

NTP Historical Controls Report

By Route and Vehicle

F 344/N RATS

June 2013

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:

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

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 Columbus Laboratory Battelle Columbus Laboratory Battelle Columbus Laboratory	059903103 052000705 052010703	03/23/05 08/18/04 10/20/04	727 727 727	50(3) 49(3) 50(3)	38(706) 34(692) 37(702)	512.7 515.2 503.5	Ginkgo biloba extract Kava kava extract N,N-Dimethyl-p-toluidine		
					Female				
Battelle Columbus Laboratory Battelle Columbus Laboratory Battelle Columbus Laboratory	059903103 052000705 052010703	03/24/05 08/19/04 10/21/04	728 728 728	50(5) 50(5) 50(5)	37(700) 34(683) 33(704)	350.7 354.3 354.1	Ginkgo biloba extract Kava kava extract N,N-Dimethyl-p-toluidine		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxicol Tumor Incider	Page: 5 Report Da	te: 06/05/2013			
			Male				Female	
#All Organs: Benign Tumors		50/50 (100%)	49/49 (100%)	48/50 (96%)		47/50 (94%)	43/50 (86%)	46/50 (92%)
Overall Incidence	Total	147/149 (98.66%)	Mean 98.67%	SD 2.31%	Total	136/150 (90.67%)	Mean 90.67%	SD 4.16%
#All Organs: Malignant Tumors		13/50 (26%)	17/49 (35%)	20/50 (40%)		12/50 (24%)	11/50 (22%)	23/50 (46%)
Overall Incidence	Total	50/149 (33.56%)	Mean 33.56%	SD 7.07%	Total	46/150 (30.67%)	Mean 30.67%	SD 13.32%
#All Organs: Malignant and Benign Tumo Overall Incidence		50/50 (100%) 148/149 (99.33%)	49/49 (100%) Mean 99.33%	49/50 (98%) SD 1.15%	Total	49/50 (98%) 144/150 (96%)	46/50 (92%) Mean 96%	49/50 (98%) SD 3.46%
#All Organs: Hemangioma		0/50 (0%)	0/49 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/150 (0%)	Mean 0%	SD 0%
#All Organs: Hemangiosarcoma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
#All Organs: Hemangiosarcoma or Hema	Ingioma	0/50 (0%)	0/49 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/150 (0%)	Mean 0%	SD 0%

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

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			Male				Female	
#All Organs: Histiocytic Sarcoma								
		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
All Organs: Leukemia: Lymphocyt		Iononuclear, or Undifferer						
		9/50 (18%)	7/49 (14%)	14/50 (28%)		8/50 (16%)	5/50 (10%)	15/50 (30%)
Overall Incidence	Total	30/149 (20.13%)	Mean 20.1%	SD 7.09%	Total	28/150 (18.67%)	Mean 18.67%	SD 10.26%
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 1/150 (0.67%)	1/50 (2%) Mean 0.67%	0/50 (0%) SD 1.15%
#All Organs:		1/149 (0.67%)	Mean 0.68%	SD 1.18%		1/150 (0.67%)	()	()
		1/149 (0.67%)	Mean 0.68%	SD 1.18%		1/150 (0.67%)	Mean 0.67%	SD 1.15%
#All Organs:		1/149 (0.67%)	Mean 0.68%	SD 1.18%		1/150 (0.67%)	()	()
#All Organs: Mesothelioma: Benign	n, Malignant, NO	1/149 (0.67%) S 3/50 (6%)	Mean 0.68% 3/49 (6%)	SD 1.18%		1/150 (0.67%) ´ 0/50 (0%)	Mean 0.67%	SD 1.15%
#All Organs: Mesothelioma: Benign Overall Incidence #All Organs: Mesothelioma: Maligna	n, Malignant, NO Total ant	1/149 (0.67%) S 3/50 (6%) 7/149 (4.7%) 3/50 (6%)	Mean 0.68% 3/49 (6%) Mean 4.71% 3/49 (6%)	SD 1.18% 1/50 (2%) SD 2.35% 1/50 (2%)	Total	1/150 (0.67%) 0/50 (0%) 0/150 (0%) 0/50 (0%)	Mean 0.67% 0/50 (0%) Mean 0% 0/50 (0%)	SD 1.15% 0/50 (0%) SD 0% 0/50 (0%)
#All Organs: Mesothelioma: Benign Overall Incidence #All Organs:	n, Malignant, NO	1/149 (0.67%) S 3/50 (6%) 7/149 (4.7%)	Mean 0.68% 3/49 (6%) Mean 4.71%	SD 1.18% 1/50 (2%) SD 2.35%		1/150 (0.67%) 0/50 (0%) 0/150 (0%)	Mean 0.67% 0/50 (0%) Mean 0%	SD 1.15% 0/50 (0%) SD 0%
#All Organs: Mesothelioma: Benign Overall Incidence #All Organs: Mesothelioma: Maligna	n, Malignant, NO Total ant	1/149 (0.67%) S 3/50 (6%) 7/149 (4.7%) 3/50 (6%) 7/149 (4.7%)	Mean 0.68% 3/49 (6%) Mean 4.71% 3/49 (6%) Mean 4.71%	SD 1.18% 1/50 (2%) SD 2.35% 1/50 (2%) SD 2.35%	Total	1/150 (0.67%) 0/50 (0%) 0/150 (0%) 0/50 (0%) 0/150 (0%)	Mean 0.67% 0/50 (0%) Mean 0% 0/50 (0%) Mean 0%	SD 1.15% 0/50 (0%) SD 0% 0/50 (0%) SD 0%
#All Organs: Mesothelioma: Benign Dverall Incidence #All Organs: Mesothelioma: Malign Dverall Incidence #All Organs:	n, Malignant, NO Total ant	1/149 (0.67%) S 3/50 (6%) 7/149 (4.7%) 3/50 (6%)	Mean 0.68% 3/49 (6%) Mean 4.71% 3/49 (6%)	SD 1.18% 1/50 (2%) SD 2.35% 1/50 (2%)	Total	1/150 (0.67%) 0/50 (0%) 0/150 (0%) 0/50 (0%)	Mean 0.67% 0/50 (0%) Mean 0% 0/50 (0%)	SD 1.15% 0/50 (0%) SD 0% 0/50 (0%)

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female		
#All Organs: Osteosarcoma		0/50 (0%)	1/49 (2%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	2/149 (1.34%)	Mean 1.35%	SD 1.17%	Total	0/150 (0%)	Mean 0%	SD 0%	
#All Organs: Osteosarcoma or Osteoma		0/50 (0%)	1/49 (2%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	2/149 (1.34%)	Mean 1.35%	SD 1.17%	Total	0/150 (0%)	Mean 0%	SD 0%	
Adrenal Cortex: Adenoma									
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 3/150 (2%)	0/50 (0%) Mean 2%	3/50 (6%) SD 3.46%	
Adrenal Cortex: Carcinoma									
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	
Adrenal Medulla: Pheochromocytoma Benig									
Overall Incidence	Total	11/50 (22%) 22/149 (14.77%)	5/49 (10%) Mean 14.73%	6/50 (12%) SD 6.36%	Total	2/50 (4%) 7/150 (4.67%)	3/50 (6%) Mean 4.67%	2/50 (4%) SD 1.15%	
Adrenal Medulla: Pheochromocytoma Comp	lex								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	3			ogy Data Management ice for Selected Control A Route: GAVAGE Vehicle: CORN OIL	Page: 8 Report Date: 06/05/2013							
			Male				Female					
*Adrenal Medulla: Pheochromocytoma Malignant 2/50 (4%) 0/49 (0%) 1/50 (2%) 0/50 (0%) 0/50 (0%) 0/50 (0%)												
Overall Incidence	Total	3/149 (2.01%)	Mean 2%	SD 2%	Total	0/150 (0%)	Mean 0%	SD 0%				
*Adrenal Medulla: Pheochromocytoma: Beni	gn, Comple	x, Malignant, NOS										
Overall Incidence	Total	12/50 (24%) 25/149 (16.78%)	5/49 (10%) Mean 16.73%	8/50 (16%) SD 6.93%	Total	2/50 (4%) 7/150 (4.67%)	3/50 (6%) Mean 4.67%	2/50 (4%) SD 1.15%				
#Blood Vessel: Leiomyosarcoma												
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%				
#Bone: Chordoma												
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%				
#Bone: Osteoma												
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%				
#Bone: Osteosarcoma						-/ /						
Overall Incidence	Total	0/50 (0%) 2/149 (1.34%)	1/49 (2%) Mean 1.35%	1/50 (2%) SD 1.17%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%				

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#Bone: Osteosarcoma or Osteoma		0/50 (0%)	1/49 (2%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	2/149 (1.34%)	Mean 1.35%	SD 1.17%	Total	0/150 (0%)	Mean 0%	SD 0%
*Brain: Glioma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
'Brain: Glioma Benign								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Brain: Glioma Malignant		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (00())
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
*Brain: Oligodendroglioma, Glioma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
'Brain: Osteosarcoma							0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
*Clitoral/Preputial Gland: Adenoma		4/50 (8%)	0/49 (0%)	0/50 (0%)		5/50 (10%)	2/50 (4%)	5/50 (10%)
Overall Incidence	Total	4/149 (2.68%)	Mean 2.67%	SD 4.62%	Total	12/150 (8%)	Mean 8%	SD 3.46%
Clitoral/Preputial Gland: Carcinoma		0/50 (0%)						
Overall Incidence	Total	1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	2/150 (1.33%)	2/50 (4%) Mean 1.33%	0/50 (0%) SD 2.31%
Clitoral/Preputial Gland: Carcinoma or Adenoma								
Overall Incidence	Total	4/50 (8%) 5/149 (3.36%)	1/49 (2%) Mean 3.35%	0/50 (0%) SD 4.16%	Total	5/50 (10%) 14/150 (9.33%)	4/50 (8%) Mean 9.33%	5/50 (10%) SD 1.15%
Clitoral/Preputial Gland: Sarcoma				0/50 (0%)		0/50 (00%)	0/50 /00/)	0/50 (0%)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
#Ear: Neural Crest Tumor								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 2/150 (1.33%)	1/50 (2%) Mean 1.33%	1/50 (2%) SD 1.15%
≇Eye: Melanoma Benign								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#Eye: Melanoma Malignant		0/50 (0%)	0/49 (0%)	0/50 (09	<i>(</i>)	0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
#Harderian Gland: Adenoma		0/50 (0%)	0/49 (0%)	0/50 (09		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
#Harderian Gland: Carcinoma		0/50 (0)()	0/40 (09/)	0/50 (0)	<i></i>	0/50 (00/)	0/50 (00/)	0/50 (00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0% SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Harderian Gland: Carcinoma or Adenoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0% SD 0%	%) Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Heart: Schwannoma Benign								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0% SD 0%	%) Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Heart: Schwannoma Malignant		0/50 (00/)	0(40 (024)	0/50 (0)	<i></i>	0/50 (00/)	0/50 (00/)	0/50 (00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0% SD 0%	%) Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male					Female	
#Intestine Large: Colon/Rectur Adenoma	n:	0/50 (001)	0/40 /00/2	0/50	(00())		2/52 /22/2	0/50 /00/`	2/52 /22/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 SD 0%	(0%)	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
		()					()		
Intestine Large: Colon/Rectur Carcinoma or Adenoma	n:	0/50 (00/)	0/40 (00/)	0/50	(00()				0/50 (00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 SD 0%	(0%)	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Intestine Small: Duodenum: Leiomyoma									
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 SD 0%	(0%)	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Intestine Small: Duodenum: Schwannoma Malignant									
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 SD 0%	(0%)	Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%
Intestine Small: Ileum: Adenoma									
		0/50 (0%)	0/49 (0%)	0/50	(0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%		Total	0/150 (0%)	Mean 0%	SD 0%
Intestine Small: Jejunum: Carcinoma									
Overall Incidence	Total	0/50 (0%)	0/49 (0%)	0/50	(0%)	Total	0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%		Total	0/150 (0%)	Mean 0%	SD 0%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#Intestine Small: Jejunum Leiomyoma	:	1/50 (2%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (09/)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
#Intestine Small: Jejunum Leiomyosarcoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%
#Intestine Small: Site Uns Adenoma	pecified:							
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Intestine Small: Site Uns Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Intestine Small: Site Uns Carcinoma or Adenoma	pecified:							
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
#Intestine Small: Site Uns Leiomyoma								
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	;			logy Data Management nce for Selected Control A Route: GAVAGE Vehicle: CORN OIL	-		Page: 14 Report Date: 06/05/2013				
			Male				Female				
#Intestine Small: Site Unspec Leiomyosarcoma	cified:	0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)			
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%			
#Intestine Small: Site Unspec Schwannoma Malignant											
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%			
*Islets, Pancreatic: Adenoma		4/50 (8%)	4/49 (8%)	2/50 (4%)		1/50 (2%)	1/50 (2%)	0/50 (0%)			
Overall Incidence	Total	10/149 (6.71%)	Mean 6.72%	SD 2.36%	Total	2/150 (1.33%)	Mean 1.33%	SD 1.15%			
*Islets, Pancreatic: Carcinoma		0/50 (0%)	0/49 (0%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/150 (0%)	Mean 0%	SD 0%			
*Islets, Pancreatic: Carcinoma or Adenoma											
Overall Incidence	Total	4/50 (8%) 11/149 (7.38%)	4/49 (8%) Mean 7.39%	3/50 (6%) SD 1.2%	Total	1/50 (2%) 2/150 (1.33%)	1/50 (2%) Mean 1.33%	0/50 (0%) SD 1.15%			
*Kidney: Pelvis and Transitic Papilloma	onal Epitheli	ium:				······					
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%			

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

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			Male				Female	
*Kidney: Renal Tubule: Adenoma		0/50 (00/)	0/40 (0%)	4/50 (20/)		0/50 (0%)	0/50 (0%)	0/50 (00/.)
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Kidney: Renal Tubule: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Kidney: Renal Tubule: Carcinoma or Adenoma		0/50 (00%)	0/40 (0%)	4/50 (00/)		0/50 (0%)	0/50 (0%)	0/50 (00/.)
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Kidney: Renal Tubule: Lipoma								
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Kidney: Renal Tubule: Mesenchymal Tumor Mali								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Kidney: Renal Tubule: Sarcoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
^t Liver: Hepatocellular Adenoma		0/50 (0%)	1/49 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	Mean 0.68%	SD 1.18%	Total	0/150 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
'Liver: Hepatocellular Carcinoma	or Hepatobl		0/40 (000)	a/50 /00/)		0/50 /00 ⁽¹⁾	0/50 (00/)	0/50 (00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Liver: Hepatocellular Carcinoma			1/49 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	Mean 0.68%	SD 1.18%	Total	0/150 (0%)	Mean 0%	SD 0%
Liver: Hepatocellular Carcinoma		ular Adenoma, or Hepatol 0/50 (0%)		0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	1/149 (0.67%)	Mean 0.68%	SD 1.18%	Total	0/150 (0%)	Mean 0%	SD 0%
'Liver: Ito Cell Tumor Benign								
	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

			logy Data Management S nce for Selected Control A Route: GAVAGE Vehicle: CORN OIL	•		Page: 17 Report Da	te: 06/05/2013
		Male				Female	
enoma Total	1/50 (2%) 3/149 (2.01%)	2/49 (4%) Mean 2.03%	0/50 (0%) SD 2.04%	Total	4/50 (8%) 5/150 (3.33%)	0/50 (0%) Mean 3.33%	1/50 (2%) SD 4.16%
Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
	1/50 (2%)	2/49 (4%)	0/50 (0%)	Total	4/50 (8%) 5/150 (2.23%)	0/50 (0%) Moon 3 33%	1/50 (2%) SD 4.16%
	·····			Total			0/50 (0%)
Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%
	0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	1/50 (2%)	0/50 (0%)
Total	()	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%
Total	0/50 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 2/150 (1.33%)	2/50 (4%) Mean 1 33%	0/50 (0%) SD 2.31%
	r cinoma Total r cinoma or Alv Total Total	enoma $1/50$ (2%) Total $3/149$ (2.01%) rcinoma $0/50$ (0%) Total $1/149$ (0.67%) rcinoma or Alveolar/Bronchiolar Adeno $1/50$ (2%) Total $3/149$ (2.01%) rcinoma or Alveolar/Bronchiolar Adeno $1/50$ (2%) Total $3/149$ (2.01%) Total $3/149$ (2.01%) Total $0/50$ (0%) Total $0/149$ (0%) Total $0/149$ (0%) Total $0/149$ (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Male enoma 1/50 (2%) 2/49 (4%) Total 3/149 (2.01%) Total 3/149 (2.01%) Mean 2.03% cinoma 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% rcinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) Total 1/149 (0.67%) Mean 2.03% rcinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) Total 3/149 (2.01%) Mean 2.03% 0/50 (0%) 0/49 (0%) Mean 0% 0/50 (0%) 0/50 (0%) 0/49 (0%) Mean 0% 0/50 (0%) 0/50 (0%) 0/49 (0%)	Route: GAVAGE Vehicle: CORN OIL Male anoma 1/50 2/49 (4%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% SD 1.18% cinoma 0/50 (0%) 2/49 (4%) 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% SD 1.18% cinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04%	Route: GAVAGE Vehicle: CORN OIL Male Male onoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% SD 1.18% Total cinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 1/149 (2%) 2/49 (4%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total cinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 0/50 (0%) Mean 2.03% SD 2.04% Total 0/50 (0%) 0/49 (0%) SD 0% Total 0/50 (0%) 0/49 <td>Route: GAVAGE Vehicle: CORN OIL Male anoma 1/50 (2%) 2/49 (4%) 0/50 (0%) 4/50 (8%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% SD 1.18% Total 0/150 (0%) cinoma 1/50 (2%) 2/49 (4%) 0/50 (0%) 0/50 (0%) Total 3/149 (2.01%) Mean 0.68% SD 2.04% Total 0/150 (0%) cinoma of Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 5/150 (3.33%) O/50 (0%) 0/49 (0%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) O/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 1/150 (0.67%)</td> <td>Route: GAVAGE Vehicle: CORN OIL Male Female anoma 1/50 2/49 (4%) 0/50 (0%) 4/50 (8%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) Mean 3.33% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Mean 3.33% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Mean 0% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) Mean 0% cinoma or Alveolar/Bronchiolar Adenoma 1/149 (0.67%) Mean 2.03% SD 2.04% Total 0/150 (0%) Mean 3.33% cinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 5/150 (3.33%) Mean 3.3% cinoma or Alveolar/Bronchiolar Adenoma 1/150 0/50 0/50 0/5</td>	Route: GAVAGE Vehicle: CORN OIL Male anoma 1/50 (2%) 2/49 (4%) 0/50 (0%) 4/50 (8%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Total 1/149 (0.67%) Mean 0.68% SD 1.18% Total 0/150 (0%) cinoma 1/50 (2%) 2/49 (4%) 0/50 (0%) 0/50 (0%) Total 3/149 (2.01%) Mean 0.68% SD 2.04% Total 0/150 (0%) cinoma of Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 5/150 (3.33%) O/50 (0%) 0/49 (0%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) O/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 1/150 (0.67%) 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 1/150 (0.67%)	Route: GAVAGE Vehicle: CORN OIL Male Female anoma 1/50 2/49 (4%) 0/50 (0%) 4/50 (8%) 0/50 (0%) Total 3/149 (2.01%) Mean 2.03% SD 2.04% Total 5/150 (3.33%) Mean 3.33% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Mean 3.33% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) 0/50 (0%) Mean 0% cinoma 0/50 (0%) 1/49 (2%) 0/50 (0%) Mean 0% cinoma or Alveolar/Bronchiolar Adenoma 1/149 (0.67%) Mean 2.03% SD 2.04% Total 0/150 (0%) Mean 3.33% cinoma or Alveolar/Bronchiolar Adenoma 1/50 (2%) 2/49 (4%) 0/50 (0%) Total 5/150 (3.33%) Mean 3.3% cinoma or Alveolar/Bronchiolar Adenoma 1/150 0/50 0/50 0/5

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxicol Tumor Inciden	Page: 18 Report Da	te: 06/05/2013				
			Male					Female	
#Mammary Gland: Carcinoma		0/50 (00/)	2/42 (22/)	0/50	(22())		0/50 (00/)	4/50 (00/)	(/50 /00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	SD 0%	(0%)	Total	0/50 (0%) 2/150 (1.33%)	1/50 (2%) Mean 1.33%	1/50 (2%) SD 1.15%
#Mammary Gland: Carcinoma or Adenoma									
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	SD 0%	(0%)	Total	0/50 (0%) 4/150 (2.67%)	3/50 (6%) Mean 2.67%	1/50 (2%) SD 3.06%
#Mammary Gland: Fibroadenoma		2/50 (4%)	0/49 (0%)		(0%)		23/50 (46%)	24/50 (48%)	29/50 (58%)
Overall Incidence	Total	2/149 (1.34%)	Mean 1.33%	SD 2.31%	`	Total	76/150 (50.67%)	Mean 50.67%	SD 6.43%
#Mammary Gland: Fibroma		0/50 (0%)	0/49 (0%)		(0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	` ,	Total	0/150 (0%)	Mean 0%	SD 0%
#Mammary Gland: Fibroma, Fibroadenoma or A									
Overall Incidence	Total	2/50 (4%) 2/149 (1.34%)	0/49 (0%) Mean 1.33%	SD 2.31%	(0%)	Total	23/50 (46%) 77/150 (51.33%)	25/50 (50%) Mean 51.33%	29/50 (58%) SD 6.11%
#Mammary Gland: Fibroma, Fibroadenoma, Ca		r Adenoma							
Overall Incidence	Total	2/50 (4%) 2/149 (1.34%)	0/49 (0%) Mean 1.33%	SD 2.31%	(0%)	Total	23/50 (46%) 79/150 (52.67%)	26/50 (52%) Mean 52.67%	30/50 (60%) SD 7.02%

