%)	Mean 1%	SD 1.15%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Oral Mucosa:									
Squamous Cell Carcinoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Oral Mucosa:									
Squamous Cell Papilloma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Ovary:									
Cystadenoma									
						0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
						0/50 (0%)			
Overall Incidence	Total				Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Ovary:									
Fibrosarcoma									
						0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
						0/50 (0%)			
Overall Incidence	Total				Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Ovary:									
Granulosa Cell Tumor Benign									
						0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
						0/50 (0%)			
Overall Incidence	Total				Total	0/200 (0%)	Mean 0%	SD 0%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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		
*Ovary:						
Granulosa Cell Tumor Malignant						
		0/50	(0%)	0/50	(0%)	0/50
		0/50	(0%)			(0%)
Overall Incidence	Total	0/200	(0%)	Mean 0%		SD 0%
.....						
*Ovary:						
Granulosa Cell Tumor: Benign, Malignant, NOS						
		0/50	(0%)	0/50	(0%)	0/50
		0/50	(0%)			(0%)
Overall Incidence	Total	0/200	(0%)	Mean 0%		SD 0%
.....						
*Ovary:						
Granulosa-Theca Tumor Malignant						
		2/50	(4%)	0/50	(0%)	0/50
		1/50	(2%)			(0%)
Overall Incidence	Total	3/200	(1.5%)	Mean 1.5%		SD 1.91%
.....						
*Ovary:						
Schwannoma Malignant						
		0/50	(0%)	0/50	(0%)	0/50
		0/50	(0%)			(0%)
Overall Incidence	Total	0/200	(0%)	Mean 0%		SD 0%
.....						
*Ovary:						
Sertoli Cell Tumor Malignant						
		0/50	(0%)	0/50	(0%)	0/50
		1/50	(2%)			(0%)
Overall Incidence	Total	1/200	(0.5%)	Mean 0.5%		SD 1%

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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		
*Ovary:							
Tubulostromal Adenoma							
					0/50 (0%)	0/50 (0%)	0/50 (0%)
					0/50 (0%)		
Overall Incidence					Total 0/200 (0%)	Mean 0%	SD 0%
.....							
*Pancreas:							
Adenoma							
		0/50 (0%)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)			0/50 (0%)		
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total 0/200 (0%)	Mean 0%	SD 0%
.....							
*Pancreas:							
Carcinoma or Adenoma							
		0/50 (0%)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)			0/50 (0%)		
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total 0/200 (0%)	Mean 0%	SD 0%
.....							
*Pancreas:							
Mixed Tumor Benign							
		0/50 (0%)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)			0/50 (0%)		
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total 0/200 (0%)	Mean 0%	SD 0%
.....							
*Parathyroid Gland:							
Adenoma							
		0/46 (0%)	0/48 (0%)	0/48 (0%)	0/47 (0%)	1/43 (2%)	0/49 (0%)
		0/50 (0%)			0/49 (0%)		
Overall Incidence	Total	0/192 (0%)	Mean 0%	SD 0%	Total 1/188 (0.53%)	Mean 0.58%	SD 1.16%

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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		Male			Female		
*Pituitary Gland: Pars Distalis or Unspecified Site:							
Adenoma							
		37/50 (74%)	31/50 (62%)	36/50 (72%)	35/50 (70%)	29/50 (58%)	36/49 (73%)
		34/50 (68%)			32/50 (64%)		
Overall Incidence	Total	138/200 (69%)	Mean 69%	SD 5.29%	Total	132/199 (66.33%)	Mean 66.37% SD 6.81%
.....							
*Pituitary Gland: Pars Distalis or Unspecified Site:							
Carcinoma							
		0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)	2/50 (4%)	0/49 (0%)
		0/50 (0%)			1/50 (2%)		
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	3/199 (1.51%)	Mean 1.5% SD 1.91%
.....							
*Pituitary Gland: Pars Distalis or Unspecified Site:							
Carcinoma or Adenoma							
		37/50 (74%)	31/50 (62%)	37/50 (74%)	35/50 (70%)	31/50 (62%)	36/49 (73%)
		34/50 (68%)			33/50 (66%)		
Overall Incidence	Total	139/200 (69.5%)	Mean 69.5%	SD 5.74%	Total	135/199 (67.84%)	Mean 67.87% SD 4.96%
.....							
*Pituitary Gland: Pars Distalis or Unspecified Site:							
Ganglioneuroma							
		0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/49 (0%)
		0/50 (0%)			0/50 (0%)		
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/199 (0%)	Mean 0% SD 0%
.....							
*Pituitary Gland: Pars Intermedia:							
Adenoma							
		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/49 (0%)
		0/50 (0%)			0/50 (0%)		
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0% SD 0%