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

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		Male				Female	
Total	()	()	()	Total	()	()	0/50 (0%) SD 0%
	()				0/100 (0/0)		
t	0/50 (00/)	2/42 (22/)	0/50 (00/)		0/50 (00/)	0/50 (00/)	0/50 (00/)
Total	()	()	()	Total	· · /	()	0/50 (0%) SD 0%
1 Ulai	0/149 (0/0)		0/0 0/0	1 Utal	0/100 (0/0)		
	()	()	()			()	0/50 (0%)
	. ,		SD 0%	lotal	0/149 (0%)	Mean 0%	SD 0%
	0/50 (0%)	1/49 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)
Total	1/149 (0.67%)	Mean 0.68%	SD 1.18%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%
	rynx, Tooth, Gingiva):						
	0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Total	. ,	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
a, Tongue, Phar	rynx, Tooth, Gingiva): Squamous, or Papilloma		0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)
	0/00 (0/0)	1/45 (2/0)	SD 1.18%		0/00 (0/0)	Mean 0.67%	1/00 (2/0)
	t Total Total a, Tongue, Phar r Papilloma Total a, Tongue, Phar ma Total a, Tongue, Phar	t 0/50 (0%) Total 0/149 (0%) 0/50 (0%) Total 0/149 (0%) a, Tongue, Pharynx, Tooth, Gingiva): r Papilloma 0/50 (0%) Total 1/149 (0.67%) a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 (0%) Total 0/149 (0%)	0/50 (0%) 0/49 (0%) Total 0/149 (0%) Mean 0% t 0/50 (0%) 0/49 (0%) Total 0/149 (0%) Mean 0% t 0/50 (0%) Mean 0% Total 0/149 (0%) Mean 0% 1 0/149 (0%) Mean 0% a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 (0%) Total 0/149 (0%) Mean 0%	0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% SD 0% t 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% SD 0% Total 0/149 (0%) 0/49 (0%) 0/50 (0%) A, Tongue, Pharynx, Tooth, Gingiva): r Mean 0% SD 0% SD 1.18% a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 (0%) Mean 0.68% SD 1.18% a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 (0%) Mean 0% SD 0% a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 0%) Mean 0% SD 0% a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 0%) Mean 0% SD 0% a, Tongue, Pharynx, Tooth, Gingiva): ma Nean 0% SD 0% Mean	0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total t 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) 0/49 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/49 (0%) 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 0% Mean 0.68% SD 1.18% Total a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 0% Mean 0% SD 0% Total a, Tongue, Pharynx, Tooth, Gingiva): ma 0% SD 0% Total a, Tongue, Pharynx, Tooth, Gingiva): ma 0% SD 0% Total	0/50 (0%) 0/49 (0%) 0/50 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 0/150 (0%) t 0/50 (0%) 0/49 (0%) 0/50 (0%) 0/50 (0%) Total 0/149 (0%) 0/49 (0%) 0/50 (0%) 0/50 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 0/150 (0%) 0/50 (0%) 0/49 (0%) 0/50 (0%) 0/49 (0%) Total 0/149 (0%) Mean 0% SD 0% Total 0/149 (0%) a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 (0%) Mean 0.68% SD 1.18% Total 1/150 (0.67%) a, Tongue, Pharynx, Tooth, Gingiva): ma 0/50 0%) Mean 0% SD 0% Total 0/150 (0%) a, Tongue, Pharynx, Tooth, Gingiva): ma 0%	0/50 0/49 0/60 0/50 0/60 0/50 0/50 0/60 0/50 0/60 0/50 0/60 0/50 0/60 Mean 0% SD 0% Total 0/149 0/60 Mean 0% t 0/50 0/60 0/49 0% 0/50 0% 0/50 0% Mean 0% t 0/50 0/60 0/49 0% 0/50 0% Total 0/150 0% Mean 0% t 0/50 0% 0/49 0% 0/50 0% Total 0/150 0% Mean 0% total 0/149 0% 0/49 0% 0/50 0% Total 0/149 0% Mean 0% total 0/149 0% 0/49 0% 0/50 0% Total 0/149 0% Mean 0% total 0/149 0% 1/49 0/2% 0/50 0% Mean 0% Mean 0% Mean 0% Mean 0% Mean 0% Mean 0%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC		Toxicol Tumor Incider	Page: 20 Report Date: 06/05/2013				
		Male				Female	
#Oral Mucosa: Squamous Cell Carcinoma	0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
#Oral Mucosa: Squamous Cell Papilloma	0/50 (0%)	1/49 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence Total	1/149 (0.67%)	Mean 0.68%	SD 1.18%	Total	0/150 (0%)	Mean 0%	SD 0%
*Ovary: Cystadenoma					0/50 (0%)	1/50 (2%)	0/50 (0%)
Overall Incidence				Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%
'Ovary: Fibrosarcoma					0/50 (0%)	0/50 (0%)	1/50 (2%)
Overall Incidence				Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%
*Ovary: Granulosa Cell Tumor Benign							
Overall Incidence				Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
*Ovary: Granulosa Cell Tumor Malignant					0/50 /00/1	0/50 (00/.)	0/50 /00/)
Overall Incidence				Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N			ogy Data Management ace for Selected Control A Route: GAVAGE Vehicle: CORN OIL		Page: 21 Report Date: 06/05/2013			
Length of Study: CHRONIC								
		Male				Female		
*Ovary: Granulosa Cell Tumor: Benign, I	Malignant NOS							
Overall Incidence	-			Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	
'Ovary: Granulosa-Theca Tumor Maligna								
Overall Incidence				Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	
*Ovary: Schwannoma Malignant								
Overall Incidence				Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	
*Ovary: Sertoli Cell Tumor Malignant								
Overall Incidence				Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	
'Ovary: Tubulostromal Adenoma								
Overall Incidence				Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	
Pancreas: Adenoma								
Overall Incidence To	0/50 (0%) otal 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	

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

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			Male				Female	
*Pancreas: Carcinoma or Adenoma		0/50 (0%)	1/40 (2%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Pancreas: Mixed Tumor Benign		0/50 (0%)						
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Parathyroid Gland: Adenoma								
Overall Incidence	Total	0/47 (0%) 1/145 (0.69%)	1/49 (2%) Mean 0.68%	0/49 (0%) SD 1.18%	Total	1/38 (3%) 1/132 (0.76%)	0/44 (0%) Mean 0.88%	0/50 (0%) SD 1.52%
Pituitary Gland: Pars Dista Adenoma								
Overall Incidence	Total	38/50 (76%) 82/149 (55.03%)	21/49 (43%) Mean 54.95%	23/50 (46%) SD 18.3%	Total	34/50 (68%) 94/150 (62.67%)	29/50 (58%) Mean 62.67%	31/50 (62%) SD 5.03%
Pituitary Gland: Pars Dista Carcinoma		ified Site:						
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	2/50 (4%) 3/150 (2%)	1/50 (2%) Mean 2%	0/50 (0%) SD 2%
Pituitary Gland: Pars Dista Carcinoma or Adenoma								
Overall Incidence	Total	38/50 (76%) 83/149 (55.7%)	21/49 (43%) Mean 55.62%	24/50 (48%) SD 17.84%	Total	36/50 (72%) 97/150 (64.67%)	30/50 (60%) Mean 64.67%	31/50 (62%) SD 6.43%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 23 Report Da	te: 06/05/2013				
			Male				Female	
*Pituitary Gland: Pars Distalis Ganglioneuroma	or Unspec							
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
*Pituitary Gland: Pars Interme Adenoma	edia:	4/50 (00/)	0/40 (00/)	0/50 (00/)		(20)	0/50 (00/)	0/50 (00/)
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%
*Pituitary Gland: Pars Interme Carcinoma or Adenoma						4/50 (004)	0/50 (00/.)	0/50 (00/)
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%
*Pituitary Gland: Pars Nervos Craniopharyngioma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
*Prostate: Adenoma		0/50 (0%)						
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%				
*Prostate: Carcinoma or Adenoma		0/50 (0%)	0/49 (0%)	0/50 (0%)				
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%				

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

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			Male				Female	
*Salivary Glands: Carcinoma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%
Salivary Glands: Carcinoma or Adenoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Salivary Glands: Sarcoma								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Salivary Glands: Schwannoma Malignant			0/40 (00/)	0/50 (00())		0/50 (00/)	0/50 (00/)	0/50 (00/.)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Seminal Vesicle: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%				
Skeletal Muscle: Fibrous Histiocytoma							0/50 (0%)	
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#Skeletal Muscle: Lipoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
		()				()		
#Skin: Basal Cell Adenoma		1/50 (2%)	2/49 (4%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	4/149 (2.68%)	Mean 2.69%	SD 1.2%	Total	0/150 (0%)	Mean 0%	SD 0%
#Skin: Basal Cell Adenoma or B	•	1/50 (2%)	2/49 (4%)	1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	4/149 (2.68%)	Mean 2.69%	SD 1.2%	Total	0/150 (0%)	Mean 0%	SD 0%
¥Skin: Basal Cell Adenoma, Bas				1/50 (2%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	4/149 (2.68%)	Mean 2.69%	SD 1.2%	Total	0/150 (0%)	Mean 0%	SD 0%
#Skin: Basal Cell Carcinoma								4/50 (00/)
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%
		0/149 (0%)				1/130 (0.07%)		ינו ענ
#Skin: Basal Cell Carcinoma or I	Basosquamo		,					
••••••	Tatal	0/50 (0%)	0/49 (0%)	0/50 (0%)	T - (-)	0/50 (0%)	0/50 (0%)	1/50 (2%)
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	3	Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: CORN OIL						Page: 26 Report Date: 06/05/2013		
			Male				Female			
#Skin: Basal Cell Carcinoma, Bas NOS), or Trichoepithelioma		noma, Basosquamous Tui	nor (benign, malignar	nt or						
Overall Incidence	Total	1/50 (2%) 4/149 (2.68%)	2/49 (4%) Mean 2.69%	1/50 (2%) SD 1.2%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%		
¥Skin: Basal or Sq. Cell Carcinor Adenoma, Papilloma, Sq P				1 a, 4/50 (8%)		1/50 (2%)	0/50 (0%)	2/50 (4%)		
Overall Incidence	Total	8/149 (5.37%)	Mean 5.36%	SD 2.29%	Total	3/150 (2%)	Mean 2%	SD 2%		
#Skin: Fibroma		1/50 (2%)	7/49 (14%)	6/50 (12%)		1/50 (2%)	1/50 (2%)	1/50 (2%)		
Overall Incidence	Total	14/149 (9.4%)	Mean 9.43%	SD 6.53%	Total	3/150 (2%)	Mean 2%	SD 0%		
#Skin: Fibroma, Fibrosarcoma, Sa	arcoma, My			6/50 (12%)		1/50 (2%)	1/50 (2%)	4/50 (8%)		
Overall Incidence	Total	15/149 (10.07%)	Mean 10.1%	SD 5.4%	Total	6/150 (4%)	Mean 4%	4/30 (8%) SD 3.46%		
≭Skin: Fibrosarcoma										
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 3/150 (2%)	0/50 (0%) Mean 2%	3/50 (6%) SD 3.46%		
#Skin: Fibrosarcoma, Sarcoma, N	lyxosarcom	a, or Fibrous Histiocytom 1/50 (2%)		0/50 (0%)		0/50 (0%)	0/50 (0%)	3/50 (6%)		
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	3/150 (2%)	Mean 2%	SD 3.46%		

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

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			Male				Female	
#Skin: Fibrous Histiocytoma								
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
#Skin: Hemangiosarcoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
≇Skin: Keratoacanthoma		0/50 (422)	0/40 (02/)	0/F0 (0%)		0/50 (0)()	0/50 (00/.)	4/50 (00())
Overall Incidence	Total	2/50 (4%) 5/149 (3.36%)	0/49 (0%) Mean 3.33%	3/50 (6%) SD 3.06%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%
∜Skin: Lipoma								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
∕Skin: Liposarcoma								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%
∜Skin: Neural Crest Tumor								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	i	Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: CORN OIL						Page: 28 Report Date: 06/05/2013			
			Male				Female				
#Skin: Neurofibroma or Schwannoma benign 0/50 (0%) 0/49 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)											
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%			
#Skin: Neurofibrosarcoma or Sch							0/50 (00/)	2/52 (22/)			
Overall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%			
#Skin: Neurofibrosarcoma, Neuro Overall Incidence	fibroma, or Total	Schwannoma (benign, ma 1/50 (2%) 1/149 (0.67%)	lignant or NOS) 0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%			
#Skin: Sarcoma Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%			
#Skin: Schwannoma Benign		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%			
#Skin: Schwannoma Malignant		1/50 (2%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/150 (0%)	Mean 0%	SD 0%			

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	3	Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: CORN OIL						Page: 29 Report Date: 06/05/2013		
			Male				Female			
#Skin: Squamous Cell Carcinoma	l	0/50 (0%)	0/49 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/50 (0%)		
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%		
#Skin: Squamous Cell Carcinoma or Carcinoma	ı, Basal Cell					4/50 (00()	0/50 (0)()	4/50 (20())		
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	1/50 (2%) 2/150 (1.33%)	0/50 (0%) Mean 1.33%	1/50 (2%) SD 1.15%		
Skin: Squamous Cell Papilloma Overall Incidence	Totol	0/50 (0%) 0/140 (0%)	0/49 (0%)	0/50 (0%) SD 0%	Total	0/50 (0%)	0/50 (0%)	0/50 (0%) SD 0%		
	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%		
Skin: Squamous Cell Papilloma	or Papilloma	0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)		
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%		
≭Skin: Squamous Cell Papilloma,	Papilloma, S	Squamous Cell Carcinom 2/50 (4%)	a or Keratoacanthom 0/49 (0%)	a 3/50 (6%)		1/50 (2%)	0/50 (0%)	1/50 (2%)		
Overall Incidence	Total	5/149 (3.36%)	Mean 3.33%	SD 3.06%	Total	2/150 (1.33%)	Mean 1.33%	SD 1.15%		
≭Skin: Squamous Cell Papilloma,	Papilloma, c	2/50 (4%)	0/49 (0%)	3/50 (6%)		0/50 (0%)	0/50 (0%)	1/50 (2%)		

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

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			Male				Female	
#Skin: Trichoepithelioma		0/50 (0%)	0/40 (0%)	0/50 (0)()		0/50 (0%)	0/50 (0%)	0/50 (00/)
verall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Skin: Sebaceous Gland: Adenoma								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Skin: Sebaceous Gland: Carcinoma or Adenoma		o/50 (00/)	0/40 (00/)	4/50 (00/)		0/50 (00/)	0/50 (00/)	0/50 (00/)
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Spinal Cord: Glioma Malignant								
Overall Incidence	Total	0/50 (0%) 1/149 (0.67%)	1/49 (2%) Mean 0.68%	0/50 (0%) SD 1.18%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Stomach, Glandular: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
Stomach, Glandular: Carcinoma or Adenoma			-//- /					
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxicol Tumor Inciden	Page: 31 Report Date: 06/05/2013					
			Male			Female			
#Stomach, Glandular: Sarcoma Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 1/150 (0.67%)	1/50 (2%) Mean 0.67%	0/50 (0%) SD 1.15%	
Testes: Adenoma Dverall Incidence	Total	37/50 (74%) 114/149 (76.51%)	37/49 (76%) Mean 76.5%	40/50 (80%) SD 3.12%					
Testes: Hemangioma Dverall Incidence	Total	0/50 (0%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	1/50 (2%) SD 1.15%					
Thymus: Thymoma Benign Overall Incidence	Total	1/47 (2%) 1/145 (0.69%)	0/48 (0%) Mean 0.71%	0/50 (0%) SD 1.23%	Total	1/50 (2%) 1/147 (0.68%)	0/50 (0%) Mean 0.67%	0/47 (0%) SD 1.15%	
Thymus: Thymoma Malignant Dverall Incidence	Total	0/47 (0%) 0/145 (0%)	0/48 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/147 (0%)	0/50 (0%) Mean 0%	0/47 (0%) SD 0%	
Thymus: Thymoma NOS Dverall Incidence	Total	0/47 (0%) 0/145 (0%)	0/48 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/147 (0%)	0/50 (0%) Mean 0%	0/47 (0%) SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 32 Report Date: 06/05/2013							
			Male			Female				
*Thymus: Thymoma: Benign, Malignai	nt, NOS	1/47 (2%)	0/48 (0%)	0/50 (0%)		1/50 (2%)	0/50 (0%)	0/47 (0%)		
Overall Incidence	Total	1/145 (0.69%)	Mean 0.71%	SD 1.23%	Total	1/147 (0.68%)	Mean 0.67%	SD 1.15%		
*Thyroid Gland: C-Cell: Adenoma				44/50 (220/)			E/EQ (400()	0/40 (499/)		
Overall Incidence	Total	10/50 (20%) 29/149 (19.46%)	8/49 (16%) Mean 19.44%	11/50 (22%) SD 2.88%	Total	11/49 (22%) 25/148 (16.89%)	5/50 (10%) Mean 16.94%	9/49 (18%) SD 6.35%		
*Thyroid Gland: C-Cell: Carcinoma		1/50 (2%)	0/49 (0%)	0/50 (0%)		0/49 (0%)	0/50 (0%)	0/49 (0%)		
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/148 (0%)	Mean 0%	SD 0%		
*Thyroid Gland: C-Cell: Carcinoma or Adenoma Overall Incidence	Total	11/50 (22%) 30/149 (20.13%)	8/49 (16%) Mean 20.11%	11/50 (22%) SD 3.28%	Total	11/49 (22%) 25/148 (16.89%)	5/50 (10%) Mean 16.94%	9/49 (18%) SD 6.35%		
						(,				
*Thyroid Gland: Follicular Cell Adenoma	1:	2/50 (4%)	1/49 (2%)	1/50 (2%)		1/49 (2%)	1/50 (2%)	1/49 (2%)		
Overall Incidence	Total	4/149 (2.68%)	Mean 2.68%	SD 1.14%	Total	3/148 (2.03%)	Mean 2.03%	SD 0.02%		
*Thyroid Gland: Follicular Cell Carcinoma	l:	0/50 /001		0/50 /00/)			0/50 (00/.)	0/40 (00/)		
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/49 (0%) 0/148 (0%)	0/50 (0%) Mean 0%	0/49 (0%) SD 0%		

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

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			Male				Female				
*Thyroid Gland: Follicular Cell: Carcinoma or Adenoma											
		2/50 (4%)	1/49 (2%)	1/50 (2%)		1/49 (2%)	1/50 (2%)	1/49 (2%)			
verall Incidence	Total	4/149 (2.68%)	Mean 2.68%	SD 1.14%	Total	3/148 (2.03%)	Mean 2.03%	SD 0.02%			
Tongue: Squamous Cell Carcinoma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (00/)	0/50 (0%)			
Verall Incidence	Total	0/50 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%			
						0,100 (0,0)					
Tongue: Squamous Cell Carcinoma o	or Papillom	na Squamous 0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)			
Verall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%			
Tongue: Squamous Cell Papilloma		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	1/50 (2%)			
verall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%			
Tooth: Adamantinoma Malignant		-/		-/ /`		- / /·					
Numell Incidence	Tetal	0/50 (0%)	0/49 (0%)	0/50 (0%)	Tatal	0/50 (0%)	0/50 (0%)	0/50 (0%)			
verall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%			
Jrinary Bladder: Carcinoma											
		0/50 (0%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	0/150 (0%)	Mean 0%	SD 0%			

*: Denominator is number of animals with tissues examined microscopically

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: GAVAGE Vehicle: CORN OIL							Page: 34 Report Date: 06/05/2013		
			Male				Female			
Urinary Bladder: Carcinoma or Papilloma		0/50 (0%)	0/49 (0%)	0/50 (0	%)	0/50 (0%)	0/50 (0%)	1/50 (2%)		
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%		
Urinary Bladder: Hemangiosarcoma				- /						
Overall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0 SD 0%	%) Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
'Urinary Bladder: Papilloma		0/50 (0%)	0/49 (0%)	0/50 (0	%)	0/50 (0%)	0/50 (0%)	1/50 (2%)		
Overall Incidence	Total	0/149 (0%)	Mean 0%	SD 0%	Total	1/150 (0.67%)	Mean 0.67%	SD 1.15%		
¢Uterus: Adenoma						0/50 (0%)	0/50 (0%)	0/50 (0%)		
Overall Incidence					Total	0/150 (0%)	Mean 0%	SD 0%		
#Uterus: Carcinoma						0/50 (00/)		0/50 (00/)		
Overall Incidence					Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
≇Uterus: Leiomyosarcoma										
Overall Incidence					Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N	Toxicology Data Management Syst Tumor Incidence for Selected Control Anim Route: GAVAGE Vehicle: CORN OIL	Page: 35 Report Date: 06/05/2013					
Length of Study: CHRONIC	Male		Female				
#Uterus: Polyp Stromal							
Overall Incidence		Total	3/50 (6%) 13/150 (8.67%)	7/50 (14%) Mean 8.67%	3/50 (6%) SD 4.62%		
#Uterus: Sarcoma							
Overall Incidence		Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
#Uterus: Sarcoma Stromal							
Overall Incidence		Total	0/50 (0%) 1/150 (0.67%)	1/50 (2%) Mean 0.67%	0/50 (0%) SD 1.15%		
#Uterus: Sarcoma Stromal or Polyp Stromal							
Overall Incidence		Total	3/50 (6%) 13/150 (8.67%)	7/50 (14%) Mean 8.67%	3/50 (6%) SD 4.62%		
#Uterus: Schwannoma Malignant							
Overall Incidence		Total	1/50 (2%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	0/50 (0%) SD 1.15%		
#Vagina: Polyp			0/50 (00()	0/50 (0%)	0/50 (0%)		
Overall Incidence		Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
*: Denominator is number of animals with tissues examined mic	croscopically	•••••					

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: GAVAGE Vehicle: CORN OIL						Page: 36 Report Date: 06/05/2013		
			Male				Female			
¥Vagina: Sarcoma Overall Incidence					Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
#Vagina: Schwannoma Malignant Overall Incidence					Total	0/50 (0%) 1/150 (0.67%)	0/50 (0%) Mean 0.67%	1/50 (2%) SD 1.15%		
⊭Zymbal's Gland: Adenoma Dverall Incidence	Total	0/50 (0%) 0/149 (0%)	0/49 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
∉Zymbal's Gland: Carcinoma Dverall Incidence	Total	1/50 (2%) 1/149 (0.67%)	0/49 (0%) Mean 0.67%	0/50 (0%) SD 1.15%	Total	0/50 (0%) 0/150 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%		
≭Zymbal's Gland: Carcinoma or Adenoma		1/50 (2%)	0/49 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)		
Overall Incidence	Total	1/149 (0.67%)	Mean 0.67%	SD 1.15%	Total	0/150 (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: GAVAGE Vehicle: METHYLCELLULOSE

				Stu	dy 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		
Southern Research Institute	059903705	06/09/03	729	50(3)	27(662)	523.0	alpha/beta Thujone mixture
					Female		
Southern Research Institute	059903705	06/09/03	730	50(5)	35(689)	335.4	alpha/beta Thujone mixture

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme nce for Selected Contr Route: GAVAGE hicle: METHYLCELLU	ol Animal Groups		Page: 38 Report Date	3 Date: 06/05/2013	
			Male			Female			
#All Organs: Benign Tumors		44/50 (88%)				46/50 (92%)			
Overall Incidence	Total	44/50 (88%)	Mean 88%	SD 0%	Total	46/50 (92%)	Mean 92%	SD 0%	
#All Organs: Malignant Tumors		31/50 (62%)				20/50 (40%)			
Overall Incidence	Total	31/50 (62%)	Mean 62%	SD 0%	Total	20/50 (40%)	Mean 40%	SD 0%	
#All Organs: Malignant and Benign Tumo		48/50 (96%)				49/50 (98%)			
Overall Incidence	Total	48/50 (96%)	Mean 96%	SD 0%	Total	49/50 (98%)	Mean 98%	SD 0%	
#All Organs: Hemangioma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Hemangiosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Hemangiosarcoma or Hemai		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		06/05/2013			
			Male				Female			
#All Organs: Histiocytic Sarcoma		1/50 (2%)			0/50 (0%)					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Leukemia: Lymphocytic, M						10/50 (20%)				
Overall Incidence	Total	22/50 (44%)	Mean 44%	SD 0%	Total	10/50 (20%)	Mean 20%	SD 0%		
#All Organs: Malignant Lymphoma: Hist Overall Incidence		phocytic, Mixed, NOS, o 0/50 (0%) 0/50 (0%)			Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#All Organs: Mesothelioma: Benign, Ma						0/50 (0%)				
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Mesothelioma: Malignant		2/50 (4%)				0/50 (0%)				
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Osteoma		0/50 (0%)				0/50 (0%)				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	blogy Data Manageme ence for Selected Contr Route: GAVAGE chicle: METHYLCELLU	ol Animal Groups		ite: 06/05/2013			
			Male			Female				
#All Organs: Osteosarcoma		1/50 (2%)				1/50 (2%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
#All Organs: Osteosarcoma or Osteoma		1/50 (2%)				1/50 (2%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
*Adrenal Cortex: Adenoma		1/50 (2%)				1/47 (2%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/47 (2.13%)	Mean 2.13%	SD 0%		
*Adrenal Cortex: Carcinoma		0/50 (0%)				0/47 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)	Mean 0%	SD 0%		
*Adrenal Medulla: Pheochromocytoma Benign		0/50 (40%)				2/40 (40/)				
Overall Incidence	Total	6/50 (12%) 6/50 (12%)	Mean 12%	SD 0%	Total	2/48 (4%) 2/48 (4.17%)	Mean 4.17%	SD 0%		
*Adrenal Medulla: Pheochromocytoma Comple										
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/48 (2%) 1/48 (2.08%)	Mean 2.08%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	blogy Data Manageme ence for Selected Contr Route: GAVAGE chicle: METHYLCELLU	ol Animal Groups		9: 06/05/2013		
			Male				Female		
*Adrenal Medulla: Pheochromocytoma Malign	ant	0/50 (0%)				0/48 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
*Adrenal Medulla: Pheochromocytoma: Benig						3/48 (6%)			
Overall Incidence	Total	6/50 (12%)	Mean 12%	SD 0%	Total	3/48 (6.25%)	Mean 6.25%	SD 0%	
#Blood Vessel: Leiomyosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Chordoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Osteoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Osteosarcoma		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 42 Report Dat	42 Date: 06/05/2013	
			Male			Female			
#Bone: Osteosarcoma or Osteoma		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Brain: Glioma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Glioma Benign Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Brain: Glioma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	
*Duciu.						·····			
*Brain: Oligodendroglioma, Glioma	, or Astrocy	toma 0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Brain: Osteosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	act/Lab: All Laboratories Tumor Incidence for Selected Control Animal Groups es: RATS Route: GAVAGE i: F 344/N Vehicle: METHYLCELLULOSE h of Study: CHRONIC Vehicle: METHYLCELLULOSE					Page: 43 Report Dat	Page: 43 Report Date: 06/05/2013	
			Male				Female	
*Clitoral/Preputial Gland: Adenoma								
Overall Incidence	Total	2/49 (4%) 2/49 (4.08%)	Mean 4.08%	SD 0%	Total	12/50 (24%) 12/50 (24%)	Mean 24%	SD 0%
*Clitoral/Preputial Gland: Carcinoma								
Overall Incidence	Total	1/49 (2%) 1/49 (2.04%)	Mean 2.04%	SD 0%	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%
*Clitoral/Preputial Gland: Carcinoma or Adenoma		3/49 (6%)				14/50 (28%)		
Overall Incidence	Total	3/49 (6.12%)	Mean 6.12%	SD 0%	Total	14/50 (28%)	Mean 28%	SD 0%
*Clitoral/Preputial Gland: Sarcoma		0/49 (0%)				0/50 (0%)		
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Ear: Neural Crest Tumor		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Eye: Melanoma Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		e: 06/05/2013		
			Male			Female			
#Eye: Melanoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
'Heart: Schwannoma Benign		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Heart: Schwannoma Malignant		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	Il Laboratories Tumor Incidence for Selected Control Animal Groups Report Route: GAVAGE Vehicle: METHYLCELLULOSE					Page: 45 Report Dat	e: 45 ort Date: 06/05/2013		
			Male				Female		
#Intestine Large: Colon/Rectu Adenoma	m:								
o	T	0/50 (0%)		OD 00/	T	1/50 (2%)		OD 00/	
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Intestine Large: Colon/Rectu Carcinoma or Adenoma		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Intestine Small: Duodenum: Leiomyoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Duodenum: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Ileum: Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Jejunum: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals						. ,			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE chicle: METHYLCELLU	ol Animal Groups		e: 06/05/2013		
			Male			Female			
#Intestine Small: Jejunum: Leiomyoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Jejunum: Leiomyosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Adenoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Carcinoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Carcinoma or Adenoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Leiomyoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals									

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	i	Toxicology Data Management System Page: 47 Tumor Incidence for Selected Control Animal Groups Report Date Route: GAVAGE Vehicle: METHYLCELLULOSE					ə: 06/05/2013	
			Male		THYLCELLULOSE Female 0% Total 0/50 (0%) Mean 0% SD 0% 0% Total 0/50 (0%) Mean 0% SD 0% 0% Total 0/50 (0%) Mean 0% SD 0% 0% Total 1/49 (2%) Mean 2.04% SD 0% 0/49 (0%) 0% 0% SD 0%			
#Intestine Small: Site Unspec Leiomyosarcoma	cified:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unspec Schwannoma Malignant		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	, ,	Mean 0%	SD 0%
*Islets, Pancreatic: Adenoma		1/50 (2%)				1/40 (29/.)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%		1/49 (2.04%)		
*Islets, Pancreatic: Carcinoma		2/50 (4%)						
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	()	Mean 0%	SD 0%
*Islets, Pancreatic: Carcinoma or Adenoma		2/50 (0%)				4/40 (20/)		
Overall Incidence	Total	3/50 (6%) 3/50 (6%)	Mean 6%	SD 0%	Total	1/49 (2%) 1/49 (2.04%)	Mean 2.04%	SD 0%
*Kidney: Pelvis and Transitio Papilloma		m:						
Overall Incidence	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%) 0/44 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE chicle: METHYLCELLU	ol Animal Groups		: 06/05/2013		
			Male				Female		
*Kidney: Renal Tubule: Adenoma		0/48 (0%)				0/44 (0%)			
Overall Incidence	Total	0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%) 0/44 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma									
Overall Incidence	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%) 0/44 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma or Adenoma Overall Incidence	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%) 0/44 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Lipoma Overall Incidence	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%) 0/44 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Mesenchymal Tumor Malig	nant	0/48 (0%)				1/44 (2%)			
Overall Incidence	Total	0/48 (0%)	Mean 0%	SD 0%	Total	1/44 (2.27%)	Mean 2.27%	SD 0%	
*Kidney: Renal Tubule: Sarcoma		0/48 (0%)				0/44 (0%)			
Overall Incidence	Total	0/48 (0%)	Mean 0%	SD 0%	Total	0/44 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 49 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0%			
			Male		Report Date: 06/05/2013 Female (0%) Mean 0% SD 0% (0%) Mean 0% SD 0%					
*Liver: Hepatocellular Adenoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Liver: Hepatocellular Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)				
*Liver: Hepatocellular Carcinoma o Overall Incidence	r Hepatobla Total		Mean 0%	SD 0%	Total					
*Liver: Hepatocellular Carcinoma o						0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Liver: Hepatocellular Carcinoma, H										
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)				
*Liver: Ito Cell Tumor Benign		1/50 (2%)				0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*: Denominator is number of animals	with tissues e									

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 50 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0%			
			Male			Female 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%				
*Lung: Alveolar/Bronchiolar Adeno	oma	1/50 (2%)				0/50 (0%/)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	()	Mean 0%	SD 0%		
*Lung: Alveolar/Bronchiolar Carcin	oma	1/50 (2%)				0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)				
*Lung: Alveolar/Bronchiolar Carcin Overall Incidence				SD 0%	Total	0/50 (0%)				
*Lung: Fibrosarcoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Mammary Gland: Adenolipoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	. ,		SD 0%		
#Mammary Gland: Adenoma		0/50 (0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 51 Report Dat	Page: 51 Report Date: 06/05/2013 Female Mean 4% SD 0% Mean 6% SD 0%			
			Male			Female					
#Mammary Gland: Carcinoma		0/50 (00/)				0/50 (40/)					
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%			
#Mammary Gland: Carcinoma or Adenoma											
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	3/50 (6%) 3/50 (6%)	Mean 6%	SD 0%			
#Mammary Gland: Fibroadenoma Overall Incidence	Total	3/50 (6%) 3/50 (6%)	Mean 6%	SD 0%	Total	26/50 (52%) 26/50 (52%)	Mean 52%	SD 0%			
#Mammary Gland: Fibroma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%			
#Mammary Gland: Fibroma, Fibroadenoma or <i>F</i>		. ,				· · ·					
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	28/50 (56%)	Mean 56%	SD 0%			
#Mammary Gland: Fibroma, Fibroadenoma, Ca		Adenoma 3/50 (6%)				30/50 (60%)					
Overall Incidence *: Denominator is number of animals #: Denominator is number of animals	with tissues ex	3/50 (6%)	Mean 6%	SD 0%	Total	30/50 (60%)	Mean 60%	SD 0%			

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: GAVAGE Vehicle: METHYLCELLULOSE				Page: 52 Report Date: 06/05/2013			
			Male				Female		
#Mesentery: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Mesentery: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Nose: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Oral Cavity (Oral Mucosa, To Papilloma Squamous or Pa	ongue, Phary								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma	ongue, Phary	ynx, Tooth, Gingiva):							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma	ongue, Phary	ynx, Tooth, Gingiva):				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animal	s with tissues e	xamined microscopically							

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU				
			Male			-		
#Oral Mucosa: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Oral Mucosa: Squamous Cell Papilloma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Ovary: Cystadenoma						0/50 (00/)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Ovary: Fibrosarcoma						0/50 (09/)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Ovary: Granulosa Cell Tumor Beni								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)		
*Ovary: Granulosa Cell Tumor Malig	gnant							
Overall Incidence					Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
*: Denominator is number of animals #: Denominator is number of animal		xamined microscopically						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE chicle: METHYLCELLU	ol Animal Groups		Page: 54 Report Date: 06/05/2013 Female Mean 2% SD 0% Mean 0% SD 0%			
Length of Study: CHRONIC			Male				Female	Female Mean 2% SD 0% Mean 0% SD 0%		
*Ovary: Granulosa Cell Tumor: Benign,	Malignant N	NOS								
Grandiosa Gen Tumor. Berngin,	mangnant, i					1/50 (2%)				
Overall Incidence					Total	1/50 (2%)	Mean 2%	SD 0%		
*Ovary: Granulosa-Theca Tumor Malign	ant									
						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)				
*Ovary: Schwannoma Malignant										
A					T ()	0/50 (0%)	N. 004	OD 001		
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Sertoli Cell Tumor Malignant										
					Tatal	0/50 (0%)	Maga 00/			
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Tubulostromal Adenoma										
						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Pancreas: Adenoma										
		0/50 (0%)			-	0/49 (0%)		OD 001		
Overall Incidence T	otal	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	blogy Data Manageme ence for Selected Contr Route: GAVAGE bhicle: METHYLCELLU	ol Animal Groups		Page: 55 Report Dat	Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0%		
			Male				Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 2% SD 0%			
*Pancreas: Carcinoma or Adenoma		0/50 (0%)				0/49 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%		
*Pancreas: Mixed Tumor Benign		1/50 (2%)				0/49 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%		
*Parathyroid Gland: Adenoma		0/48 (0%)				0/47 (0%)				
Overall Incidence	Total	0/48 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)				
*Pituitary Gland: Pars Distali Adenoma										
Overall Incidence	Total	24/50 (48%)	Mean 48%	SD 0%	Total	25/50 (50%) 25/50 (50%)	Mean 50%	SD 0%		
*Pituitary Gland: Pars Distalis Carcinoma		fied Site:								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)		SD 0%		
*Pituitary Gland: Pars Distali Carcinoma or Adenoma		fied Site:								
Overall Incidence	Total	24/50 (48%) 24/50 (48%)	Mean 48%	SD 0%	Total	26/50 (52%) 26/50 (52%)	Mean 52%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 56 Report Dat	Page: 56 Report Date: 06/05/2013 Female Mean 2% SD 0% Mean 2% SD 0% Mean 2% SD 0% Mean 0% SD 0%			
			Male				Report Date: 06/05/2013 Female Mean 2% SD 0% Mean 2% SD 0% Mean 2% SD 0%				
*Pituitary Gland: Pars Distalis Ganglioneuroma	or Unspeci	fied Site:									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%			
*Pituitary Gland: Pars Interme Adenoma		0/50 (001)				4/50 /00/					
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%			
*Pituitary Gland: Pars Interme Carcinoma or Adenoma											
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%			
*Pituitary Gland: Pars Nervos Craniopharyngioma						0/50 /00/)					
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
*Prostate: Adenoma		2/50 (40()									
Overall Incidence	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%							
*Prostate: Carcinoma or Adenoma											
Overall Incidence	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%							
*: Denominator is number of animals	s with tissues e										

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxicc Tumor Incide Ve	Page: 57 Report Date: 06/05/2013					
			Male				-		
*Salivary Glands: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
*Salivary Glands: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
*Salivary Glands: Sarcoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
#Seminal Vesicle: Adenoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%					
#Skeletal Muscle: Fibrous Histiocytoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

Contract/Lab: All Laboratori Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	Page: 58 Report Date: 06/05/2013						
			Male				Mean 0% SD 0% Mean 2% SD 0% Mean 2% SD 0%			
#Skeletal Muscle: Lipoma		0/50 (0%)			Control Animal Groups Report Date: 06/05/2013 /AGE Female 0/50 (0%) Female Total 0/50 (0%) 1/50 (2%) Mean 0% SD 0% 1/50 (2%) Mean 2% SD 0% 1/50 (2%) Mean 2% SD 0%					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Basal Cell Adenoma		1/50 (2%)				1/50 (2%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	· · /	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma or B	}asosquamous ⊺	1/50 (2%)								
	Total	1/50 (2%)	Mean 2%	SD 0%		· · ·				
#Skin: Basal Cell Adenoma, Bas		mor Benign, or Trichoep 3/50 (6%)	ithelioma			1/50 (2%)				
#Skin: Basal Cell Adenoma, Bas Overall Incidence	sosquamous Tu Total	mor Benign, or Trichoer 3/50 (6%) 3/50 (6%)	ithelioma Mean 6%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma, Bas Overall Incidence	sosquamous Tu Total	mor Benign, or Trichoeg 3/50 (6%) 3/50 (6%)	ithelioma Mean 6%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma, Bas Overall Incidence #Skin: Basal Cell Carcinoma Overall Incidence	sosquamous Tu Total Total	mor Benign, or Trichoeg 3/50 (6%) 3/50 (6%) 1/50 (2%) 1/50 (2%)	hithelioma Mean 6% Mean 2%	SD 0%	Total Total	1/50 (2%) 1/50 (2%) 1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma, Bas Overall Incidence #Skin: Basal Cell Carcinoma Overall Incidence	sosquamous Tu Total Total	mor Benign, or Trichoeg 3/50 (6%) 3/50 (6%) 1/50 (2%) 1/50 (2%)	ithelioma Mean 6% Mean 2%	SD 0%	Total Total	1/50 (2%) 1/50 (2%) 1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		

ersion: Jun2013		Toxicology Data Management System				Page: 59			
contract/Lab: All Laborator	ries		Tumor Incide	nce for Selected Contr	ol Animal Groups		Report Dat	e: 06/05/2013	
pecies: RATS				Route: GAVAGE					
itrain: F 344/N			Ve	hicle: METHYLCELLU	JLOSE				
ength of Study: CHRONI	С								
			Male				Female		
Skin:									
Basal Cell Carcinoma, E NOS), or Trichoepithelic		oma, Basosquamous Tur	nor (benign, maligna	int or					
		4/50 (8%)				2/50 (4%)			
Verall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%	
Skin:									
Basal or Sq. Cell Carcin	oma, Carcinom	a, Basosq. Tumor (M or E	3), Basal Cell Adenoi	ma,					
Adenoma, Papilloma, So	q Papilloma, Ke	ratoacanthoma, Trichoep 9/50 (18%)	oithelioma			2/50 (4%)			
Verall Incidence	Total	9/50 (18%)	Mean 18%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%	
						· · ·			
Skin:									
Fibroma		11/50 (22%)				2/50 (4%)			
Verall Incidence	Total	11/50 (22%)	Mean 22%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%	
						. ,			
Skin:									
Fibroma, Fibrosarcoma	, Sarcoma, Myxo	oma, Myxosarcoma, or Fi 16/50 (32%)	brous Histiocytoma			2/50 (4%)			
Verall Incidence	Total	16/50 (32%)	Mean 32%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%	
						()			
Skin:									
Fibrosarcoma		3/50 (6%)				0/50 (0%)			
Verall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
Skin:									
Skin:	ı, Myxosarcoma	, or Fibrous Histiocytoma 6/50 (12%)	a			0/50 (0%)			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU	ol Animal Groups		Page: 60 Report Date: 06/05/2013 Female							
			Male			Female 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 0/50 (0%) 0/50 (0%) Mean 0% SD 0%								
#Skin: Fibrous Histiocytoma		0/50 (0%)				· · ·								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%						
#Skin: Hemangiosarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total		Mean 0%	SD 0%						
#Skin: Keratoacanthoma Overall Incidence	Total	5/50 (10%) 5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%						
#Skin: Lipoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · ·	Mean 0%	SD 0%						
#Skin: Liposarcoma	Tetel	0/50 (0%)	Maga 09/	00.00/	Tetel	· · ·	Maga 00/							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	. ,								
#Skin: Neural Crest Tumor		0/50 (0%)				0/50 (0%)								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%						

		Tumor Incide		Page: 61 Report Date: 06/05/2013			
		Male			Female		
oma benign	0/50 (0%)				0/50 (0%)		
Total	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
wannoma (ma					0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
	3/50 (6%)				0/50 (0%)		
Total	3/50 (6%)	Mean 6%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
	0/50 (0%)				0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
	0/50 (0%)				0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
	oma benign Total wannoma (m Total fibroma, or S Total Total	oma benign $0/50$ (0%) Total $0/50$ (0%) wannoma (malignant or NOS) $0/50$ (0%) Total $0/50$ (0%) Total $0/50$ (0%) fibroma, or Schwannoma (benign, ma $0/50$ (0%) Total $0/50$ (0%) Total $0/50$ (0%) Total $3/50$ (6%) Total $3/50$ (6%) Total $0/50$ (0%) $0/50$ (0%) $0/50$ (0%) $0/50$ (0%) $0/50$ (0%)	Tumor Incide Ve Male Male Oma benign 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 6% O/50 (0%) Mean 0% 0/50 (0%)	Tumor Incidence for Selected Contr Route: GAVAGE Vehicle: METHYLCELLU Male oma benign 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% wannoma (malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% SD 0% fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% SD 0% fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 6% SD 0% 0/50 (0%) Mean 0% SD 0% 0%	Route: GAVAGE Vehicle: METHYLCELLULOSE Male Male Ona benign 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total wannoma (malignant or NOS) 0/50 (0%) Mean 0% SD 0% Total fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) Mean 0% SD 0% Total fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) Mean 0% SD 0% Total fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total Model Mean 0% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: METHYLCELLULOSE Male 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) wannoma (malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) Total 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) Total 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) Total 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) Total 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) fibroma, or Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% SD 0% 0/50 (0%) fibroma (of Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) Mean 0% 0/50 0% 0/50 (0%) fibroma (of Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) fibroma (of Schwannoma (benign, malignant or NOS) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0	Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: METHYLCELLULOSE Report Dat Data Male Female One benign 0/50 (0%) Male Female One benign 0/50 (0%) Male Female One benign 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Male Jost Colspan="2">Male Female One benign 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Male One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">Mean 0% Male One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">Mean 0% One colspan="2">One colspan="2">One colspan="2">One colspan="2">One colspan="2">Mean 0% One colspan="2">One colspan="2">Mean 0% One colspan= colspan="2">One

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 62 Report Date: 06/05/2013						
			Male				Female			
#Skin: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Carcinoma, or Carcinoma		1/50 (2%)			Total	1/50 (2%) 1/50 (2%)	Magn 20/	SD 0%		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
#Skin: Squamous Cell Papilloma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Papilloma o		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Papilloma, F	Papilloma, S	quamous Cell Carcinoma 5/50 (10%)	a or Keratoacanthon	na		0/50 (0%)				
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Papilloma, F		r Keratoacanthoma 5/50 (10%)				0/50 (0%)				
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*: Denominator is number of animals #: Denominator is number of animals										

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incide Ve		Page: 63 Report Date: 06/05/2013				
			Male			Female			
#Skin: Trichoepithelioma		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Spinal Cord: Glioma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals									

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Ve		Page: 64 Report Date: 06/05/2013				
			Male			Female			
#Stomach, Glandular: Sarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Testes: Adenoma		35/50 (70%)							
Overall Incidence	Total	35/50 (70%)	Mean 70%	SD 0%					
*Testes: Hemangioma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%					
*Thymus: Thymoma Benign		0/44 (0%)				0/48 (0%)			
Overall Incidence	Total	0/44 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma Malignant		0/44 (0%)				0/48 (0%)			
Overall Incidence	Total	0/44 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma NOS		0/44 (0%)				0/48 (0%)			
Overall Incidence	Total	0/44 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	

		Tumor Incider	Page: 65 Report Date: 06/05/2013						
		Male			Female				
nt, NOS	0/44 (0%)				0/48 (0%)				
Total	0/44 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%		
					4/42 (10%)				
Total	6/46 (13.04%)	Mean 13.04%	SD 0%	Total	4/42 (9.52%)	Mean 9.52%	SD 0%		
Total	0/46 (0%)	Mean 0%	SD 0%	Total	3/42 (7.14%)	Mean 7.14%	SD 0%		
Total	6/46 (13.04%)	Mean 13.04%	SD 0%	Total	7/42 (16.67%)	Mean 16.67%	SD 0%		
Total	0/46 (0%)	Mean 0%	SD 0%	Total	0/42 (0%) 0/42 (0%)	Mean 0%	SD 0%		
					0/42 (0%)				
Total	0/46 (0%)	Mean 0%	SD 0%	Total	0/42 (0%)	Mean 0%	SD 0%		
	Total Total Total : Total	$\begin{array}{cccc} & 0/44 & (0\%) \\ \hline Total & 0/44 & (0\%) \\ \hline Total & 6/46 & (13\%) \\ \hline Total & 6/46 & (13.04\%) \\ \hline Total & 0/46 & (0\%) \\ \hline Total & 0/46 & (0\%) \\ \hline Total & 6/46 & (13.04\%) \\ \hline Total & 0/46 & (13.04\%) \\ \hline Total & 0/46 & (0\%) \\ \hline \end{array}$	Tumor Incider Vei Male nt, NOS 0/44 (0%) Mean 0% Total 0/44 (0%) Mean 0% Total 6/46 (13%) Mean 13.04% Total 6/46 (0%) Mean 0% Total 0/46 (0%) Mean 0% Total 6/46 (13.04%) Mean 13.04% : 0/46 (0%) Mean 0% :: 0/46 (0%) Mean 0% :: 0/46 (0%) Mean 0%	Tumor Incidence for Selected Contr Route: GAVAGE Male mt, NOS 0/44 (0%) Total 0/44 (0%) Total 0/46 (13%) Total 6/46 (13%) Total 0/46 (0%) Mean 0% SD 0% Total 0/46 (13%) Total 6/46 (13%) Total 0/46 (0%) Mean 0% SD 0% :: 0/46 (0%) Mean 0% SD 0%	Vehicle: METHYLCELLULOSE Male nt, NOS 0/44 (0%) Mean 0% SD 0% Total Total 0/44 (0%) Mean 0% SD 0% Total Total 0/46 (13%) Mean 13.04% SD 0% Total Total 6/46 (13%) Mean 13.04% SD 0% Total Total 0/46 (0%) Mean 0% SD 0% Total Total 6/46 (13.04%) Mean 13.04% SD 0% Total Total 6/46 (0%) Mean 13.04% SD 0% Total 0/46 (0%) Mean 0% SD 0% Total :: 0/46 (0%) Mean 0% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: METHYLCELLULOSE Male Male nt, NOS 0/44 (0%) 0/44 (0%) Mean 0% SD 0% Total 0/48 (0%) Total 0/44 (0%) Mean 0% SD 0% Total 4/42 (10%) Total 6/46 (13%) Mean 13.04% SD 0% Total 3/42 (7%) Total 0/46 (0%) Mean 0% SD 0% Total 3/42 (7%) Total 0/46 (0%) Mean 13.04% SD 0% Total 3/42 (7.14%) Total 0/46 (0%) Mean 13.04% SD 0% Total 7/42 (16.67%) t: 0/46 (0%) Mean 13.04% SD 0% Total 0/42 (0%) t: 0/46 (0%) Mean 0% SD 0% Total 0/42 (0%)	Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: METHYLCELLULOSE Report Date Male Female nt, NOS 0/44 (0%) Mean 0% SD 0% Total 0/48 (0%) Mean 0% Total 0/44 (0%) Mean 0% SD 0% Total 0/48 (0%) Mean 0% Total 0/46 (13%) Mean 13.04% SD 0% Total 4/42 (10%) Mean 9.52% Total 0/46 (13.04%) Mean 13.04% SD 0% Total 3/42 (7%) Mean 9.52% Total 0/46 (13.04%) Mean 13.04% SD 0% Total 3/42 (7%) Mean 7.14% Total 0/46 (13.04%) Mean 13.04% SD 0% Total 3/42 (7%) Mean 7.14% Total 6/46 (13.04%) Mean 13.04% SD 0% Total 3/42 (0%) Mean 16.67% Total 0/46 (0%) Mean 0% SD 0% Total 0/42 (0%) Mean 0% Total 0/46 (0%) Mean 0% SD 0% Total 0/42 (0%) Mean 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumor Incide	ology Data Manageme ence for Selected Contr Route: GAVAGE ehicle: METHYLCELLU		Page: 66 Report Date: 06/05/2013			
			Male			Female			
*Thyroid Gland: Follicular Cel Carcinoma or Adenoma	l:	0/46 (0%)				0/42 (0%)			
Overall Incidence	Total	0/46 (0%)	Mean 0%	SD 0%	Total	0/42 (0%)	Mean 0%	SD 0%	
#Tongue: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Tongue: Squamous Cell Carcinoma Overall Incidence			Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Tongue: Squamous Cell Papilloma		. ,			Total	0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Tooth: Adamantinoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Urinary Bladder: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals									