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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		Male				Female			
*Pituitary Gland: Pars Intermedia:									
 Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/49 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0%	SD 0%	
.....									
*Pituitary Gland: Pars Nervosa:									
 Craniopharyngioma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/49 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0%	SD 0%	
.....									
*Prostate:									
 Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)					
		0/50 (0%)							
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%					
.....									
*Prostate:									
 Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)					
		0/50 (0%)							
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%					
.....									
*Salivary Glands:									
 Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
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		Male				Female			
*Salivary Glands:									
 Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Salivary Glands:									
 Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Salivary Glands:									
 Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Seminal Vesicle:									
 Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)					
		0/50 (0%)							
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%					
.....									
#Skeletal Muscle:									
 Fibrous Histiocytoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
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		Male				Female			
#Skeletal Muscle:									
Lipoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Basal Cell Adenoma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Basal Cell Adenoma or Basosquamous Tumor Benign									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Basal Cell Adenoma, Basosquamous Tumor Benign, or Trichoepithelioma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		2/50 (4%)				1/50 (2%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 1.91%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Basal Cell Carcinoma									
		0/50 (0%)	1/50 (2%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 2.52%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
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		Male				Female			
#Skin:									
Basal Cell Carcinoma or Basosquamous Tumor (malignant or NOS)									
		0/50 (0%)	1/50 (2%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 2.52%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma									
		0/50 (0%)	1/50 (2%)	4/50 (8%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		3/50 (6%)				1/50 (2%)			
Overall Incidence	Total	8/200 (4%)	Mean 4%	SD 3.65%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Basal or Sq. Cell Carcinoma, Carcinoma, Basosq. Tumor (M or B), Basal Cell Adenoma, Adenoma, Papilloma, Sq Papilloma, Keratoacanthoma, Trichoepithelioma									
		1/50 (2%)	1/50 (2%)	5/50 (10%)		1/50 (2%)	1/50 (2%)	1/50 (2%)	
		9/50 (18%)				2/50 (4%)			
Overall Incidence	Total	16/200 (8%)	Mean 8%	SD 7.66%	Total	5/200 (2.5%)	Mean 2.5%	SD 1%	
.....									
#Skin:									
Fibroma									
		3/50 (6%)	1/50 (2%)	3/50 (6%)		2/50 (4%)	1/50 (2%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	8/200 (4%)	Mean 4%	SD 2.31%	Total	4/200 (2%)	Mean 2%	SD 1.63%	
.....									
#Skin:									
Fibroma, Fibrosarcoma, Sarcoma, Myxoma, Myxosarcoma, or Fibrous Histiocytoma									
		3/50 (6%)	2/50 (4%)	6/50 (12%)		2/50 (4%)	1/50 (2%)	0/50 (0%)	
		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	12/200 (6%)	Mean 6%	SD 4.32%	Total	4/200 (2%)	Mean 2%	SD 1.63%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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		Male				Female			
#Skin:									
Fibrosarcoma									
		0/50 (0%)	0/50 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 3%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Fibrosarcoma, Sarcoma, Myxosarcoma, or Fibrous Histiocytoma									
		0/50 (0%)	1/50 (2%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	4/200 (2%)	Mean 2%	SD 2.83%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Fibrous Histiocytoma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Hemangiosarcoma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Keratoacanthoma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		1/50 (2%)	1/50 (2%)	0/50 (0%)	
		3/50 (6%)				1/50 (2%)			
Overall Incidence	Total	4/200 (2%)	Mean 2%	SD 2.83%	Total	3/200 (1.5%)	Mean 1.5%	SD 1%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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		Male				Female			
#Skin:									
Lipoma									
		2/50 (4%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 2%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Liposarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Neural Crest Tumor									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Neurofibroma or Schwannoma benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Neurofibrosarcoma or Schwannoma (malignant or NOS)									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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		Male				Female			
#Skin:									
Neurofibrosarcoma, Neurofibroma, or Schwannoma (benign, malignant or NOS)									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Schwannoma Benign									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Schwannoma Malignant									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Squamous Cell Carcinoma									
		1/50 (2%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
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Toxicology Data Management System
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		Male				Female			
#Skin:									
Squamous Cell Carcinoma, Basal Cell Carcinoma, Basosquamous Tumor (malignant or NOS), or Carcinoma									
		1/50 (2%)	1/50 (2%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 2%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Skin:									
Squamous Cell Papilloma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		3/50 (6%)				0/50 (0%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 3%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Squamous Cell Papilloma or Papilloma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		3/50 (6%)				0/50 (0%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 3%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin:									
Squamous Cell Papilloma, Papilloma, Squamous Cell Carcinoma or Keratoacanthoma									
		1/50 (2%)	0/50 (0%)	1/50 (2%)		1/50 (2%)	1/50 (2%)	1/50 (2%)	
		6/50 (12%)				1/50 (2%)			
Overall Incidence	Total	8/200 (4%)	Mean 4%	SD 5.42%	Total	4/200 (2%)	Mean 2%	SD 0%	
.....									
#Skin:									
Squamous Cell Papilloma, Papilloma, or Keratoacanthoma									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		1/50 (2%)	1/50 (2%)	0/50 (0%)	
		6/50 (12%)				1/50 (2%)			
Overall Incidence	Total	7/200 (3.5%)	Mean 3.5%	SD 5.74%	Total	3/200 (1.5%)	Mean 1.5%	SD 1%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Skin:									
Trichoepithelioma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin: Sebaceous Gland:									
Adenoma									
		0/50 (0%)	1/50 (2%)	2/50 (4%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 1.91%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Skin: Sebaceous Gland:									
Carcinoma or Adenoma									
		0/50 (0%)	1/50 (2%)	2/50 (4%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	3/200 (1.5%)	Mean 1.5%	SD 1.91%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Spinal Cord:									
Glioma Malignant									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Stomach, Glandular:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
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 Route: INHALATION
 Vehicle: AIR