Version: Jun2013 Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC	5		Toxico Tumor Incide Vo	Page: 67 Report Date: 06/05/2013				
			Male				Female	
*Urinary Bladder: Carcinoma or Papilloma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Urinary Bladder: Hemangiosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Urinary Bladder: Papilloma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Uterus: Adenoma						0/50 (0%)		
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%
#Uterus: Carcinoma								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Uterus: Leiomyosarcoma								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

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 Grou Route: GAVAGE Vehicle: METHYLCELLULOSE	ups	Page: 68 Report Dat	e: 06/05/2013			
	Male		Female				
#Uterus: Polyp Stromal		17/50 (34%)					
Overall Incidence	Total	17/50 (34%)	Mean 34%	SD 0%			
#Uterus: Sarcoma		0/50 (0%)					
Overall Incidence	Total		Mean 0%	SD 0%			
#Uterus: Sarcoma Stromal Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%			
#Uterus: Sarcoma Stromal or Polyp Stromal		17/50 (34%)					
Overall Incidence	Total	17/50 (34%)	Mean 34%	SD 0%			
#Uterus: Schwannoma Malignant		0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%			
#Vagina: Polyp		0/50 (0%)					
Overall Incidence	Total	()	Mean 0%	SD 0%			
*: Denominator is number of animals with tissues examined micr	roscopically						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Ve	Page: 69 Report Date: 06/05/2013					
			Male			Female			
#Vagina: Sarcoma Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Vagina: Schwannoma Malignant Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Zymbal's Gland: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Zymbal's Gland: Carcinoma		0/50 (0%)				0/50 (0%)		05 av	
Overall Incidence #Zymbal's Gland: Carcinoma or Adenoma	Total	0/50 (0%) 	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

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: GAVAGE Vehicle: WATER

	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 Columbus Laboratory	052000505	01/21/04	727	50(3)	30(679)	498.5	Ginseng				
					Female						
Battelle Columbus Laboratory	052000505	01/22/04	728	50(5)	36(700)	355.0	Ginseng				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide	Page: 71 Report Date: 06/05/2013				
			Male				Female	
#All Organs: Benign Tumors Overall Incidence	Total	49/50 (98%) 49/50 (98%)	Mean 98%	SD 0%	Total	42/50 (84%) 42/50 (84%)	Mean 84%	SD 0%
#All Organs: Malignant Tumors		26/50 (52%)				10/50 (20%)		
Overall Incidence	Total	26/50 (52%)	Mean 52%	SD 0%	Total	10/50 (20%)	Mean 20%	SD 0%
#All Organs: Malignant and Benign Tumo Overall Incidence	o rs Total	49/50 (98%) 49/50 (98%)	Mean 98%	SD 0%	Total	45/50 (90%) 45/50 (90%)	Mean 90%	SD 0%
#All Organs: Hemangioma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Hemangiosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Hemangiosarcoma or Hema	ngioma	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide	Page: 72 Report Date: 06/05/2013				
			Male				Female	
#All Organs: Histiocytic Sarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Leukemia: Lymphocytic, Mo		ononuclear, or Undifferen 18/50 (36%)				6/50 (12%)		
Overall Incidence	Total	18/50 (36%)	Mean 36%	SD 0%	Total	6/50 (12%)	Mean 12%	SD 0%
#All Organs: Malignant Lymphoma: Histi Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#All Organs: Mesothelioma: Benign, Mal	ignant, NOS	2/50 (4%)				0/50 (0%)		
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Mesothelioma: Malignant		2/50 (4%)				0/50 (0%)		
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Osteoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 73 Report Date: 06/05/2013					
			Male				Female	
#All Organs: Osteosarcoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Osteosarcoma or Osteoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Cortex: Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Cortex: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Medulla: Pheochromocytoma Benig		4/50 (8%)				1/50 (2%)		
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Adrenal Medulla: Pheochromocytoma Comp		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incid	Page: 74 Report Date: 06/05/2013				
			Male			Female		
*Adrenal Medulla: Pheochromocytoma Malign	ant	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Medulla: Pheochromocytoma: Benig	n, Complex,	Malignant, NOS 4/50 (8%)				1/50 (2%)		
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
#Blood Vessel: Leiomyosarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Bone: Chordoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Bone: Osteoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Bone: Osteosarcoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 75 Report Date: 06/05/2013					
			Male		Female			
#Bone: Osteosarcoma or Osteoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Brain: Glioma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Brain: Glioma Benign Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Brain: Glioma Malignant		0/50 (0%)		CD 0%	Tatal	0/50 (0%)	M 00/	
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Brain: Oligodendroglioma, Glioma	, or Astrocy	rtoma 0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
'Brain: Osteosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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: GAVAGE Vehicle: WATER							Page: 76 Report Date: 06/05/2013		
				Male		Female				
*Clitoral/Preputial Gland: Adenoma		0/50	(0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Clitoral/Preputial Gland: Carcinoma			(0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Clitoral/Preputial Gland: Carcinoma or Adenoma Overall Incidence	Total		(0%)	Mean 0%	SD 0%	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	
		()					()			
*Clitoral/Preputial Gland: Sarcoma		0/50 ((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Ear: Neural Crest Tumor		0/50 ((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	· · /	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Eye: Melanoma Benign		0/50 ((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	()	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 77 Report Date: 06/05/2013					
			Male			Female		
#Eye: Melanoma Malignant		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
#Harderian Gland: Adenoma		0/50 (00)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Harderian Gland: Carcinoma						0/50 (0%)		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Harderian Gland: Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Heart: Schwannoma Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
'Heart: Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 78 Report Date: 06/05/2013					
			Male			Female		
#Intestine Large: Colon/Rectu Adenoma	m:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Large: Colon/Rectu Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Duodenum: Leiomyoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
#Intestine Small: Duodenum: Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Ileum: Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Jejunum: Carcinoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

i				Page: 79 Report Dat	t e: 06/05/2013		
		Male			Female		
	0/50 (0%)				0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
					0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
cified: Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
					0/50 (0%)		
Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
					0/50 (0%)		
Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
					1/50 (2%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
	Total ccified: Total ccified: Total ccified: Total	$\begin{array}{cccc} & 0/50 & (0\%) \\ Total & 0/50 & (0\%) \\ \hline Total & 1/50 & (2\%) \\ \hline Total & 0/50 & (0\%) \\ \hline \end{array}$	s Tumor Incide Male Male Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 1/50 (2%) Mean 2% Total 1/50 (2%) Mean 2%	s Tumor Incidence for Selected Control Route: GAVAGE Vehicle: WATER Male Male O/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% recified: 0/50 (0%) Mean 0% SD 0% recified: 1/50 (2%) Total 1/50 (2%) Mean 2% SD 0% recified: 1/50 (2%) Total 1/50 (2%) Mean 2% SD 0% recified: 0/50 (0%) 0/50 (0%) Mean 2% SD 0%	Route: GAVAGE Vehicle: WATER Male Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total totfied: Image: Colspan="4">Total 1/50 (2%) Mean 2% SD 0% Total totfied: Image: Colspan="4">Total 1/50 (2%) Mean 2% SD 0% Total totfied: Incified: Incified: Incified: Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) Mean 2% SD 0% Total	s Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: WATER Male Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) refied: Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) refied: Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) refied: Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) refied: Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) refied: Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) refied:	s Tumor Incidence for Selected Control Animal Groups Route: CAVAGE Vehicle: WATER Report Dat Route: CAVAGE Male Female Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% triffed: 0/50 (0%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% </td

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incid	Page: 80 Report Date: 06/05/2013				
			Male			Female		
#Intestine Small: Site Unspe Leiomyosarcoma	cified:	0/50 (09/)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unspe Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Islets, Pancreatic: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
Islets, Pancreatic: Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Islets, Pancreatic: Carcinoma or Adenoma		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
Kidney: Pelvis and Transition Papilloma		m:						
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

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: GAVAGE Vehicle: WATER							Page: 81 Report Date: 06/05/2013		
		Male						Female		
*Kidney: Renal Tubule: Adenoma		1/50 (:	2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Me	an 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma		1/50 (;	2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)		an 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma or Adenoma Overall Incidence	Total		4%)	an 4%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Lipoma		0/50 ((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		an 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Mesenchymal Tumor Malign			0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	,	an 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Sarcoma		0/50 ((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	,	an 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 82 Report Date: 06/05/2013				
			Male		Female			
*Liver: Hepatocellular Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma (Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma	or Hepatocel					0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma,	Hepatocellu	lar Adenoma, or Hepa 1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Liver: Ito Cell Tumor Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incid	Page: 83 Report Date: 06/05/2013				
			Male			Female		
*Lung: Alveolar/Bronchiolar Adenc	oma	0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir Overall Incidence	ooma or Alve Total	eolar/Bronchiolar Aden 0/50 (0%) 0/50 (0%)	oma Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
*Lung: Fibrosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Adenolipoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Adenoma		0/50 (0%)				2/50 (4%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 84 Report Date: 06/05/2013					
			Male			Female		
#Mammary Gland: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Carcinoma or Adenoma		0/50 (0%)				2/50 (4%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%
#Mammary Gland: Fibroadenoma Overall Incidence	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	Total	32/50 (64%) 32/50 (64%)	Mean 64%	SD 0%
#Mammary Gland: Fibroma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Fibroma, Fibroadenoma or A		2/50 (4%)				33/50 (66%)		
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	33/50 (66%)	Mean 66%	SD 0%
#Mammary Gland: Fibroma, Fibroadenoma, Ca						33/50 (66%)		
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	33/50 (66%)	Mean 66%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: GAVAGE Vehicle: WATER			Page: 85 Report Date: 06/05/2013			
			Male				Female			
#Mesentery: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Mesentery: Schwannoma Malignant		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Nose: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Oral Cavity (Oral Mucosa, To Papilloma Squamous or Pap	ngue, Phary					0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma										
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma,	ngue, Phary	ynx, Tooth, Gingiva):				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*: Denominator is number of animals	with tissues e									

Version: Jun2013 Contract/Lab: All Laboratori Species: RATS Strain: F 344/N Length of Study: CHRONIC		Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: GAVAGE Vehicle: WATER					Page: 86 Report Date: 06/05/2013			
				-						
#Oral Mucosa: Squamous Cell Carcinom		0/50 (0%)				, ,				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Oral Mucosa: Squamous Cell Papillom	a	0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	, ,	Mean 0%	SD 0%		
*Ovary: Cystadenoma						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Fibrosarcoma						0/50 (0%)				
Overall Incidence					Total	()	Mean 0%	SD 0%		
*Ovary: Granulosa Cell Tumor Be	enign									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Granulosa Cell Tumor Ma	alignant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratorie	es			ology Data Manageme			Page: 87 Report Dat	e: 06/05/2013 SD 0% SD 0%		
Species: RATS				Route: GAVAGE						
Strain: F 344/N				Vehicle: WATER						
Length of Study: CHRONIC										
			Male				Female			
*Ovary: Granulosa Cell Tumor: Bo	enign, Maligna	nt, NOS								
						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%			
*Ovary: Granulosa-Theca Tumor	Malignant									
Overell Incidence					Tetel	0/50 (0%)	Maara 00/	CD 00/		
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Schwannoma Malignant										
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
						· · ·				
*Ovary: Sertoli Cell Tumor Malign	ant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
					1 Utai	0/30 (0 %)				
*Ovary: Tubulostromal Adenoma										
					T	0/50 (0%)		OD 001		
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Pancreas: Adenoma						0/50 (00/)				
Overall Incidence	Total	0/50 (0%)	Maan 0%	SD 09/	Total	0/50 (0%)	Maan 0%	SD 0%		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC	95			ology Data Manageme ence for Selected Contr Route: GAVAGE Vehicle: WATER			Page: 88 Report Date: 06/05/2013				
			Male				Female				
Pancreas: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
Pancreas: Mixed Tumor Benign		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
Parathyroid Gland: Adenoma		0/50 (0%)				0/48 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%			
Pituitary Gland: Pars Dista Adenoma											
Overall Incidence	Total	20/50 (40%) 20/50 (40%)	Mean 40%	SD 0%	Total	16/50 (32%) 16/50 (32%)	Mean 32%	SD 0%			
Pituitary Gland: Pars Dista Carcinoma		fied Site:									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
Pituitary Gland: Pars Dista Carcinoma or Adenoma		fied Site:									
Overall Incidence	Total	20/50 (40%) 20/50 (40%)	Mean 40%	SD 0%	Total	16/50 (32%) 16/50 (32%)	Mean 32%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: GAVAGE Vehicle: WATER	-		Page: 89 Report Date: 06/05/2013 Female				
			Male				Female (0%) Mean 0% SD 0% (0%) Mean 0% SD 0%				
*Pituitary Gland: Pars Distalis Ganglioneuroma	or Unspecif					0/50 (0%)					
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Pituitary Gland: Pars Interme Adenoma											
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)					
*Pituitary Gland: Pars Interme Carcinoma or Adenoma Overall Incidence		0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)					
Pituitary Gland: Pars Nervos Craniopharyngioma Overall Incidence	a: Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
Prostate: Adenoma Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%							
		1/50 (2%) 									
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%							

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: GAVAGE Vehicle: WATER	-		Page: 90 Report Date: 06/05/2013				
			Male				Female				
*Salivary Glands: Carcinoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Salivary Glands: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Salivary Glands: Sarcoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Salivary Glands: Schwannoma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
#Seminal Vesicle: Adenoma		1/50 (2%)									
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%							
#Skeletal Muscle: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ence for Selected Contr Route: GAVAGE Vehicle: WATER	-		Page: 91 Report Date: 06/05/20				
			Male		Female						
#Skeletal Muscle: Lipoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
¥Skin: Basal Cell Adenoma		1/50 (2%)				1/50 (2%)					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%			
#Skin: Basal Cell Adenoma or Bas Overall Incidence	osquamous Total	Tumor Benign 1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%			
∜Skin: Basal Cell Adenoma, Basos		umor Benign, or Trichoe 1/50 (2%)				1/50 (2%)					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%			
fSkin: Basal Cell Carcinoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
∜Skin: Basal Cell Carcinoma or Ba		s Tumor (malignant or N 0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*: Denominator is number of animals	s with tissues e										

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme once for Selected Contr Route: GAVAGE Vehicle: WATER	-		Page: 92 Report Date: 06/05/2013				
			Male				Female	Report Date: 06/05/2013			
#Skin: Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma											
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)					
∜Skin: Basal or Sq. Cell Carcinoma Adenoma, Papilloma, Sq Pa	a, Carcinoma	a, Basosq. Tumor (M or E	3), Basal Cell Adeno			3/50 (6%)					
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%			
έSkin: Fibroma		2/50 (4%)				0/50 (0%)					
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
Skin: Fibroma, Fibrosarcoma, Sa	rcoma, Myxo	3/50 (6%)	brous Histiocytoma			0/50 (0%)					
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	0/50 (0%)					
ŧSkin: Fibrosarcoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
έSkin: Fibrosarcoma, Sarcoma, My	/xosarcoma,	or Fibrous Histiocytoma 1/50 (2%)	a			0/50 (0%)					
		.,									

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 93 Report Date: 06/05/2013					
			Male			Female 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 2/50 (4%) 2/50 (4%) Mean 4% SD 0%			
#Skin: Fibrous Histiocytoma		1/50 (2%)				()			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	, ,		SD 0%	
#Skin: Hemangiosarcoma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
#Skin: Keratoacanthoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%)			
#Skin: Lipoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Liposarcoma		. ,				· · ·			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neural Crest Tumor		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Managemen ence for Selected Contro Route: GAVAGE Vehicle: WATER			Page: 94 Report Date: 06/05/2013			
			Male				Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%			
#Skin: Neurofibroma or Schwan	•	0/50 (0%)				· · /)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Neurofibrosarcoma or Sc										
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)				
#Skin: Neurofibrosarcoma, Neur		chwannoma (benign, ma 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0%	SD 0%	Total					
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma	ofibroma, or S Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence	ofibroma, or S Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0%	SD 0% SD 0%	Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0%	SD 0%		
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin:	ofibroma, or S Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0%	SD 0% SD 0%	Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0%	SD 0%		
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence #Skin: Schwannoma Benign Overall Incidence	rofibroma, or S Total Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%	Total Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%		
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence #Skin:	rofibroma, or S Total Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%	Total Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic a Tumor Incide	Page: 95 Report Date: 06/05/2013				•		
		Male					Female	Female Mean 0% SD 0% Mean 0% SD 0% Mean 2% SD 0% Mean 2% SD 0% Mean 2% SD 0%		
#Skin: Squamous Cell Carcinoma		1/50 (2%)				0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)				
#Skin: Squamous Cell Carcinoma, or Carcinoma	Basal Cell C	1/50 (2%)	us Tumor (malignar	nt or NOS),		0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Papilloma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
Skin: Squamous Cell Papilloma o		0/50 (0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
∕Skin: Squamous Cell Papilloma, I	Papilloma, S	quamous Cell Carcinoma 1/50 (2%)	a or Keratoacanthor	na		3/50 (6%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	3/50 (6%)				
Squamous Cell Papilloma, I						3/50 (6%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%		
*: Denominator is number of animals #: Denominator is number of animals		xamined microscopically								

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incide	Page: 96 Report Date: 06/05/2013				
			Male				Female	
#Skin: Trichoepithelioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Skin: Sebaceous Gland: Adenoma		0/50 (00/)						
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Skin: Sebaceous Gland: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Spinal Cord: Glioma Malignant		0/50 (0%)				1/50 (2%)	Maga 20/	CD 0%
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
#Stomach, Glandular: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Stomach, Glandular: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide	Page: 97 Report Date: 06/05/2013					
			Male			Female			
#Stomach, Glandular: Sarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Testes: Adenoma		45/50 (90%)							
Overall Incidence	Total	45/50 (90%)	Mean 90%	SD 0%					
*Testes: Hemangioma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%					
*Thymus: Thymoma Benign Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma Malignant						. ,			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/48 (2.08%)	Mean 2.08%	SD 0%	
*Thymus: Thymoma NOS		0/50 (0%)				0/48 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide		Page: 98 Report Date: 06/05/2013			
			Male				Female	
*Thymus: Thymoma: Benign, Malignar	nt, NOS	0/50 (0%)				1/48 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/48 (2.08%)	Mean 2.08%	SD 0%
*Thyroid Gland: C-Cell: Adenoma		44/50 (000()				0/50 (1001)		
Overall Incidence	Total	11/50 (22%) 11/50 (22%)	Mean 22%	SD 0%	Total	6/50 (12%) 6/50 (12%)	Mean 12%	SD 0%
*Thyroid Gland: C-Cell: Carcinoma						0/50 (00/)		
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Thyroid Gland: C-Cell: Carcinoma or Adenoma		11/50 (22%)				6/50 (12%)		
Overall Incidence	Total	11/50 (22%)	Mean 22%	SD 0%	Total	6/50 (12%)	Mean 12%	SD 0%
*Thyroid Gland: Follicular Cell Adenoma								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Thyroid Gland: Follicular Cell Carcinoma						0/50 /00/)		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 99 Report Date: 06/05/2013				
			Male				Female	
*Thyroid Gland: Follicular Cel Carcinoma or Adenoma	l:	1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Carcinoma (Overall Incidence	or Papillom a Total	a Squamous 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Papilloma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tooth: Adamantinoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Urinary Bladder: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 100 Report Date: 06/05/2013					
			Male			Female			
*Urinary Bladder: Carcinoma or Papilloma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Urinary Bladder: Hemangiosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Urinary Bladder: Papilloma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Adenoma						0/50 (0%)			
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Carcinoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Leiomyosarcoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	Toxicology Data Management Sys Tumor Incidence for Selected Control Anin Route: GAVAGE Vehicle: WATER			Page: 101 Report Date: 06/05/2013				
	Male			Female				
#Uterus:								
Polyp Stromal			8/50 (16%)					
Overall Incidence		Total	8/50 (16%)	Mean 16%	SD 0%			
#Uterus:								
Sarcoma			0/50 (00/)					
Overall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
#Uterus:				••••••				
Sarcoma Stromal								
			0/50 (0%)					
Overall Incidence		Total	0/50 (0%)	Mean 0%	SD 0%			
#Uterus:								
Sarcoma Stromal or Polyp Stromal			0/50 (100/)					
Overall Incidence		Total	8/50 (16%) 8/50 (16%)	Mean 16%	SD 0%			
#Uterus:								
Schwannoma Malignant								
			0/50 (0%)					
Overall Incidence		Total	0/50 (0%)	Mean 0%	SD 0%			
#Vagina:								
Polyp								
		Tetal	0/50 (0%)	Maga 00/				
Overall Incidence		Total	0/50 (0%)	Mean 0%	SD 0%			
: Denominator is number of animals with tissues examined micr	oscopically							

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	S			Page: 102 Report Date: 06/05/2013					
			Male			Female			
#Vagina: Sarcoma						0/50 (0%)			
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Vagina: Schwannoma Malignant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Carcinoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Carcinoma or Adenoma						0/50 (0%/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

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

				Stu	dy 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 Battelle Northwest Battelle Northwest Battelle Northwest	052001105 059901705 059302507 052030305	07/14/03 08/25/03 06/16/03 06/06/05	729 729 729 729	50(5) 50(5) 50(5) 50(5)	23(678) 28(686) 20(668) 25(680)	526.9 525.6 536.2 532.1	1-Bromopropane Diethylamine Tetralin Vinylidene chloride	
					Female			
Battelle Northwest Battelle Northwest Battelle Northwest Battelle Northwest	052001105 059901705 059302507 052030305	07/14/03 08/25/03 06/16/03 06/06/05	730 730 730 731	50(5) 50(5) 50(5) 50(5)	34(702) 31(687) 31(682) 30(705)	386.5 378.3 370.8 375.6	1-Bromopropane Diethylamine Tetralin Vinylidene chloride	

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

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			Male				Female	
#All Organs: Benign Tumors								
		48/50 (96%) 47/50 (94%)	44/50 (88%)	48/50 (96%)		45/50 (90%) 47/50 (94%)	43/50 (86%)	40/50 (80%)
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%) 27/50 (54%)	31/50 (62%)	33/50 (66%)		26/50 (52%) 24/50 (48%)	24/50 (48%)	25/50 (50%)
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 Tu	mors	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 (00/)	0/50 (00()	0/50 (00/)		0/50 (00/)	0/50 (00//)	0/50 (00/)
		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%) 0/50 (0%)	1/50 (2%)	1/50 (2%)		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

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

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			Male				Female	
#All Organs: Hemangiosarcoma or	Hemangioma							
		0/50 (0%) 0/50 (0%)	1/50 (2%)	1/50 (2%)		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%) 0/50 (0%)	0/50 (0%)	2/50 (4%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	2/200 (1%)	Mean 1%	SD 2%
Overall Incidence	Total	17/50 (34%) 96/200 (48%)	Mean 48%	SD 10.07%	Total	10/50 (20%) 58/200 (29%)	Mean 29%	17/50 (34%) SD 6.22%
#All Organs:		phocytic, Mixed, NOS, or						
Malignant Lymphoma:			0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
Malignant Lymphoma:		0/50 (0%) 0/50 (0%)	0/00 (0/0)	0/30 (070)		1/50 (2%)		0,00 (0,0)
	Total		Mean 0%	SD 0%	Total	1/50 (2%) 1/200 (0.5%)	Mean 0.5%	SD 1%
Overall Incidence		0/50 (0%) 0/200 (0%)		()	Total	. ,		(111)
Overall Incidence #All Organs:		0/50 (0%) 0/200 (0%)		()	Total	. ,		(111)

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#All Organs: Mesothelioma: Malignant								
		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%
#All Organs: Osteoma								
		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%
#All Organs: Osteosarcoma								
		2/50 (4%) 1/50 (2%)	0/50 (0%)	3/50 (6%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)
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%) 2/50 (4%)	0/50 (0%)	3/50 (6%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)
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%) 4/49 (8%)	1/50 (2%)	0/50 (0%)		3/50 (6%) 2/50 (4%)	4/50 (8%)	8/50 (16%)
Overall Incidence	Total	6/199 (3.02%)	Mean 3.04%	SD 3.54%	Total	17/200 (8.5%)	Mean 8.5%	SD 5.26%

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
Adrenal Cortex: Carcinoma								
		0/50 (0%) 0/49 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/199 (0%)	Mean 0%	SD 0%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%
Adrenal Medulla: Pheochromocytoma Beni								
		10/50 (20%) 5/49 (10%)	7/50 (14%)	9/50 (18%)		2/50 (4%) 0/50 (0%)	0/50 (0%)	2/50 (4%)
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 Com								
		1/50 (2%) 0/49 (0%)	2/50 (4%)	0/50 (0%)		1/50 (2%) 0/50 (0%)	0/50 (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 Mali	gnant							
		0/50 (0%) 2/49 (4%)	1/50 (2%)	4/50 (8%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	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: Ber	nign, Complex	k, Malignant, NOS						
		11/50 (22%) 6/49 (12%)	10/50 (20%)	12/50 (24%)		3/50 (6%) 1/50 (2%)	0/50 (0%)	3/50 (6%)
Overall Incidence	Total	39/199 (19.6%)	Mean 19.56%	SD 5.14%	Total	7/200 (3.5%)	Mean 3.5%	SD 3%

*: Denominator is number of animals with tissues examined microscopically

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

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

*: Denominator is number of animals with tissues examined microscopically

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

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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%)
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%)
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%)	0/50 (0%)		1/50 (2%) 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, Gli								
		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%) 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%)
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

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

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			Male				Female	
Clitoral/Preputial Gland: Adenoma								
		4/50 (8%) 2/50 (4%)	0/50 (0%)	0/50 (0%)		3/49 (6%) 4/47 (9%)	1/50 (2%)	0/50 (0%)
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%) 2/50 (4%)	1/50 (2%)	0/50 (0%)		1/49 (2%) 1/47 (2%)	0/50 (0%)	4/50 (8%)
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%) 4/50 (8%)	1/50 (2%)	0/50 (0%)		4/49 (8%) 5/47 (11%)	1/50 (2%)	4/50 (8%)
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%)	0/50 (0%)		0/49 (0%) 0/47 (0%)	0/50 (0%)	0/50 (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%

*: Denominator is number of animals with tissues examined microscopically

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

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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%)
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%)
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%)
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%)
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%)
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

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

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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%)
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%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
#Intestine Large: Colon/Rectu 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 Large: Colon/Rectu 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: Duodenum: Leiomyoma								
		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

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

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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

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

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			Male				Female	
#Intestine Small: Site Uns Adenoma	specified:							
		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 Uns 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 Uns Carcinoma or Adenoma	specified:	0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)
		0/50 (0%)	0/30 (078)	0/30 (078)		0/50 (0%)	0/30 (078)	0/30 (078)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Uns Leiomyoma								
		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%
#Intestine Small: Site Uns Leiomyosarcoma	specified:							
		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

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

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			Male				Female	
#Intestine Small: Site Unspec Schwannoma Malignant	cified:							
		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%) 2/50 (4%)	6/50 (12%)	3/50 (6%)		0/50 (0%) 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%) 2/50 (4%)	1/50 (2%)	1/50 (2%)		1/50 (2%) 0/50 (0%)	0/50 (0%)	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%) 4/50 (8%)	7/50 (14%)	4/50 (8%)		1/50 (2%) 0/50 (0%)	2/50 (4%)	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 Transitio Papilloma	onal Epitheli	um:						
-		1/50 (2%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		0/49 (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

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%)	0/50 (0%)		0/49 (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%)	0/50 (0%)		1/49 (2%) 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%)	0/50 (0%)		1/49 (2%) 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%)	0/50 (0%)		0/49 (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 Malig	gnant							
-		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)		0/49 (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

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%)	0/50 (0%)		0/49 (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 Adenom								
		0/50 (0%) 1/50 (2%)	0/50 (0%)	1/50 (2%)		0/50 (0%) 1/50 (2%)	1/50 (2%)	0/50 (0%)
Overall Incidence	Total	2/200 (1%)	Mean 1%	SD 1.15%	Total	2/200 (1%)	Mean 1%	SD 1.15%
Liver: Hepatocellular Carcino								
		2/50 (4%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%) 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 Carcino		istoma						
		2/50 (4%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		1/50 (2%) 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 Carcino								
-	-	2/50 (4%) 1/50 (2%)	0/50 (0%)	1/50 (2%)		1/50 (2%) 1/50 (2%)	1/50 (2%)	0/50 (0%)
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

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

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			Male				Female	
*Liver:								
Hepatocellular Carcino	ma, Hepatocellu	lar Adenoma, or Hepatol						
		2/50 (4%) 1/50 (2%)	0/50 (0%)	1/50 (2%)		1/50 (2%) 1/50 (2%)	1/50 (2%)	0/50 (0%)
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%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar A	denoma	2/50 (40/)	0/50 (0%)	0/50 (0%)		1/50 (20/)	0/50 (0%/)	0/50 (0%)
		2/50 (4%) 3/50 (6%)	· · · ·	· · · ·		1/50 (2%) 1/50 (2%)	0/50 (0%)	~ /
Overall Incidence	Total	5/200 (2.5%)	Mean 2.5%	SD 3%	Total	2/200 (1%)	Mean 1%	SD 1.15%
*Lung: Alveolar/Bronchiolar C	arcinoma							
		1/50 (2%) 0/50 (0%)	1/50 (2%)	1/50 (2%)		1/50 (2%) 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 C	arcinoma or Alvo	eolar/Bronchiolar Adeno	ma					
		3/50 (6%) 3/50 (6%)	1/50 (2%)	1/50 (2%)		2/50 (4%) 1/50 (2%)	0/50 (0%)	0/50 (0%)
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

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

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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%)
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%)
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)	%)	0/50 (0%) 0/50 (0%)	1/50 (2%)	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%)	0/50 (0)	%)	4/50 (8%) 5/50 (10%)	9/50 (18%)	3/50 (6%)
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%)	0/50 (0)	%)	4/50 (8%) 5/50 (10%)	10/50 (20%)	3/50 (6%)
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

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%) 1/50 (2%)	2/50 (4%)	1/50 (2%)		25/50 (50%) 37/50 (74%)	27/50 (54%)	14/50 (28%)
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%)	· · · · · · · · · · · · · · · · · · ·	14/30 (2078)
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	ı, Carcinoma, or			1/50 (00/)		07/50 (5404)	00/50 (000/)	
		2/50 (4%) 1/50 (2%)	2/50 (4%)	1/50 (2%)		27/50 (54%) 38/50 (76%)	30/50 (60%)	16/50 (32%)
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

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

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			Male				Female	
#Mesentery: Schwannoma Malignar	nt							
		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%)	0/49 (0%)	0/50 (0%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	0/198 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
Papilloma Squamous o Overall Incidence	Total	0/50 (0%) 0/50 (0%) 0/200 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	Total	0/50 (0%) 0/50 (0%) 0/200 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%
#Oral Cavity (Oral Mucos Squamous Cell Carcino	a, Tongue, Phar							
		1/50 (2%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%) 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 Mucos Squamous Cell Carcino		ynx, Tooth, Gingiva): Squamous, or Papilloma						
-	•	1/50 (2%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	1/50 (2%)
		0/30 (078)				1/00 (2/0)		

*: Denominator is number of animals with tissues examined microscopically

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

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				Male						F	emale		
#Oral Mucosa: Squamous Cell Carcinoma													
		1/50 (2 0/50 (0	,	(0%)	0/50	(0%)		0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence	Total	1/200 (0.5%)	Mean		SD 1%		Total	0/200 ((0%)	Mea	an 0%	SD	0%
#Oral Mucosa: Squamous Cell Papilloma													
		0/50 (0 0/50 (0	,	(0%)	0/50	(0%)		0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence	Total	0/200 (0%)	Mean		SD 0%		Total	0/200 ((0%)		an 0%	SD	0%
*Ovary: Cystadenoma								0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence							Total	0/200 ((0%)		an 0%	SD	
'Ovary: Fibrosarcoma													
								0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence							Total	0/200 (,		an 0%	SD	0%
*Ovary: Granulosa Cell Tumor Benig													
								0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence							Total	0/200 (Mea	an 0%	SD	0%

*: Denominator is number of animals with tissues examined microscopically

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	Page: 123 Report Date: 06/05/2013			
	Male		Female		
*Ovary: Granulosa Cell Tumor Malignant					
		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (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%)	0/50 (0%)	
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	
*Ovary: Granulosa-Theca Tumor Malignant		2/50 (4%)	0/50 (0%)	0/50 (0%)	
		1/50 (2%)	0,00 (0,0)	0,00 (0,0)	
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%)	0/50 (0%)	
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	
*Ovary: Sertoli Cell Tumor Malignant					
-		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	1/200 (0.5%)	Mean 0.5%	SD 1%	

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									Page: 124 Report Date: 06/05/2013			
		Male							Female					
[•] Ovary: Tubulostromal Adenoma									0/50	(0%)	0/50	(0%)	0/50	(0%)
									0/50	(0%)	0,00	(0,0)	0,00	(0,0)
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%)	0/49	(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	. ,	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%)	0/49	(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	. ,	Mean	0%	SD	0%
Pancreas: Mixed Tumor Benign														
		0/50 0/50	(0%) (0%)	0/49	(0%)	0/50	(0%)		0/50 0/50	(0%) (0%)	0/50	(0%)	0/50	(0%)
Overall Incidence	Total	0/199 (0%)	. ,	Mean	0%	SD 0%		Total	0/200		Mean	0%	SD	0%
Parathyroid Gland: Adenoma														
		0/46 0/50	(0%) (0%)	0/48	(0%)	0/48	(0%)		0/47 0/49	(0%) (0%)	1/43	(2%)	0/49	(0%)
Overall Incidence	Total	0/192 (0%)	· · ·	Mean	0%	SD 0%		Total	1/188 (0	· · ·	Mean	0.58%	SD 1	16%

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

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			Male				Female	
Pituitary Gland: Pars Di Adenoma	stalis or Unspec	ified Site:						
		37/50 (74%) 34/50 (68%)	31/50 (62%)	36/50 (72%)		35/50 (70%) 32/50 (64%)	29/50 (58%)	36/49 (73%)
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 Di Carcinoma								
		0/50 (0%) 0/50 (0%)	0/50 (0%)	1/50 (2%)		0/50 (0%) 1/50 (2%)	2/50 (4%)	0/49 (0%)
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 Di Carcinoma or Adenom Overall Incidence		37/50 (74%) 34/50 (68%) 139/200 (69.5%)	31/50 (62%) Mean 69.5%	37/50 (74%) SD 5.74%	Total	35/50 (70%) 33/50 (66%) 135/199 (67.84%)	31/50 (62%) Mean 67.87%	36/49 (73%) SD 4.96%
*Pituitary Gland: Pars Di		cified Site:				······		
Ganglioneuroma						0/50 (0%)	0/50 (0%)	0/49 (0%)
Ganglioneuroma		0/50 (0%) 0/50 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%)	0,00 (0,0)	
-	Total	()	1/50 (2%) Mean 0.5%	SD 1%	Total	()	Mean 0%	SD 0%
Overall Incidence		0/50 (0%)			Total	0/50 (0%)	()	· · · · ·
Overall Incidence *Pituitary Gland: Pars In		0/50 (0%)			Total	0/50 (0%)	()	· · · · ·

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
Pituitary Gland: Pars Interm Carcinoma or Adenoma	edia:							
		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/49 (0%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/199 (0%)	Mean 0%	SD 0%
Pituitary Gland: Pars Nervos Craniopharyngioma								
		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/49 (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

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

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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

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

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			Male				Female	
#Skeletal Muscle: Lipoma								
		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: Basal Cell Adenoma								
		0/50 (0%) 1/50 (2%)	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 1.15%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%
Basal Cell Adenoma or B Overall Incidence	Total	0/50 (0%) 1/50 (2%) 2/200 (1%)	0/50 (0%) Mean 1%	1/50 (2%) SD 1.15%	Total	0/50 (0%) 1/50 (2%) 1/200 (0.5%)	0/50 (0%) Mean 0.5%	0/50 (0%) SD 1%
#Skin: Basal Cell Adenoma, Bas	osquamous T	umor Benian. or Trichoe	pithelioma					
	·	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	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%)	1/50 (2%)	3/50 (6%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	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

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

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			Male				Female	
#Skin:								
Basal Cell Carcinoma	or Basosquamou	is Tumor (malignant or N	OS)					
		0/50 (0%) 1/50 (2%)	1/50 (2%)	3/50 (6%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	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, NOS), or Trichoepithel		oma, Basosquamous Tur	nor (benign, maligna	nt or				
<i>,,</i> ,		0/50 (0%) 3/50 (6%)	1/50 (2%)	4/50 (8%)		0/50 (0%) 1/50 (2%)	0/50 (0%)	0/50 (0%)
Overall Incidence	Total	8/200 (4%)	Mean 4%	SD 3.65%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%
Basal or Sq. Cell Carci	inoma, Carcinom	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep	3), Basal Cell Adenon ithelioma	na,				
Basal or Sq. Cell Carci	inoma, Carcinom	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%)	3), Basal Cell Adenon			1/50 (2%)	1/50 (2%)	1/50 (2%)
Adenoma, Papilloma, S Overall Incidence	inoma, Carcinom Sq Papilloma, Ke Total	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%) 16/200 (8%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8%	na, 5/50 (10%) SD 7.66%	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%)	1/50 (2%) Mean 2.5%	1/50 (2%) SD 1%
Basal or Sq. Cell Carci Adenoma, Papilloma, S Overall Incidence	inoma, Carcinom Sq Papilloma, Ke Total	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8%	na, 5/50 (10%) SD 7.66%	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%)	1/50 (2%) Mean 2.5%	
Basal or Sq. Cell Carci Adenoma, Papilloma, S Overall Incidence #Skin:	inoma, Carcinom Sq Papilloma, Ke Total	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%) 16/200 (8%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8%	na, 5/50 (10%) SD 7.66%	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%)	1/50 (2%) Mean 2.5%	
Basal or Sq. Cell Carci Adenoma, Papilloma, S Overall Incidence #Skin:	inoma, Carcinom Sq Papilloma, Ke Total	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%) 16/200 (8%) 3/50 (6%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8%	na, 5/50 (10%) SD 7.66%	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%) 2/50 (4%)	1/50 (2%) Mean 2.5%	SD 1%
Basal or Sq. Cell Carci Adenoma, Papilloma, S Overall Incidence #Skin: Fibroma Overall Incidence	inoma, Carcinom Sq Papilloma, Ke Total Total	a, Basosq. Tumor (M or E ratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%) 16/200 (8%) 3/50 (6%) 1/50 (2%) 8/200 (4%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8% 1/50 (2%) Mean 4%	na, 5/50 (10%) SD 7.66% 3/50 (6%)	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%) 2/50 (4%) 1/50 (2%)	1/50 (2%) Mean 2.5% 1/50 (2%)	SD 1% 0/50 (0%)
Basal or Sq. Cell Carci Adenoma, Papilloma, S Overall Incidence #Skin: Fibroma Overall Incidence	inoma, Carcinom Sq Papilloma, Ke Total Total	a, Basosq. Tumor (M or E pratoacanthoma, Trichoep 1/50 (2%) 9/50 (18%) 16/200 (8%) 3/50 (6%) 1/50 (2%)	3), Basal Cell Adenon ithelioma 1/50 (2%) Mean 8% 1/50 (2%) Mean 4%	na, 5/50 (10%) SD 7.66% 3/50 (6%)	Total	1/50 (2%) 2/50 (4%) 5/200 (2.5%) 2/50 (4%) 1/50 (2%)	1/50 (2%) Mean 2.5% 1/50 (2%)	SD 1% 0/50 (0%)

*: Denominator is number of animals with tissues examined microscopically

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

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			Male				Female	
#Skin: Fibrosarcoma								
		0/50 (0%) 0/50 (0%)	0/50 (0%)	3/50 (6%)		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, I								
	ing xoou come	0/50 (0%) 0/50 (0%)	1/50 (2%)	3/50 (6%)		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%) 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: Hemangiosarcoma								
		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	1/200 (0.5%)	Mean 0.5%	SD 1%	Total	0/200 (0%)	Mean 0%	SD 0%
#Skin: Keratoacanthoma								
		0/50 (0%) 3/50 (6%)	0/50 (0%)	1/50 (2%)		1/50 (2%) 1/50 (2%)	1/50 (2%)	0/50 (0%)
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

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

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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%)	0/50 (0%)		1/50 (2%) 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 Schw								
		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		alignant or NOS)						
	· ·	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	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

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

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			Male				Female	
*Skin: Neurofibrosarcoma, Neuro	fibroma, or S	Schwannoma (benign, ma	alignant or NOS)					
	,	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	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%)	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	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%) 0/50 (0%)	0/50 (0%)	1/50 (2%)
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

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

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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%)	1/50 (2%)	3/50 (6%)		0/50 (0%) 0/50 (0%)	0/50 (0%)	1/50 (2%)				
Overall Incidence	Total	6/200 (3%)	Mean 3%	SD 2%	Total	1/200 (0.5%)	Mean 0.5%	SD 1%				
∕Skin: Squamous Cell Papillo	ma	0/50 (0%)	0/50 (0%)	0/50 (0%)		0/50 (0%)	0/50 (0%)	0/50 (0%)				
		3/50 (6%)	0/50 (0%)	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: Squamous Cell Papillo	ma or Papilloma	0/50 (0%) 3/50 (6%)	0/50 (0%)	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%				
έSkin: Squamous Cell Papillo	ma, Papilloma, S	Squamous Cell Carcinom 1/50 (2%) 6/50 (12%)	a or Keratoacanthoma 0/50 (0%)	1/50 (2%)	Tatal	1/50 (2%) 1/50 (2%)	1/50 (2%)	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 Papillo	ma, Papilloma, o											
		0/50 (0%) 6/50 (12%)	0/50 (0%)	1/50 (2%)		1/50 (2%) 1/50 (2%)	1/50 (2%)	0/50 (0%)				
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

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%) 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: Sebaceous Gland: Adenoma								
		0/50 (0%) 0/50 (0%)	1/50 (2%)	2/50 (4%)		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%) 0/50 (0%)	1/50 (2%)	2/50 (4%)		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

Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups 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%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
fStomach, 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%)
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%	Total	0/200 (0%)	Mean 0%	SD 0%
Testes: Adenoma								
		34/50 (68%) 32/50 (64%)	36/50 (72%)	29/50 (58%)				
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%) 0/42 (0%)	0/44 (0%)	0/47 (0%)		1/46 (2%) 0/46 (0%)	0/48 (0%)	0/44 (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

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%) 0/42 (0%)	0/44 (0%)	0/47 (0%)		0/46 (0%) 0/46 (0%)	0/48 (0%)	0/44 (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%) 0/42 (0%)	0/44 (0%)	0/47 (0%)		0/46 (0%) 0/46 (0%)	1/48 (2%)	0/44 (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,		0/43 (0%) 0/42 (0%)	0/44 (0%)	0/47 (0%)		1/46 (2%) 0/46 (0%)	1/48 (2%)	0/44 (0%)
Overall Incidence	Total	0/42 (0%)	Mean 0%	SD 0%	Total	2/184 (1.09%)	Mean 1.06%	SD 1.23%
Thyroid Gland: C-Cell: Adenoma								
		5/50 (10%) 4/50 (8%)	7/50 (14%)	5/50 (10%)		3/50 (6%) 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%) 3/50 (6%)	1/50 (2%)	2/50 (4%)		1/50 (2%) 0/50 (0%)	0/50 (0%)	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

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		0/50 (40%)	0/50 (400/)	0/50 (40%)		4/50 (00())	4/50 (00())	0/50 (0%)
		9/50 (18%) 7/50 (14%)	8/50 (16%)	6/50 (12%)		4/50 (8%) 3/50 (6%)	4/50 (8%)	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

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%)	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	0/200 (0%)	Mean 0%	SD 0%				
'Urinary Bladder: Carcinoma												
		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%				
*Urinary Bladder: Carcinoma or Papilloma												
		0/50 (0%) 0/49 (0%)	1/50 (2%)	0/50 (0%)		0/50 (0%) 0/50 (0%)	0/50 (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

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

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			Male					Female	
Urinary Bladder: Hemangiosarcoma									
		0/50 (0%) 0/49 (0%)	1/50 (2%)	0/50	(0%)		0/50 (0%) 0/50 (0%)	0/50 (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%) 0/49 (0%)	1/50 (2%)	0/50	(0%)		0/50 (0%) 0/50 (0%)	0/50 (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%)
Overall Incidence						Total	0/50 (0%) 2/200 (1%)	Mean 1%	SD 1.15%
Uterus: Carcinoma									
							0/50 (0%) 0/50 (0%)	0/50 (0%)	1/50 (2%)
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