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		Male				Female			
#Stomach, Glandular:									
Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Stomach, Glandular:									
Sarcoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Testes:									
Adenoma									
		34/50 (68%)	36/50 (72%)	29/50 (58%)					
		32/50 (64%)							
Overall Incidence	Total	131/200 (65.5%)	Mean 65.5%	SD 5.97%					
.....									
*Testes:									
Hemangioma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)					
		0/50 (0%)							
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%					
.....									
*Thymus:									
Thymoma Benign									
		0/43 (0%)	0/44 (0%)	0/47 (0%)		1/46 (2%)	0/48 (0%)	0/44 (0%)	
		0/42 (0%)				0/46 (0%)			
Overall Incidence	Total	0/176 (0%)	Mean 0%	SD 0%	Total	1/184 (0.54%)	Mean 0.54%	SD 1.09%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
*Thymus:									
Thymoma Malignant									
		0/43 (0%)	0/44 (0%)	0/47 (0%)		0/46 (0%)	0/48 (0%)	0/44 (0%)	
		0/42 (0%)				0/46 (0%)			
Overall Incidence	Total	0/176 (0%)	Mean 0%	SD 0%	Total	0/184 (0%)	Mean 0%	SD 0%	
.....									
*Thymus:									
Thymoma NOS									
		0/43 (0%)	0/44 (0%)	0/47 (0%)		0/46 (0%)	1/48 (2%)	0/44 (0%)	
		0/42 (0%)				0/46 (0%)			
Overall Incidence	Total	0/176 (0%)	Mean 0%	SD 0%	Total	1/184 (0.54%)	Mean 0.52%	SD 1.04%	
.....									
*Thymus:									
Thymoma: Benign, Malignant, NOS									
		0/43 (0%)	0/44 (0%)	0/47 (0%)		1/46 (2%)	1/48 (2%)	0/44 (0%)	
		0/42 (0%)				0/46 (0%)			
Overall Incidence	Total	0/176 (0%)	Mean 0%	SD 0%	Total	2/184 (1.09%)	Mean 1.06%	SD 1.23%	
.....									
*Thyroid Gland: C-Cell:									
Adenoma									
		5/50 (10%)	7/50 (14%)	5/50 (10%)		3/50 (6%)	4/50 (8%)	3/50 (6%)	
		4/50 (8%)				3/50 (6%)			
Overall Incidence	Total	21/200 (10.5%)	Mean 10.5%	SD 2.52%	Total	13/200 (6.5%)	Mean 6.5%	SD 1%	
.....									
*Thyroid Gland: C-Cell:									
Carcinoma									
		4/50 (8%)	1/50 (2%)	2/50 (4%)		1/50 (2%)	0/50 (0%)	0/50 (0%)	
		3/50 (6%)				0/50 (0%)			
Overall Incidence	Total	10/200 (5%)	Mean 5%	SD 2.58%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
*Thyroid Gland: C-Cell: Carcinoma or Adenoma									
		9/50 (18%)	8/50 (16%)	6/50 (12%)		4/50 (8%)	4/50 (8%)	3/50 (6%)	
		7/50 (14%)				3/50 (6%)			
Overall Incidence	Total	30/200 (15%)	Mean 15%	SD 2.58%	Total	14/200 (7%)	Mean 7%	SD 1.15%	
.....									
*Thyroid Gland: Follicular Cell: Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Thyroid Gland: Follicular Cell: Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Thyroid Gland: Follicular Cell: Carcinoma or Adenoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Tongue: Squamous Cell Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	2/200 (1%)	Mean 1%	SD 1.15%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Tongue:									
Squamous Cell Carcinoma or Papilloma Squamous									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)	
		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
#Tongue:									
Squamous Cell Papilloma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Tooth:									
Adamantinoma Malignant									
		0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Urinary Bladder:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Urinary Bladder:									
Carcinoma or Papilloma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	1/199 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