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	Page: 140 Report Date: 06/05/2013					
	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%			
lUterus:							
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%			
EUterus: Schwannoma Malignant							
-		0/50 (0%) 0/50 (0%)	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	0/200 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	5		Toxicolo Tumor Incidenc	Page: 141 Report Dat	te: 06/05/2013			
			Male				Female	
#Vagina: Polyp						0/50 (0%)	0/50 (0%)	0/50 (0%)
Overall Incidence					Total	0/50 (0%) 0/200 (0%)	Mean 0%	SD 0%
#Vagina: Sarcoma						1/50 (2%)	0/50 (0%)	0/50 (0%)
Overall Incidence					Total	0/50 (0%) 1/200 (0.5%)	Mean 0.5%	SD 1%
#Vagina: Schwannoma Malignant						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%) 0/50 (0%)	2/50 (4%)	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								
Overall Incidence	Total	0/50 (0%) 0/50 (0%) 0/200 (0%)	0/50 (0%) Mean 0%	0/50 (0%) SD 0%	Total	1/50 (2%) 0/50 (0%) 2/200 (1%)	0/50 (0%) Mean 1%	1/50 (2%) SD 1.15%

*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013					Toxicolo	ogy Data Ma	nagement	System				Page: 142		
Contract/Lab: All Laboratories				Tur	nor Inciden	ce for Select	ed Control A	nimal Groups		Report Date: 06/05/2013				
Species: RATS			Route: INHALATION											
Strain: F 344/N				Vehicle: AIR										
Length of Study: CHRONIC														
		Male							Female					
#Zymbal's Gland: Carcinoma or Adenoma														
		0/50 0/50	(0%) (0%)	2/50	(4%)	0/50	(0%)		1/50 0/50	(2%) (0%)	0/50	(0%)	1/50	(2%)
Overall Incidence	Total	2/200 (1%	%)	Mean	1%	SD 2%		Total	2/200 ((1%)	Mea	an 1%	SD 1.1	15%

*: Denominator is number of animals with tissues examined microscopically

Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: ORAL Vehicle: WATER

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 Columbus Laboratory	052000903	11/18/04	726	50(3)	33(668)	516.1	beta-Picoline				
					Female						
Battelle Columbus Laboratory	052000903	11/19/04	727	50(5)	30(688)	352.7	beta-Picoline				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	5		Page: 144 Report Date: 06/05/2013						
			Male		Female				
#All Organs: Benign Tumors		45/50 (90%)				47/50 (94%)			
Overall Incidence	Total	45/50 (90%)	Mean 90%	SD 0%	Total	47/50 (94%)	Mean 94%	SD 0%	
#All Organs: Malignant Tumors		23/50 (46%)				17/50 (34%)			
Overall Incidence	Total	23/50 (46%)	Mean 46%	SD 0%	Total	17/50 (34%)	Mean 34%	SD 0%	
#All Organs: Malignant and Benign Tun Overall Incidence		48/50 (96%) 48/50 (96%)	Mean 96%	SD 0%	Total	49/50 (98%) 49/50 (98%)	Mean 98%	SD 0%	
#All Organs: Hemangioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Hemangiosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Hemangiosarcoma or Hem		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER			Page: 145 Report Date: 06/05/2				
			Male				D (0%) Mean 0% SD 0% 50 (24%) 0 (24%) Mean 24% SD 0% 50 (0%) Mean 0% SD 0%				
#All Organs: Histiocytic Sarcoma		0/50 (0%)				()					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#All Organs: Leukemia: Lymphocytic, Mo	onocytic, Mo	ononuclear, or Undifferen 14/50 (28%)	tiated			12/50 (24%)					
Overall Incidence	Total	14/50 (28%)	Mean 28%	SD 0%	Total	12/50 (24%)	Mean 24%	SD 0%			
#All Organs: Malignant Lymphoma: Histi Overall Incidence	ocytic, Lym Total	phocytic, Mixed, NOS, or 0/50 (0%) 0/50 (0%)	Undifferentiated Ce	ell Type SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
#All Organs: Mesothelioma: Benign, Mal		4/50 (8%)									
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#All Organs: Mesothelioma: Malignant		4/50 (8%)				0/50 (0%)					
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#All Organs: Osteoma		0/50 (0%)				0/50 (0%)					
		(-/0)									

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic a Tumor Incide	Page: 146 Report Date: 06/05/2013 Female Mean 0% SD 0%				
			Male			Female 0/50 (0%) /50 (0%) Mean 0% SD 0% 0/50 (0%) /50 (0%) Mean 0% SD 0% 2/50 (4%) /50 (4%) Mean 4% SD 0% 0/50 (0%) /50 (0%) Mean 0% SD 0% 0/50 (0%) /50 (0%) Mean 0% SD 0% 0/50 (0%) /50 (0%) Mean 0% SD 0%		
#All Organs: Osteosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Osteosarcoma or Osteom		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Cortex: Adenoma		1/50 (2%)				()		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%
*Adrenal Cortex: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Adrenal Medulla: Pheochromocytoma Beni		5/50 (10%)				2/50 (4%)		
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	2/50 (4%)		
*Adrenal Medulla: Pheochromocytoma Com		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratorie: Species: RATS Strain: F 344/N Length of Study: CHRONIC	5			ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER			Page: 147 Report Date: 06/05/2013				
			Male			Female 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% 1000000000000000000000000000000000000					
*Adrenal Medulla: Pheochromocytoma Malig	nant	0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		0/50 (0%)	Mean 0%	SD 0%			
*Adrenal Medulla: Pheochromocytoma: Beni		Malignant, NOS 6/50 (12%)									
Overall Incidence	Total	6/50 (12%)	Mean 12%	SD 0%		2/50 (4%)					
#Blood Vessel: Leiomyosarcoma		0/50 (0%)									
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
∕Bone: Chordoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		()	Mean 0%	SD 0%			
#Bone: Osteoma		0/50 (0%)									
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Bone: Osteosarcoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	ol Animal Groups		Page: 148 Report Dat		
			Male			Female 0/50 (0%) Total 0/50 (0%) 0/50 (0%) Mean 0% SD 09 0/50 (0%) Mean 0% SD 09 1/50 (0%) Mean 0% SD 09 1/50 (2%) Mean 2% SD 09 0/50 (0%) Mean 2% SD 09 1/50 (2%) Mean 2% SD 09 1/50 (0%) Mean 0% SD 09 1/50 (0%) Mean 0% SD 09 1/50 (2%) Mean 0% SD 09 1/50 (2%) Mean 0% SD 09			
#Bone: Osteosarcoma or Osteoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		. ,	Mean 0%	SD 0%	
*Brain: Glioma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		0/50 (0%)		SD 0%	
*Brain: Glioma Benign Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		1/50 (2%)		SD 0%	
*Brain: Glioma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · · ·	Mean 0%	SD 0%	
		. ,							
Brain: Oligodendroglioma, Glioma	a, or Astrocy	toma 0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Brain: Osteosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incide	Page: 149 Report Dat	•				
			Male			0/50 (0%) 0/50 (0%) Mean 0% SD 0% 7/50 (14%) 7/50 (14%) Mean 14% SD 0% 1/50 (2%) 1/50 (2%) Mean 2% SD 0% 0/50 (0%)			
*Clitoral/Preputial Gland: Adenoma		0/50 (0%)				7/50 (14%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	7/50 (14%)	Mean 14%	SD 0%	
*Clitoral/Preputial Gland: Carcinoma		2/50 (4%)							
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)			
*Clitoral/Preputial Gland: Carcinoma or Adenoma Overall Incidence	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	Total	7/50 (14%) 7/50 (14%)	Mean 14%		
*Clitoral/Preputial Gland: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)		SD 0%	
#Ear: Neural Crest Tumor		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%		
#Eye: Melanoma Benign		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	Page: 150 Report Dat	Page: 150 Report Date: 06/05/2013		
			Male				Female	
#Eye: Melanoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Harderian Gland: Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Harderian Gland: Carcinoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Harderian Gland: Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Heart: Schwannoma Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Heart: Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	rol Animal Groups		Page: 151 Report Dat		
			Male				(0%) %) Mean 0% SD 0% (0%) %) Mean 0% SD 0% (0%) Mean 0% SD 0%		
#Intestine Large: Colon/Rectu Adenoma	m:								
		1/50 (2%)				()			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Large: Colon/Rectu Carcinoma or Adenoma									
0	Tatal	1/50 (2%)			T . (.)	()	Mara 00/	00.00/	
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Duodenum: Leiomyoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Moon 0%	SD 0%	
		0/00 (078)							
#Intestine Small: Duodenum: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Ileum: Adenoma									
		0/50 (0%)				()			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Jejunum: Carcinoma						0/50 (09/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals						. ,			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Mean 0% SD 0%		
			Male			Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%			
#Intestine Small: Jejunum: Leiomyoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	()	Mean 0%	SD 0%	
#Intestine Small: Jejunum: Leiomyosarcoma									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
#Intestine Small: Site Unspeci Adenoma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Carcinoma	fied:	0/50 (00/)							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	, ,	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Carcinoma or Adenoma		0/50 (00/)				0/50 (00/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	. ,	Mean 0%	SD 0%	
#Intestine Small: Site Unspeci Leiomyoma						0/50 (00/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laborator Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 153 Report Date: 06/05/2013 Female				
			Male				Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%				
#Intestine Small: Site Unsp Leiomyosarcoma	pecified:	0/50 (0%)	Male 0/50 (0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	0/50 (0%)							
Overall Incidence	Total	0/50 (0%)				0/50 (0%)	Mean 0%	SD 0%			
#Intestine Small: Site Unsp Schwannoma Malignant	pecified:	0/50 (0%)									
Overall Incidence	Total	0/50 (0%)				0/50 (0%)		SD 0%			
*Islets, Pancreatic: Adenoma Overall Incidence	Total	4/50 (8%) 4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%) 0/50 (0%)		SD 0%			
*Islets, Pancreatic: Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)					Mean 0%	SD 0%			
*Islets, Pancreatic: Carcinoma or Adenoma		4/50 (8%)				0/50 (0%)					
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%)					
*Kidney: Pelvis and Transi Papilloma		m:									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER			Page: 154 Report Date: 0				
			Male			Female 0/49 (0%) Mean 0% SD 0% 0/49 (0%) Mean 0% SD 0%					
*Kidney: Renal Tubule: Adenoma		0/50 (0%)	Male Main 0%) Mean 0% SD 0% Total 0/49 (0%) %) Mean 0% SD 0% Total 0/49 (0%)								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%			
*Kidney: Renal Tubule: Carcinoma		0/50 (0%)				0/49 (0%)					
Overall Incidence	Total	0/50 (0%)			Total	()	Mean 0%	SD 0%			
*Kidney: Renal Tubule: Carcinoma or Adenoma		0/50 (0%)									
Overall Incidence	Total	0/50 (0%)					Mean 0%	SD 0%			
*Kidney: Renal Tubule: Lipoma		0/50 (0%)				0/49 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%			
*Kidney: Renal Tubule: Mesenchymal Tumor Maligr						0/49 (0%)					
Overall Incidence	Total	0/50 (0%)		SD 0%	Total	()	Mean 0%	SD 0%			
*Kidney: Renal Tubule: Sarcoma		0/50 (0%)				0/49 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	rol Animal Groups	Page: 155 Report Dat		
			Male					
*Liver: Hepatocellular Adenoma		3/50 (6%)				2/50 (4%)		
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%		()	Mean 4%	SD 0%
*Liver: Hepatocellular Carcinoma		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		. ,	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma o Overall Incidence			Mean 0%	SD 0%		0/50 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma o	r Hepatocel	lular Adenoma 3/50 (6%)				2/50 (4%)		
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	l otal	2/50 (4%)	Mean 4%	SD 0%
*Liver: Hepatocellular Carcinoma, H	lepatocellu	lar Adenoma, or Hepatol 3/50 (6%)	olastoma			2/50 (4%)		
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%		()	Mean 4%	SD 0%
*Liver: Ito Cell Tumor Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of animals	with tissues e							

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 156 Report Date: 06/05/2013 Female				
			Male			Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%					
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	. ,	Mean 0%	SD 0%			
*Lung: Alveolar/Bronchiolar Carcir		0/50 (0%)									
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	. ,	Mean 0%	SD 0%			
*Lung: Alveolar/Bronchiolar Carcir Overall Incidence	oma or Alve	eolar/Bronchiolar Adenor 3/50 (6%) 3/50 (6%)	na Mean 6%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Lung: Fibrosarcoma		0/50 (0%)				0/50 (0%)		25. 00			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Wean 0%	SD 0%			
#Mammary Gland: Adenolipoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Mammary Gland: Adenoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 157 Report Date: 06/05/20				
			Male				Female	Report Date: 06/05/2013			
#Mammary Gland: Carcinoma		0/50 (0%)				2/50 (4%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%			
#Mammary Gland: Carcinoma or Adenoma		0/50 (0%)				2/50 (4%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%			
#Mammary Gland: Fibroadenoma Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	34/50 (68%) 34/50 (68%)	Mean 68%	SD 0%			
Mammary Gland: Fibroma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Moon 0%	SD 0%			
	TULAI	0/50 (0%)		30 0%	10181	0/50 (0%)		30 0%			
#Mammary Gland: Fibroma, Fibroadenoma or	Adenoma	1/50 (2%)				34/50 (68%)					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	34/50 (68%)	Mean 68%	SD 0%			
∯Mammary Gland: Fibroma, Fibroadenoma, Ca						34/50 (68%)					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	34/50 (68%)	Mean 68%	SD 0%			

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: ORAL Vehicle: WATER				Page: 158 Report Date: 06/05/2013		
			Male						
#Mesentery: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Mesentery: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
*Nose: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)			
	ongue, Phar	· · · · · · · · · · · · · · · · · · ·				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma		ynx, Tooth, Gingiva):							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma,	ongue, Phar	ynx, Tooth, Gingiva): Squamous, or Papilloma				0/50 (00/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*: Denominator is number of animals	s with tissues e	examined microscopically							

Version: Jun2013 Contract/Lab: All Laboratori Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 159 Report Date: 06/05/2013				
			Male				-				
#Oral Mucosa: Squamous Cell Carcinon	na	0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Oral Mucosa: Squamous Cell Papillom		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Ovary: Cystadenoma					T-1-1	0/50 (0%)	M 00/	CD 00/			
Overall Incidence					Total	0/50 (0%)					
*Ovary: Fibrosarcoma						0/50 (0%)					
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%			
*Ovary: Granulosa Cell Tumor Be	enign										
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			
*Ovary: Granulosa Cell Tumor Ma											
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	3			ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-				
			Male				Female		
*Ovary: Granulosa Cell Tumor: Be	nian. Maliana	unt. NOS							
Overall Incidence		,			Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Granulosa-Theca Tumor N	lalignant								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Schwannoma Malignant									
Overall Incidence					Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	
*Ovary: Sertoli Cell Tumor Maligna									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Tubulostromal Adenoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Pancreas: Adenoma		1/40 (20/)				0/50 (0%)			
Overall Incidence	Total	1/49 (2%) 1/49 (2.04%)	Mean 2.04%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Nogy Data Manageme nce for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 161 Report Dat	e: 06/05/2013		
			Male				Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0%			
*Pancreas: Carcinoma or Adenoma		1/49 (2%)				0/50 (0%)				
Overall Incidence	Total	1/49 (2.04%)	Mean 2.04%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Pancreas: Mixed Tumor Benign		0/49 (0%)				0/50 (0%)				
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)				
*Parathyroid Gland: Adenoma		0/50 (0%)				0/47 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)	Mean 0%	SD 0%		
*Pituitary Gland: Pars Distalis Adenoma		ified Site:								
Overall Incidence	Total	28/50 (56%) 28/50 (56%)	Mean 56%	SD 0%	Total	30/50 (60%) 30/50 (60%)	Mean 60%	SD 0%		
*Pituitary Gland: Pars Distalis Carcinoma										
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*Pituitary Gland: Pars Distalis Carcinoma or Adenoma										
		28/50 (56%)				30/50 (60%)				
Overall Incidence	Total	28/50 (56%)	Mean 56%	SD 0%	Total	30/50 (60%)	Mean 60%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: ORAL Vehicle: WATER				Female					Page: 162 Report Date: 06/05/2013		
			Male				Female							
*Pituitary Gland: Pars Dista Ganglioneuroma	lis or Unspecif					0/50 (0%)								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%						
*Pituitary Gland: Pars Interr Adenoma						0/50 (0%)								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%						
*Pituitary Gland: Pars Interr Carcinoma or Adenoma Overall Incidence		0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%						
Pituitary Gland: Pars Nervo Craniopharyngioma Overall Incidence		0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%						
Prostate: Adenoma	T .(1)	0/49 (0%)	M 00/	05.0%										
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%										
Prostate: Carcinoma or Adenoma		0/49 (0%)												
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%										

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: ORAL Vehicle: WATER					e: 06/05/2013		
			Male				Female	Page: 163 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0%		
*Salivary Glands: Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Salivary Glands: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Salivary Glands: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*Salivary Glands: Schwannoma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Seminal Vesicle: Adenoma	Total	0/50 (0%)	Magn 00/	SD 00/						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%						
#Skeletal Muscle: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC	S		Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups Route: ORAL Vehicle: WATER				Fage: 164 Report Date: 06/05/2013 Female					-		
		······	Male			Female 50 (0%) Mean 0% SD 0% 50 (2%) Mean 2% SD 0% 50 (2%) Mean 2% SD 0% 50 (2%) Mean 2% SD 0%								
#Skeletal Muscle: Lipoma														
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%						
≭Skin: Basal Cell Adenoma		1/50 (2%)												
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%						
¥Skin: Basal Cell Adenoma or Ba ⊃verall Incidence		Tumor Benign 1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%						
∜Skin: Basal Cell Adenoma, Bas Dverall Incidence		umor Benign, or Trichoe 1/50 (2%) 1/50 (2%)		SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%						
/Skin: Basal Cell Carcinoma	10141													
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%						
Skin: Basal Cell Carcinoma or I		s Tumor (malignant or N 0/50 (0%)				0/50 (0%)								
		0/50 (0%)	Mean 0%		Total	0/50 (0%)	Mean 0%	SD 0%						

/ersion: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 165 Report Dat	Report Date: 06/05/2013				
			Male				Female	Report Date: 06/05/2013				
#Skin: Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma												
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%				
Skin: Basal or Sq. Cell Carcinom Adenoma, Papilloma, Sq P	a, Carcinoma	a, Basosq. Tumor (M or ∣	B), Basal Cell Adeno			1/50 (2%)						
verall Incidence	Total	6/50 (12%)	Mean 12%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%				
Skin: Fibroma		3/50 (6%)				2/50 (4%)						
verall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%				
Skin: Fibroma, Fibrosarcoma, Sa	rcoma, Myxo	oma, Myxosarcoma, or F 4/50 (8%)	ibrous Histiocytoma			2/50 (4%)						
verall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%				
Skin: Fibrosarcoma		1/50 (2%)				0/50 (0%)						
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				
Skin: Fibrosarcoma, Sarcoma, M						0/50 (0%)						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER			Page: 166 Report Dat	Page: 166 Report Date: 06/05/2013 Female			
			Male			Il Groups Report Date: 06/05/2013 Female 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%					
#Skin: Fibrous Histiocytoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total		Mean 0%	SD 0%			
#Skin: Hemangiosarcoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Skin: Keratoacanthoma Overall Incidence	Total	5/50 (10%) 5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
¥Skin: Lipoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Skin: Liposarcoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
#Skin: Neural Crest Tumor		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			

Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contro Route: ORAL Vehicle: WATER	-		Page: 167 Report Dat	e: 06/05/2013	
			Male				Female Mean 0% SD 0%		
#Skin: Neurofibroma or Schwanı	noma benign	0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)			
#Skin: Neurofibrosarcoma or Scl						0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neurofibrosarcoma, Neur		chwannoma (benign, ma 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin:	ofibroma, or S	chwannoma (benign, ma 0/50 (0%)	lignant or NOS) Mean 0%			0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin:	ofibroma, or S	chwannoma (benign, ma 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0%	SD 0%		0/50 (0%) 0/50 (0%)			
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence	ofibroma, or S Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)			
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence #Skin: Schwannoma Benign Overall Incidence	ofibroma, or S Total Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%	Total Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0%	SD 0% SD 0%	
#Skin: Neurofibrosarcoma, Neur Overall Incidence #Skin: Sarcoma Overall Incidence #Skin:	ofibroma, or S Total Total Total	chwannoma (benign, ma 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	lignant or NOS) Mean 0% Mean 0% Mean 0%	SD 0% SD 0% SD 0%	Total Total Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0%	SD 0% SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: ORAL Vehicle: WATER	-		Page: 168 Report Dat	te: 06/05/2013
			Male				Female	
#Skin: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Carcinoma, or Carcinoma	, Basal Cell	Carcinoma, Basosquamo 0/50 (0%)	us Tumor (malignar	nt or NOS),		0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma c						0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma,						0/50 (0%)		
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma,						0/50 (0%)		
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of animals #: Denominator is number of animal		examined microscopically						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 169 Report Date: 06/05/2013					
			Male			Female			
#Skin: Trichoepithelioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland:									
Adenoma		0/50 (00/)							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Spinal Cord: Glioma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 170 Report Date: 06/05/2013						
			Male			Female			
#Stomach, Glandular: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Testes: Adenoma		35/50 (70%)							
Overall Incidence	Total	35/50 (70%)	Mean 70%	SD 0%					
*Testes: Hemangioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%					
*Thymus: Thymoma Benign Overall Incidence	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	
	1 otal	0/49 (0%)	Mean 0%	SD 0%		0/49 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma Malignant Overall Incidence	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	
		0/49 (070)			i otai	0/+3 (0/0)		0 0 /0	
*Thymus: Thymoma NOS		0/49 (0%)				0/49 (0%)			
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide	Page: 171 Report Date: 06/05/2013					
			Male			Female			
*Thymus: Thymoma: Benign, Malignar	0/49 (0%)								
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/49 (0%)	Mean 0%	SD 0%	
*Thyroid Gland: C-Cell: Adenoma		12/50 (24%)				10/50 (20%)			
Overall Incidence	Total	12/50 (24%)	Mean 24%	SD 0%	Total	10/50 (20%)	Mean 20%	SD 0%	
*Thyroid Gland: C-Cell: Carcinoma		1/50 (2%)				1/50 (2%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Thyroid Gland: C-Cell: Carcinoma or Adenoma		13/50 (26%)				11/50 (22%)			
Overall Incidence	Total	13/50 (26%)	Mean 26%	SD 0%	Total	11/50 (22%)	Mean 22%	SD 0%	
*Thyroid Gland: Follicular Cell Adenoma	:	0/50 (0%)				0/50 (00/)			
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Thyroid Gland: Follicular Cell Carcinoma		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 172 Report Date: 06/05/2013						
			Male			Female				
*Thyroid Gland: Follicular Cell Carcinoma or Adenoma		1/50 (2%)		OD 997		0/50 (0%)	M - 00/	25. 22/		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Tongue: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Tongue: Squamous Cell Carcinoma c Overall Incidence	Total	a Squamous 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
fTongue: Squamous Cell Papilloma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
≇Tooth: Adamantinoma Malignant		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
Urinary Bladder: Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

/ersion: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 173 Report Date: 06/05/2013							
			Male			Female				
*Urinary Bladder: Carcinoma or Papilloma							0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Urinary Bladder: Hemangiosarcoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Urinary Bladder: Papilloma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Uterus: Adenoma						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
#Uterus: Carcinoma										
Overall Incidence					Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Uterus: Leiomyosarcoma										
Overall Incidence					Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS	Toxicology Data Manageme Tumor Incidence for Selected Contro Route: ORAL			Page: 174 Report Date: 06/05/2013		
Strain: F 344/N	Vehicle: WATER					
Length of Study: CHRONIC						
	Male		Female			
#Uterus:						
Polyp Stromal			8/50 (16%)			
Overall Incidence		Total	8/50 (16%)	Mean 16%	SD 0%	
#Uterus:						
Sarcoma			0/50 (0%)			
Overall Incidence		Total	0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Sarcoma Stromal						
Overall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Uterus:						
Sarcoma Stromal or Polyp Stromal			- /			
Overall Incidence		Total	8/50 (16%) 8/50 (16%)	Mean 16%	SD 0%	
#Uterus:						
Schwannoma Malignant			0/50 (00/)			
Overall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Vagina:						
Polyp						
		T = (= 1	1/50 (2%)	Mara - 00/	00.00/	
Overall Incidence		Total	1/50 (2%)	Mean 2%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	3		Page: 175 Report Date: 06/05/2013						
			Male			Female			
#Vagina: Sarcoma						0/50 (09/)			
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Vagina: Schwannoma Malignant						0/50 (00/)			
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Carcinoma									
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Zymbal's Gland: Carcinoma or Adenoma						0/50 (0%)			
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

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: PERINATAL AND POSTNATAL Vehicle: FEED

				Stu	dy 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 Columbus Laboratory	059901305	05/12/05	726	50(3)	36(685)	522.7	Styrene-acrylonitrile trimer
					Female		
Battelle Columbus Laboratory	059901305	05/13/05	727	50(5)	41(699)	371.2	Styrene-acrylonitrile trimer

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 177 Report Date: 06/05/2013							
			Male			Female				
#All Organs: Benign Tumors		46/50 (92%)				42/50 (84%)				
Overall Incidence	Total	46/50 (92%)	Mean 92%	SD 0%	Total	42/50 (84%)	Mean 84%	SD 0%		
#All Organs: Malignant Tumors		22/50 (44%)				19/50 (38%)				
Overall Incidence	Total	22/50 (44%)	Mean 44%	SD 0%	Total	19/50 (38%)	Mean 38%	SD 0%		
#All Organs: Malignant and Benign Tumo		49/50 (98%)				44/50 (88%)				
Overall Incidence	Total	49/50 (98%)	Mean 98%	SD 0%	Total	44/50 (88%)	Mean 88%	SD 0%		
#All Organs: Hemangioma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Hemangiosarcoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Hemangiosarcoma or Hema		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Tumo	Page: 178 Report Date: 06/05/2013				
			N	lale			Female	
#All Organs: Histiocytic Sarcoma		1/50 (2	2%)			0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 29	% SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#All Organs: Leukemia: Lymphocytic, Mo	onocytic, Ma	ononuclear, or Uno 15/50 (30				13/50 (26%)		
Overall Incidence	Total	15/50 (30%)	Mean 30		Total	13/50 (26%)	Mean 26%	SD 0%
#All Organs: Malignant Lymphoma: Histi Overall Incidence	iocytic, Lym r Total	phocytic, Mixed, N 0/50 ((0/50 (0%)	NOS, or Undifferentia 0%) Mean 0%	ated Cell Type % SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#All Organs:								
Mesothelioma: Benign, Mali	ignant, NOS		8%)			0/50 (0%)		
Mesothelioma: Benign, Mali Overall Incidence	Total	4/50 (8 4/50 (8%)	Mean 89		Total	0/50 (0%)	Mean 0%	SD 0%
	Total	4/50 (8 4/50 (8%)	Mean 89			0/50 (0%)		SD 0%
Mesothelioma: Benign, Mali Overall Incidence #All Organs: Mesothelioma: Malignant Overall Incidence	Total	4/50 (8 4/50 (8%) 4/50 (8 4/50 (8%)	Mean 89 8%) Mean 89	% SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Mesothelioma: Benign, Mali Overall Incidence #All Organs: Mesothelioma: Malignant	Total	4/50 (8 4/50 (8%) 4/50 (8 4/50 (8%)	Mean 89 8%) Mean 89	% SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 179 Report Date: 06/05/2013		
				Male			Female				
#All Organs: Osteosarcoma		0/50	(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#All Organs: Osteosarcoma or Osteoma			(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	、	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Adrenal Cortex: Adenoma		0/50	(0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
*Adrenal Cortex: Carcinoma		0/50	(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Adrenal Medulla: Pheochromocytoma Benign			(8%)				0/50 (0%)				
Overall Incidence	Total	4/50 (8%)	. ,	Mean 8%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Adrenal Medulla: Pheochromocytoma Comple:			(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC		Tumor Incide	Page: 180 Report Date: 06/05/2013					
		Male			Female			
ant	0/50 (0%)			1/50 (2%)				
Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
n, Complex,	Malignant, NOS 4/50 (8%)				1/50 (2%)			
Total	4/50 (8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
	0/50 (0%)				0/50 (0%)		SD 0%	
	0/50 (0%)				0/50 (0%)			
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
	0/50 (0%)				0/50 (0%)			
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
	0/50 (0%)				0/50 (0%)			
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
	nant Total In, Complex, Total Total Total	nant $0/50$ (0%) Total $0/50$ (0%) In, Complex, Malignant, NOS $4/50$ (8%) Total $4/50$ (8%) Total $4/50$ (8%) Total $4/50$ (8%) Total $0/50$ (0%) 0/50 (0%) $0/50$ (0%)	Tumor Incide Route Male Man Male Man Man Main Man Main Main Main <thmain< td="" th<=""><td>Tumor Incidence for Selected Contr Route: PERINATAL AND PC Vehicle: FEED Male nant 0/50 (0%) Mean 0% SD 0% In, Complex, Malignant, NOS 4/50 (8%) Mean 0% SD 0% Total 0/50 (0%) Mean 8% SD 0% Total 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0% 0% 0/50 (0%) Mean 0% SD 0% 0%</td><td>Route: PERINATAL AND POSTNATAL Vehicle: FEED Male nant 0/50 (0%) Mean 0% SD 0% Total n, Complex, Malignant, NOS 4/50 (8%) Mean 0% SD 0% Total n, Complex, Malignant, NOS 4/50 (8%) Mean 8% SD 0% Total for tal 4/50 (8%) Mean 8% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total</td><td>Tumor Incidence for Selected Control Animal Groups Route: PERINATAL AND POSTNATAL Vehicle: FEED Male nant 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 1/50 (2%) n, Complex, Malignant, NOS 1/50 (8%) Mean 8% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 8% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% SD 0%</td><td>Tumor Incidence for Selected Control Animal Groups Route: PERINATAL AND POSTNATAL Vehicle: FEED Report Date Male Female tant 1/50 (2%) Mean Mean</td></thmain<>	Tumor Incidence for Selected Contr Route: PERINATAL AND PC Vehicle: FEED Male nant 0/50 (0%) Mean 0% SD 0% In, Complex, Malignant, NOS 4/50 (8%) Mean 0% SD 0% Total 0/50 (0%) Mean 8% SD 0% Total 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0% 0% 0/50 (0%) Mean 0% SD 0% 0%	Route: PERINATAL AND POSTNATAL Vehicle: FEED Male nant 0/50 (0%) Mean 0% SD 0% Total n, Complex, Malignant, NOS 4/50 (8%) Mean 0% SD 0% Total n, Complex, Malignant, NOS 4/50 (8%) Mean 8% SD 0% Total for tal 4/50 (8%) Mean 8% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: PERINATAL AND POSTNATAL Vehicle: FEED Male nant 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 1/50 (2%) n, Complex, Malignant, NOS 1/50 (8%) Mean 8% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 8% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 1/50 (2%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% SD 0%	Tumor Incidence for Selected Control Animal Groups Route: PERINATAL AND POSTNATAL Vehicle: FEED Report Date Male Female tant 1/50 (2%) Mean Mean	

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 181 Report Date: 06/05/2013		
				Male		Female				
#Bone: Osteosarcoma or Osteoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Glioma		0/50	(0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	(078)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
*Brain: Glioma Benign Overall Incidence	Total	0/50	(0%)	Magn 0%	SD 0%	Totol	0/50 (0%)	Maga 00/	SD 0%	
		0/50 (0%)		Mean 0%		Total	0/50 (0%)	Mean 0%		
*Brain: Glioma Malignant		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Oligodendroglioma, Glioma,		toma	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	(0,0)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Osteosarcoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	. /	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 182 Report Dat	te: 06/05/2013			
			Male				Female	
*Clitoral/Preputial Gland: Adenoma		1/50 (2%)				3/50 (6%)		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	3/50 (6%) 3/50 (6%)	Mean 6%	SD 0%
*Clitoral/Preputial Gland: Carcinoma		4/50 (0%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Clitoral/Preputial Gland: Carcinoma or Adenoma		2/50 (4%)			Tatal	3/50 (6%)	Mass OV	CD 00/
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%
*Clitoral/Preputial Gland: Sarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Ear: Neural Crest Tumor		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Eye: Melanoma Benign		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of animals	with tissues ex							

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 183 Report Date: 06/05/2013		
				Male		Female				
#Eye: Melanoma Malignant		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Adenoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Carcinoma Overall Incidence	Total		(0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
		· ,					. ,			
#Harderian Gland: Carcinoma or Adenoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Heart: Schwannoma Benign			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	、	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Heart: Schwannoma Malignant			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Route		Page: 184 Report Date: 06/05/2013			
			Male				Female	
#Intestine Large: Colon/Rectu Adenoma	m:							
		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Large: Colon/Rectu Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
		. ,				. ,		
#Intestine Small: Duodenum: Leiomyoma								
		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Duodenum: Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Ileum: Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
		()				· · · · · · · · · · · · · · · · · · ·		
#Intestine Small: Jejunum: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
		. ,				. ,		

Version: Jun2013 Contract/Lab: All Laborator Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Route	Page: 185 Report Dat	t e: 06/05/2013			
			Male				Female	
#Intestine Small: Jejunum: Leiomyoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Jejunum: Leiomyosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unsp Adenoma		0/50 (0%)	Marca 00/	05.0%	.	0/50 (0%)		05.0%
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Uns Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Uns Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unsp Leiomyoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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*: Denominator is number of animals with tissues examined microscopically

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxica Tumor Incide Route		Page: 186 Report Date: 06/05/2013			
			Male				Female	
#Intestine Small: Site Unspec Leiomyosarcoma	ified:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unspec Schwannoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Islets, Pancreatic: Adenoma		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Islets, Pancreatic: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Islets, Pancreatic: Carcinoma or Adenoma		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Kidney: Pelvis and Transition Papilloma						0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of animals								

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 187 Report Date: 06/05/2013		
				Male		Female				
*Kidney: Renal Tubule: Adenoma		1/50	(2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)		Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Carcinoma or Adenoma		1/50	(2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)		Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Lipoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Mesenchymal Tumor Malign	ant	0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	、 ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Kidney: Renal Tubule: Sarcoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 188 Report Date: 06/05/2013		
				Male		Female				
*Liver: Hepatocellular Adenoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	(2,2)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Liver: Hepatocellular Carcinoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	` ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Liver: Hepatocellular Carcinoma c		stoma	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Liver: Hepatocellular Carcinoma o	or Hepatocell		(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Liver: Hepatocellular Carcinoma,		ar Adenoma, or					0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Liver: Ito Cell Tumor Benign			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Route		Page: 189 Report Dat	:e: 06/05/2013		
			Male			·	Female	
*Lung: Alveolar/Bronchiolar Adeno	oma	1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir Overall Incidence	noma or Alve Total	1/50 (2%) 1/50 (2%)	ma Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Lung: Fibrosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Adenolipoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Adenoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 190 Report Date: 06/05/2013		
				Male				Female			
#Mammary Gland: Carcinoma			(20())								
Overall Incidence	Total	0/50 0/50 (0%)	(0%)	Mean 0%	SD 0%	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%		
#Mammary Gland: Carcinoma or Adenoma		0/50	(0%)				2/50 (4%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	2/50 (4%)	Mean 4%	SD 0%		
#Mammary Gland: Fibroadenoma		1/50	(2%)				36/50 (72%)				
Overall Incidence	Total	1/50 (2%)		Mean 2%	SD 0%	Total	36/50 (72%)	Mean 72%	SD 0%		
#Mammary Gland: Fibroma		0/50	(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	(070)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Mammary Gland: Fibroma, Fibroadenoma or A	denoma	1/50	(29/)				36/50 (72%)				
Overall Incidence	Total	1/50 (2%)		Mean 2%	SD 0%	Total	36/50 (72%)	Mean 72%	SD 0%		
#Mammary Gland: Fibroma, Fibroadenoma, Ca			(2%)				36/50 (72%)				
Overall Incidence	Total	1/50 (2%)	· · ·	Mean 2%	SD 0%	Total	36/50 (72%)	Mean 72%	SD 0%		

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 191 Report Date: 06/05/2013		
			Male		Female					
#Mesentery: Fibrous Histiocytoma		0/50 (0%	\ \			0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Mesentery: Schwannoma Malignant		0/50 (0%				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Nose: Adenoma										
Overall Incidence	Total	0/50 (0% 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Papilloma Squamous or Pap	ngue, Phary		:			0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma		nx, Tooth, Gingiva)	:							
Overall Incidence	Total	0/50 (0% 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma,	ngue, Phary	vnx, Tooth, Gingiva)	: oma			1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 192 Report Date: 06/05/2013					
			Male		Female			
#Oral Mucosa: Squamous Cell Carcinoma		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
#Oral Mucosa: Squamous Cell Papilloma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Ovary: Cystadenoma						0/50 (0%)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
'Ovary: Fibrosarcoma						0/50 (0%/)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Ovary: Granulosa Cell Tumor Benig								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Ovary: Granulosa Cell Tumor Malig	Inant					0/50 (0%)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of animals #: Denominator is number of animals		<pre>>xamined microscopically</pre>						

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: PERINATAL AND POSTNATAL Vehicle: FEED					Page: 193 Report Date: 06/05/2013		
			Male			Female				
*Ovary: Granulosa Cell Tumor: Benign	Malignant	NOS								
Granulosa Gen Tumor. Berligh	, mangnant, i					0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Granulosa-Theca Tumor Malig	nant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
						0/50 (0 %)		070		
*Ovary: Schwannoma Malignant										
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
								070		
*Ovary: Sertoli Cell Tumor Malignant										
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*Ovary: Tubulostromal Adenoma										
						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
*Pancreas: Adenoma										
	T = (= 1	1/50 (2%)	Magaz 00/	OD 00/	T . (.)	1/50 (2%)	Maga 00/			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 194 Report Date: 06/05/2013					
			Male				Female	
*Pancreas: Carcinoma or Adenoma		(/50 (00/)				(50 (00))		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
*Pancreas: Mixed Tumor Benign		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Parathyroid Gland: Adenoma								
Overall Incidence	Total	0/35 (0%) 0/35 (0%)	Mean 0%	SD 0%	Total	0/48 (0%) 0/48 (0%)	Mean 0%	SD 0%
*Pituitary Gland: Pars Distalis Adenoma		fied Site:						
Overall Incidence	Total	16/50 (32%) 16/50 (32%)	Mean 32%	SD 0%	Total	22/50 (44%) 22/50 (44%)	Mean 44%	SD 0%
*Pituitary Gland: Pars Distalis Carcinoma		fied Site:						
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Pituitary Gland: Pars Distalis Carcinoma or Adenoma		fied Site:						
Overall Incidence	Total	16/50 (32%) 16/50 (32%)	Mean 32%	SD 0%	Total	22/50 (44%) 22/50 (44%)	Mean 44%	SD 0%
*: Denominator is number of animals								

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic Tumor Incide Route	Page: 195 Report Date: 06/05/2013				
			Male			Female		
*Pituitary Gland: Pars Distalis Ganglioneuroma	or Unspecif					0/50 (0%)		
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Pituitary Gland: Pars Interme Adenoma						0/50 (09/)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Pituitary Gland: Pars Interne Carcinoma or Adenoma Overall Incidence	edia: Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Pituitary Gland: Pars Nervos Craniopharyngioma Overall Incidence		0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
*Prostate: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%				
*Prostate: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%				

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 196 Report Date: 06/05/2013		
				Male		Female				
*Salivary Glands: Carcinoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Carcinoma or Adenoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	` ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Sarcoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	· · ·	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Schwannoma Malignant			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Seminal Vesicle: Adenoma			(0%)							
Overall Incidence	Total	0/50 (0%)	· · ·	Mean 0%	SD 0%					
#Skeletal Muscle: Fibrous Histiocytoma			(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	`	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 197 Report Date: 06/05/2013		
				Male		Female				
#Skeletal Muscle: Lipoma										
Overall Incidence	Total	0/50 0/50 (0%)	(0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Basal Cell Adenoma		0/50	(0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	、 ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Basal Cell Adenoma or Baso										
Overall Incidence	Total	0/50 (0%)	(0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Overall Incidence		0/50 (0%) umor Benign, ol	Trichoepi		SD 0%		0/50 (0%)	Mean 0%	SD 0%	
Overall Incidence #Skin: Basal Cell Adenoma, Basos Overall Incidence	quamous Tu Total	0/50 (0%) umor Benign, ol 0/50 0/50 (0%)	Trichoepi (0%)	ithelioma Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0% Mean 0%	SD 0% SD 0%	
Overall Incidence #Skin:	quamous Tu Total	0/50 (0%) umor Benign, o 0/50 0/50 (0%)	Trichoepi (0%)	ithelioma Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%)			
Overall Incidence #Skin: Basal Cell Adenoma, Basos Overall Incidence #Skin: Basal Cell Carcinoma Overall Incidence	quamous Tu Total Total	0/50 (0%) umor Benign, o 0/50 (0%) 0/50 (0%) 0/50 (0%)	• Trichoepi (0%) (0%)	ithelioma Mean 0% Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
Overall Incidence #Skin: Basal Cell Adenoma, Basos Overall Incidence #Skin: Basal Cell Carcinoma	quamous Tu Total Total	0/50 (0%) umor Benign, or 0/50 (0%) 0/50 (0%) 0/50 (0%) s Tumor (maligu	• Trichoepi (0%) (0%)	ithelioma Mean 0% Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (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		Toxicology Data Management System Tumor Incidence for Selected Control Animal Groups						Page: 198 Report Date: 06/05/2013				
Species: RATS			Route		Report Bu	00/00/2010						
Strain: F 344/N			Noute									
ength of Study: CHRONIC				Vehicle: FEED								
			Male		Female							
#Skin: Basal Cell Carcinoma, Basal Cell Adenoma, Basosquamous Tumor (benign, malignant or NOS), or Trichoepithelioma												
NOS), or Trichoepithelioma	1	0/50 (0%)				0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				
Skin:												
Basal or Sq. Cell Carcinom Adenoma, Papilloma, Sq P	a, Carcinoma apilloma, Kei	a, Basosq. Tumor (M or I ratoacanthoma, Trichoer	B), Basal Cell Adenor bithelioma	ma,								
	• •	4/50 (8%)				1/50 (2%)						
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%				
Skin: Fibroma												
		5/50 (10%)				0/50 (0%)						
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				
Skin:		M	:h									
Fibroma, Fibrosarcoma, Sa	ircoma, wyxo	5/50 (10%)	Ibrous Histiocytoma			0/50 (0%)						
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				
Skin: Fibrosarcoma												
		0/50 (0%)				0/50 (0%)						
Verall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				
Skin: Fibrosarcoma, Sarcoma, M	yxosarcoma		a									
		0/50 (0%)				0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%				

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 199 Report Date: 06/05/2013		
				Male			Female			
#Skin: Fibrous Histiocytoma		0/50 (((0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Hemangiosarcoma			0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Keratoacanthoma			(4%)				1/50 (2%)			
Overall Incidence	Total	2/50 (4%)		Mean 4%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Skin: Lipoma			2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)		Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Liposarcoma			0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	0,0)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neural Crest Tumor							0/50 (0%)			
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Route		Page: 200 Report Date: 06/05/2013				
			Male			Female			
#Skin: Neurofibroma or Schwanno	-	0/50 (0%)		05.00/	Telel	0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neurofibrosarcoma or Schw	/annoma (m	alignant or NOS) 0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Skin: Neurofibrosarcoma, Neurofi Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	
≭Skin: Sarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Schwannoma Benign		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Schwannoma Malignant		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	

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: PERINATAL AND POSTNATAL Vehicle: FEED						Page: 201 Report Date: 06/05/2013		
			Male		Female				
#Skin: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Squamous Cell Carcinoma, or Carcinoma	Basal Cell C	Carcinoma, Basosquamou 0/50 (0%)	us Tumor (malignar	nt or NOS),		0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Squamous Cell Papilloma Overall Incidence	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Squamous Cell Papilloma c		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Squamous Cell Papilloma,	Papilloma, So	quamous Cell Carcinoma 4/50 (8%)	a or Keratoacanthor	na		1/50 (2%)		05.00/	
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Skin: Squamous Cell Papilloma,	Papilloma, or	r Keratoacanthoma 4/50 (8%)				1/50 (2%)			

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 202 Report Date: 06/05/2013		
			Male			Female				
#Skin: Trichoepithelioma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Sebaceous Gland: Adenoma		0/50 (0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
#Skin: Sebaceous Gland: Carcinoma or Adenoma		0/50 (0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
#Spinal Cord: Glioma Malignant		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Stomach, Glandular: Carcinoma										
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Stomach, Glandular: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