Toxicology Data Management System
 Tumor Incidence for Selected Control Animal Groups
 Route: INHALATION
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		Male				Female			
*Urinary Bladder:									
Hemangiosarcoma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	1/199 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
*Urinary Bladder:									
Papilloma									
		0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
		0/49 (0%)				0/50 (0%)			
Overall Incidence	Total	1/199 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Uterus:									
Adenoma									
						0/50 (0%)	1/50 (2%)	1/50 (2%)	
						0/50 (0%)			
Overall Incidence					Total	2/200 (1%)	Mean 1%	SD 1.15%	
.....									
#Uterus:									
Carcinoma									
						0/50 (0%)	0/50 (0%)	1/50 (2%)	
						0/50 (0%)			
Overall Incidence					Total	1/200 (0.5%)	Mean 0.5%	SD 1%	
.....									
#Uterus:									
Leiomyosarcoma									
						0/50 (0%)	0/50 (0%)	0/50 (0%)	
						0/50 (0%)			
Overall Incidence					Total	0/200 (0%)	Mean 0%	SD 0%	

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

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 Length of Study: CHRONIC

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	Male	Female
#Uterus: Polyp Stromal		
	8/50 (16%) 11/50 (22%)	8/50 (16%) 6/50 (12%)
Overall Incidence	Total 33/200 (16.5%)	Mean 16.5% SD 4.12%
.....		
#Uterus: Sarcoma		
	0/50 (0%) 0/50 (0%)	0/50 (0%) 0/50 (0%)
Overall Incidence	Total 0/200 (0%)	Mean 0% SD 0%
.....		
#Uterus: Sarcoma Stromal		
	2/50 (4%) 0/50 (0%)	0/50 (0%) 0/50 (0%)
Overall Incidence	Total 2/200 (1%)	Mean 1% SD 2%
.....		
#Uterus: Sarcoma Stromal or Polyp Stromal		
	10/50 (20%) 11/50 (22%)	8/50 (16%) 6/50 (12%)
Overall Incidence	Total 35/200 (17.5%)	Mean 17.5% SD 4.43%
.....		
#Uterus: Schwannoma Malignant		
	0/50 (0%) 0/50 (0%)	0/50 (0%) 0/50 (0%)
Overall Incidence	Total 0/200 (0%)	Mean 0% SD 0%

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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			
#Vagina:									
Polyp									
			0/50 (0%)		0/50 (0%)		0/50 (0%)		0/50 (0%)
			0/50 (0%)						
Overall Incidence				Total	0/200 (0%)		Mean 0%		SD 0%
.....									
#Vagina:									
Sarcoma									
			1/50 (2%)		0/50 (0%)		0/50 (0%)		0/50 (0%)
			0/50 (0%)						
Overall Incidence				Total	1/200 (0.5%)		Mean 0.5%		SD 1%
.....									
#Vagina:									
Schwannoma Malignant									
			0/50 (0%)		0/50 (0%)		0/50 (0%)		0/50 (0%)
			0/50 (0%)						
Overall Incidence				Total	0/200 (0%)		Mean 0%		SD 0%
.....									
#Zymbal's Gland:									
Adenoma									
		0/50 (0%)	2/50 (4%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 2%	Total	0/200 (0%)	Mean 0%	SD 0%	
.....									
#Zymbal's Gland:									
Carcinoma									
		0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	1/50 (2%)	
		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	2/200 (1%)	Mean 1%	SD 1.15%	

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied

Version: Jun2013
 Contract/Lab: All Laboratories
 Species: RATS
 Strain: F 344/N
 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: 06/05/2013

		Male				Female								
#Zymbal's Gland:														
Carcinoma or Adenoma														
		0/50	(0%)	2/50	(4%)	0/50	(0%)	1/50	(2%)	0/50	(0%)	1/50	(2%)	
		0/50	(0%)					0/50	(0%)					
Overall Incidence	Total	2/200 (1%)		Mean	1%	SD	2%	Total	2/200 (1%)		Mean	1%	SD	1.15%

*: Denominator is number of animals with tissues examined microscopically

#: Denominator is number of animals necropsied