		Page: 203 Report Date: 06/05/2013						
		Male		Female				
	0/50 (0%)			0/50 (0%)				
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
	41/50 (82%)							
Total	41/50 (82%)	Mean 82%	SD 0%					
	0/50 (0%)							
	0,00 (0,0)							
	1/48 (2%)				0/50 (0%)			
Total	1/48 (2.08%)	Mean 2.08%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
					1/50 (2%)			
Total	1/48 (2.08%)	Mean 2.08%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
	0/48 (0%)				0/50 (0%)			
Total	0/48 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
	Total Total Total	Total 0/50 (0%) 41/50 (82%) Total 41/50 (82%) Total 41/50 (82%) 0/50 (0%) 0/50 (0%) Total 0/50 (0%) 1/48 (2%) 1/48 (2.08%) Total 1/48 (2.08%) 0/48 (0%) 0/48 (0%)	Tumor Incide Route: Male 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 41/50 (82%) Mean 82% Total 0/50 (0%) Mean 82% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% Total 1/48 (2.08%) Mean 2.08% Total 1/48 (2.08%) Mean 2.08% 0/48 (0%) 0/48 (0%) 0/48 (0%)	Tumor Incidence for Selected Contr Route: PERINATAL AND PC Wehicle: FEED Male 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 41/50 (82%) Mean 82% SD 0% Total 0/50 (0%) Mean 82% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 1/48 (2%) Mean 2.08% SD 0% Total 1/48 (2%) Mean 2.08% SD 0% 0/48 (0%) Mean 2.08% SD 0%	Male Total 0/50 (0%) Mean 0% SD 0% Total 41/50 (82%) Mean 82% SD 0% Total 41/50 (82%) Mean 82% SD 0% SD 0% Total 41/50 (82%) Mean 82% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 1/48 (2.08%) Mean 2.08% SD 0% Total 1/48 (2.08%) Mean 2.08% SD 0% Total 1/48 (2.08%) Mean 2.08% SD 0% 0/48 (0%) Mean 2.08% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: PERINATAL AND POSTNATAL Vehicle: FEED Male Male 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Total 41/50 (82%) Mean 82% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 82% SD 0% 0/50 (0%) 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% 0/50 (0%) 0/50 (0%) Total 1/48 (2.08%) Mean 2.08% SD 0% Total 0/50 (0%) Total 1/48 (2.08%) Mean 2.08% SD 0% Total 1/50 (2%) Total 1/48 (2.08%) Mean 2.08% SD 0% Total 1/50 (2%) 0/48 (0%) Mean 2.08% SD 0% Total 1/50 (2%) 1/50 (2%)	Male Female 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% 1/450 (82%) Mean 82% SD 0% Total 0/50 (0%) Mean 0% 1/48 (2%) Mean 2.08% SD 0% Total 0/50 (0%) Mean 0% 1/48 (2.08%) Mean 2.08% SD 0% Total 0/50 (0%) Mean 0% 1/48 (2.08%) Mean 2.08% SD 0% Total 0/50 (0%) Mean 0% 1/48 (2.08%) Mean 2.08% SD 0% Total 0/50 (0%) Mean 0% 0/48 (0%) Mean 2.08% SD 0% Total 0/50 (0%) Mean 2%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incide Route:	Page: 204 Report Date: 06/05/2013				
			Male				Female	
*Thymus: Thymoma: Benign, Malignar	nt, NOS	2/48 (4%)				1/50 (2%)		
Overall Incidence	Total	2/48 (4.17%)	Mean 4.17%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Thyroid Gland: C-Cell: Adenoma		12/50 (24%)				6/50 (12%)		
Overall Incidence	Total	12/50 (24%)	Mean 24%	SD 0%	Total	6/50 (12%)	Mean 12%	SD 0%
*Thyroid Gland: C-Cell: Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
								30 0%
*Thyroid Gland: C-Cell: Carcinoma or Adenoma		12/50 (24%)				6/50 (12%)		
Overall Incidence	Total	12/50 (24%)	Mean 24%	SD 0%	Total	6/50 (12%)	Mean 12%	SD 0%
*Thyroid Gland: Follicular Cell Adenoma		1/50 (2%)				1/50 (2%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
*Thyroid Gland: Follicular Cell Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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: PERINATAL AND POSTNATAL Vehicle: FEED							Page: 205 Report Date: 06/05/2013		
				Male			Female				
*Thyroid Gland: Follicular Cell Carcinoma or Adenoma	:	4/50	(00())				4/50 (00/)				
Overall Incidence	Total	1/50 (2%)	(2%)	Mean 2%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Tongue: Squamous Cell Carcinoma			(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	(078)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Tongue: Squamous Cell Carcinoma c	or Papilloma	•	(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)		Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Tongue: Squamous Cell Papilloma			(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	. ,	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Tooth: Adamantinoma Malignant			(0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	· · /	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Urinary Bladder: Carcinoma			(2%)				0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	. /	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxice Tumor Incide Route		Page: 206 Report Date: 06/05/2013					
			Male			Female				
*Urinary Bladder: Carcinoma or Papilloma		1/50 (2%)				0/50 (0%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Urinary Bladder: Hemangiosarcoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
*Urinary Bladder: Papilloma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Uterus: Adenoma						0/50 (0%)				
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%		
#Uterus: Carcinoma										
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Uterus: Leiomyosarcoma						0/50 (00/)				
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*: Denominator is number of anima #: Denominator is number of anima										

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	Toxicology Data Management Tumor Incidence for Selected Control A Route: PERINATAL AND POST Vehicle: FEED		Page: 207 Report Date	e: 06/05/2013	
	Male		Female		
#Uterus: Polyp Stromal					
Overall Incidence		Total	6/50 (12%) 6/50 (12%)	Mean 12%	SD 0%
#Uterus: Sarcoma					
Overall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Uterus: Sarcoma Stromal					
Overall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Uterus: Sarcoma Stromal or Polyp Stromal			C/EQ (400()		
Overall Incidence		Total	6/50 (12%) 6/50 (12%)	Mean 12%	SD 0%
#Uterus: Schwannoma Malignant					
Overall Incidence		Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
∉Vagina: Polyp					
Dverall Incidence		Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
: Denominator is number of animals with tissues examined mic					

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 208 Report Date: 06/05/2013					
			Male		Female			
#Vagina: Sarcoma Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Vagina: Schwannoma Malignant Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
∉Zymbal's Gland: Adenoma ⊃verall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
έZymbal's Gland: Carcinoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Zymbal's Gland: Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

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: SKIN Vehicle: ACETONE

				Stu	dy 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		
Southern Research Institute	058813307	01/18/05	729	50(1)	23(681)	516.1	Trimethylolpropane triacrylate
					Female		
Southern Research Institute	058813307	01/18/05	731	50(1)	27(688)	352.8	Trimethylolpropane triacrylate

			Page: 210 Report Date: 06/05/2013						
		Male			Female				
Total	48/50 (96%) 48/50 (96%)	Mean 96%	SD 0%	43/50 (86%) 43/50 (86%) Mean 86% SD 0%					
	()				()				
	30/50 (60%)				21/50 (42%)				
Total	. ,			Total	()		SD 0%		
	50/50 (100%) 50/50 (100%)	Mean 100%	SD 0%	Total	47/50 (94%) 47/50 (94%)	Mean 94%	SD 0%		
	0/50 (0%)				0/50 (0%)				
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
	0/50 (0%)				0/50 (0%)				
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
	Total Total mors Total Total	48/50 (96%) Total 48/50 (96%) 30/50 (60%) Total 30/50 (60%) mors 50/50 (100%) Total 50/50 (100%) Total 50/50 (100%) Total 0/50 (0%) Total 0/50 (0%)	es Tumor Incide Male 48/50 (96%) Total 48/50 (96%) Mean 96% 30/50 (60%) Mean 60% mors 50/50 (100%) Total 50/50 (100%) Mean 100% Cotal 0/50 (0%) Total 0/50 (0%) Mean 0% Mean 0% M	Ses Tumor Incidence for Selected Contr Route: SKIN Vehicle: ACETONE Male Male 1 48/50 (96%) Total Mean 96% SD 0% 30/50 (60%) Total Mean 96% SD 0% mors 30/50 (60%) Total Mean 60% SD 0% mors 50/50 (100%) Total Mean 100% SD 0% 1 0/50 (0%) Mean 0% SD 0% Mean 0% SD 0% 1 0/50 (0%) Mean 0% Mean 0% SD 0% Mean 0% SD 0% 1 0/50 (0%) Mean 0% Mean 0% SD 0% Mean 0% SD 0%	Route: SKIN Vehicle: ACETONE Male 48/50 (96%) Mean 96% SD 0% Total 30/50 (60%) Mean 96% SD 0% Total 30/50 (60%) Mean 60% SD 0% Total mors 50/50 (100%) Mean 100% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total	ss Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ACETONE Male 48/50 (96%) Male Total 48/50 (96%) Mean 96% SD 0% Total 30/50 (60%) Mean 96% SD 0% Total 30/50 (60%) Mean 60% SD 0% Total 21/50 (42%) Total 30/50 (60%) Mean 60% SD 0% Total 30/50 (60%) Mean 60% SD 0% Total 21/50 (42%) Total 30/50 (60%) Mean 60% SD 0% Total 21/50 (42%) Total 50/50 (100%) Mean 100% SD 0% Total 47/50 (94%) Total 50/50 (100%) Mean 0% SD 0% Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Man 0% SD 0% Total 0/50 (0%) 0/50 (0%) Man 0% SD 0%	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ACETONE Report Data Route: SKIN Vehicle: ACETONE Male Female 48/50 (96%) Mean 96% SD 0% Total 43/50 (86%) Mean 86% Total 48/50 (96%) Mean 96% SD 0% Total 43/50 (86%) Mean 86% Total 30/50 (60%) Mean 96% SD 0% Total 21/50 (42%) Mean 42% mors 50/50 (100%) Mean 100% SD 0% Total 47/50 (94%) Mean 94% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 94% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% Manpiona 0/5		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic d Tumor Incide		Page: 211 Report Date: 06/05/2013				
			Male			Female			
#All Organs: Histiocytic Sarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Leukemia: Lymphocytic, M		ononuclear, or Undifferer 26/50 (52%)	tiated			12/50 (24%)			
Overall Incidence	Total	26/50 (52%)	Mean 52%	SD 0%	Total	12/50 (24%)	Mean 24%	SD 0%	
#All Organs: Malignant Lymphoma: Hist Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Mesothelioma: Benign, Ma						0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Mesothelioma: Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Osteoma		0/50 (0%)				0/50 (0%)			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 212 Report Date: 06/05/2013						
			Male			Female			
#All Organs: Osteosarcoma		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#All Organs: Osteosarcoma or Osteoma		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Adrenal Cortex: Adenoma		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Adrenal Cortex: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Adrenal Medulla: Pheochromocytoma Benign		11/49 (22%)				0/48 (0%)			
Overall Incidence	Total	11/49 (22.45%)	Mean 22.45%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
*Adrenal Medulla: Pheochromocytoma Comple	×	0/49 (0%)				0/48 (0%)			
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incider	Page: 213 Report Date: 06/05/2013					
			Male			Female			
*Adrenal Medulla: Pheochromocytoma Malign	ant	1/49 (2%)				0/48 (0%)			
Overall Incidence	Total	1/49 (2.04%)	Mean 2.04%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
*Adrenal Medulla: Pheochromocytoma: Benig	n, Complex					0/48 (0%)			
Overall Incidence	Total	12/49 (24.49%)	Mean 24.49%	SD 0%	Total	0/48 (0%)	Mean 0%	SD 0%	
#Blood Vessel: Leiomyosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Chordoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Osteoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Bone: Osteosarcoma		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	;		Page: 214 Report Date: 06/05/2013						
			Male			Female			
#Bone: Osteosarcoma or Osteoma Overall Incidence	ı Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
						()		30 0%	
*Brain: Glioma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Glioma Benign Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Brain: Glioma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
	10tai	0/50 (0%)		SD 0%	TOLA	0/50 (0%)	wean 0%	50 0%	
*Brain: Oligodendroglioma, Gliom	a, or Astrocy	toma 0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Brain: Osteosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 215 Report Date: 06/05/2013						
			Male			Female			
*Clitoral/Preputial Gland: Adenoma		3/50 (6%)				4/50 (8%)			
Overall Incidence	Total	3/50 (6%)	Mean 6%	SD 0%	Total	4/50 (8%)	Mean 8%	SD 0%	
*Clitoral/Preputial Gland: Carcinoma		0/50 (0%)				7/50 (14%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	7/50 (14%)	Mean 14%	SD 0%	
*Clitoral/Preputial Gland: Carcinoma or Adenoma Overall Incidence	Total	3/50 (6%) 3/50 (6%)	Mean 6%	SD 0%	Total	10/50 (20%) 10/50 (20%)	Mean 20%	SD 0%	
*Clitoral/Preputial Gland: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Ear: Neural Crest Tumor		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Eye: Melanoma Benign		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 216 Report Date: 06/05/2013						
			Male			Female			
#Eye: Melanoma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
		()				()			
#Harderian Gland: Adenoma Overall Incidence	Total	0/50 (0%)	Maan 00/	SD 0%	Total	0/50 (0%)	Maca 0%	SD 0%	
	Total	0/50 (0%)	Mean 0%		Total	0/50 (0%)	Mean 0%	50 0%	
#Harderian Gland: Carcinoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Harderian Gland: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
	TULAI	0/30 (078)			i otai	0/30 (078)		50 0%	
*Heart: Schwannoma Benign		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Heart: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 217 Report Date: 06/05/2013	
			Male			Female 0/50 (0%) Mean 0% SD 0% ttal 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%		
#Intestine Large: Colon/Rectu Adenoma	m:							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	. ,	Mean 0%	SD 0%
		, ,		070 070	ı ulaı	0/30 (0%)		0%
#Intestine Large: Colon/Rectu Carcinoma or Adenoma	m:							
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · /	Mean 0%	SD 0%
#Intestine Small: Duodenum: Leiomyoma								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · ·	Mean 0%	SD 0%
#Intestine Small: Duodenum: Schwannoma Malignant		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	()	Mean 0%	SD 0%
#Intestine Small: Ileum: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · ·	Mean 0%	SD 0%
#Intestine Small: Jejunum: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETONI	ol Animal Groups		Page: 218 Report Da	te: 06/05/2013
			Male			Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%		
#Intestine Small: Jejunum: Leiomyoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	()	Mean 0%	SD 0%
#Intestine Small: Jejunum: Leiomyosarcoma		·····						
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)		
Intestine Small: Site Unspeci Adenoma	fied:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Intestine Small: Site Unspeci Carcinoma	ïed:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
fIntestine Small: Site Unspeci Carcinoma or Adenoma		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	. ,	Mean 0%	SD 0%
fIntestine Small: Site Unspeci Leiomyoma						0/50 (00/)		
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				blogy Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 219 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0%				
			Male			Female Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/50 (6%) 3/50 (6%) Mean 6% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 6% SD 0% Total 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 3/50 (6%) Mean 0% SD 0% 3/50 (6%) Mean 0% SD 0%					
#Intestine Small: Site Unspecified: Leiomyosarcoma 0/50 (0%) 0/50 (0%)											
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		()	Mean 0%	SD 0%			
#Intestine Small: Site Unspec Schwannoma Malignant						0/50 (00/)					
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · /	Mean 0%	SD 0%			
*Islets, Pancreatic: Adenoma		18/50 (36%)				3/50 (6%)					
Overall Incidence	Total	18/50 (36%)	Mean 36%	SD 0%		()	Mean 6%	SD 0%			
*Islets, Pancreatic: Carcinoma		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	()	Mean 0%	SD 0%			
*Islets, Pancreatic: Carcinoma or Adenoma		18/50 (36%)				2/50 (6%)					
Overall Incidence	Total	18/50 (36%)	Mean 36%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%			
*Kidney: Pelvis and Transitio Papilloma		ım:									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC					Page: 220 Report Dat	Page: 220 Report Date: 06/05/2013		
			Male		JE Fema 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) Mean 09 0/50 (0%) Mean 09 Total 0/50 (0%) Mean 09 0/50 (0%) Mean 09			
*Kidney: Renal Tubule: Adenoma		0/50 (0%)	0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Kidney: Renal Tubule: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	· · /	Mean 0%	SD 0%
*Kidney: Renal Tubule: Carcinoma or Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	· · /	Mean 0%	SD 0%
*Kidney: Renal Tubule: Lipoma								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%		0/50 (0%)	Mean 0%	SD 0%
*Kidney: Renal Tubule: Mesenchymal Tumor Malign		0/50 (0%)						
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total		Mean 0%	SD 0%
*Kidney: Renal Tubule: Sarcoma		0/50 (0%)				1/50 (2%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 221 Report Date: 06/05/2013 Female Mean 0% SD 0%				
			Male			Broups Report Date: 06/05/2013 Female Female 0/50 (0%) Mean 0% SD 0% 0tal 0/50 (0%) Mean 0% SD 0%					
*Liver: Hepatocellular Adenoma		1/50 (2%)				· · /					
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	. ,	Mean 0%	SD 0%			
*Liver: Hepatocellular Carcinoma		1/50 (2%)									
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	. ,					
*Liver: Hepatocellular Carcinom: Overall Incidence			Mean 2%	SD 0%	Total	0/50 (0%)					
*Liver: Hepatocellular Carcinom	-	lular Adenoma 2/50 (4%)				· · /					
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			
*Liver: Hepatocellular Carcinoma	a, Hepatocellul	lar Adenoma, or Hepato 2/50 (4%)	blastoma			0/50 (0%)					
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total						
*Liver: Ito Cell Tumor Benign		0/50 (0%)				0/50 (0%)					
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%			

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: SKIN Vehicle: ACETONE				Page: 222 Report Date: 06/05/2013		
			Male				Female 0/50 (0%) Mean 0% SD 0% 0/50 (0%) Mean 0% SD 0%	
*Lung: Alveolar/Bronchiolar Adeno		opport Date: 06/05/2013 nale 0% 0% SD 0%						
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir		1/50 (2%)						
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carcir Overall Incidence	ioma or Alve Total	eolar/Bronchiolar Adeno 2/50 (4%) 2/50 (4%)	ma Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Lung: Fibrosarcoma Overall Incidence	Total	0/50 (0%)		SD 0%		0/50 (0%)	M 00/	CD 00/
Overall incidence		0/50 (0%)	Mean 0%	SD 0%	Total	· · ·	Mean 0%	SD 0%
#Mammary Gland: Adenolipoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Mammary Gland: Adenoma		0/50 (0%)				4/50 (8%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	4/50 (8%)	Mean 8%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 223 Report Date: 06/05/2013 Female Mean 6% SD 0% Mean 12% SD 0% Mean 44% SD 0%			
			Male				Report Date: 06/05/2013 Female (6%) Mean 6% SD 0% (12%) Mean 12% SD 0% (44%) Mean 44% SD 0% (0%) Mean 0% SD 0% (0%) Mean 0% SD 0% (50%) Mean 50% SD 0%			
#Mammary Gland: Carcinoma		0/50 (0%)				3/50 (6%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%		
#Mammary Gland: Carcinoma or Adenoma		0/50 (0%)				6/50 (12%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	6/50 (12%)				
#Mammary Gland: Fibroadenoma Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	22/50 (44%) 22/50 (44%)				
#Mammary Gland: Fibroma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Mammary Gland: Fibroma, Fibroadenoma or <i>I</i>		1/50 (2%)				25/50 (50%)				
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	25/50 (50%)	Mean 50%	SD 0%		
#Mammary Gland: Fibroma, Fibroadenoma, Ca		Adenoma 1/50 (2%)				25/50 (50%)				
Overall Incidence *: Denominator is number of animals #: Denominator is number of animals	with tissues ex	1/50 (2%)	Mean 2%	SD 0%	Total	25/50 (50%)	Mean 50%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 224 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0%			
			Male				Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 0% SD 0%			
#Mesentery: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Mesentery: Schwannoma Malignant		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)				
*Nose: Adenoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)				
#Oral Cavity (Oral Mucosa, To Papilloma Squamous or Pa	ongue, Phary									
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma										
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
#Oral Cavity (Oral Mucosa, To Squamous Cell Carcinoma,	ongue, Phary	ynx, Tooth, Gingiva): Squamous, or Papilloma				0/50 (00/)				
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
	s with tissues e					0,00 (070)				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETONE	ol Animal Groups		Page: 225 Report Dat	e: 06/05/2013	
			Male				Female		
#Oral Mucosa: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Oral Mucosa: Squamous Cell Papilloma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Cystadenoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Fibrosarcoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Granulosa Cell Tumor Beni									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Granulosa Cell Tumor Malig	gnant					4/50 (00()			
Overall Incidence					Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	
*: Denominator is number of animals #: Denominator is number of animals		xamined microscopically							

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETONE	ed Control Animal Groups SKIN		Page: 226 Report Dat	Date: 06/05/2013 SD 0% SD 0% SD 0%	
Length of Study: CHRONIC				venicle: ACETONE	-				
			Male				Female		
*Ovary: Granulosa Cell Tumor: Benigi	n Malignant	NOS							
Grandiosa Gen Tamor. Berngi	i, mangnan	, 100				1/50 (2%)			
Overall Incidence					Total	1/50 (2%)	Mean 2%		
'Ovary: Granulosa-Theca Tumor Malig	gnant								
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Schwannoma Malignant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Sertoli Cell Tumor Malignant									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Ovary: Tubulostromal Adenoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Pancreas: Adenoma									
		1/50 (2%)		65		0/50 (0%)	••	25 <i>au</i> /	
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Mean 0% SD 0%		
			Male			Female Mean 0% SD 0% Mean 0% SD 0% Mean 0% SD 0% Mean 10% SD 0%			
*Pancreas: Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Pancreas: Mixed Tumor Benign		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)			
*Parathyroid Gland: Adenoma Overall Incidence	Total	0/45 (0%) 0/45 (0%)	Mean 0%	SD 0%	Total	0/45 (0%) 0/45 (0%)			
*Pituitary Gland: Pars Distalis Adenoma						36/50 (72%)			
Overall Incidence	Total	34/49 (69.39%)	Mean 69.39%	SD 0%	Total	36/50 (72%)		SD 0%	
*Pituitary Gland: Pars Distalis Carcinoma		ified Site:							
Overall Incidence	Total	0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	Total	2/50 (4%) 2/50 (4%)	Mean 4%	SD 0%	
*Pituitary Gland: Pars Distalis Carcinoma or Adenoma		ified Site:							
Overall Incidence	Total	34/49 (69%) 34/49 (69.39%)	Mean 69.39%	SD 0%	Total	38/50 (76%) 38/50 (76%)	Moon 76%	SD 0%	
					10101	30/30 (10/0)			

Version: Jun2013 Contract/Lab: All Laboratorie Species: RATS Strain: F 344/N Length of Study: CHRONIC	S			ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 228 Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 2% SD 0% Mean 2% SD 0%			
			Male				Report Date: 06/05/2013 Female Mean 0% SD 0% Mean 2% SD 0%			
*Pituitary Gland: Pars Distalis or Unspecified Site: Ganglioneuroma 0/49 (0%) 0/50 (0%)										
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%		
*Pituitary Gland: Pars Interr Adenoma		0/49 (0%)				1/50 (2%)				
Overall Incidence	Total	0/49 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
*Pituitary Gland: Pars Interr Carcinoma or Adenoma Overall Incidence		0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
Pituitary Gland: Pars Nervo Craniopharyngioma Overall Incidence		0/49 (0%) 0/49 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
Prostate: Adenoma		0/50 (0%)								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%						
Prostate: Carcinoma or Adenoma		0/50 (0%)								
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				blogy Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETONE	ol Animal Groups		Page: 229 Report Dat	e: 06/05/2013	
			Male			Female			
*Salivary Glands: Carcinoma		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Carcinoma or Adenoma		1/50 (2%)				0/50 (0%)			
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
*Salivary Glands: Schwannoma Malignant Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Seminal Vesicle: Adenoma		0/50 (0%)							
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%					
#Skeletal Muscle: Fibrous Histiocytoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 230 Report Date: 06/05/2013						
			Male			Female				
#Skeletal Muscle: Lipoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Basal Cell Adenoma		0/50 (0%)				1/50 (2%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma or Base Overall Incidence			Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
#Skin: Basal Cell Adenoma, Basos Overall Incidence		umor Benign, or Trichoe _l 0/50 (0%) 0/50 (0%)		SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%		
¥Skin: Basal Cell Carcinoma		0/50 (0%)				0/50 (0%)				
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		
#Skin: Basal Cell Carcinoma or Ba		s Tumor (malignant or N 0/50 (0%)				0/50 (0%)				
Overall Incidence *: Denominator is number of animals #: Denominator is number of animals	with tissues e	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%		

/ersion: Jun2013 Contract/Lab: All Laboratorie: Species: RATS Strain: F 344/N Length of Study: CHRONIC	s		Toxico Tumor Incide		Page: 231 Report Date: 06/05/2013			
			Male				Female	
¢Skin: Basal Cell Carcinoma, Bas NOS), or Trichoepitheliom	sal Cell Adenc	oma, Basosquamous Tui	nor (benign, maligna	ant or				
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%
Skin: Basal or Sq. Cell Carcinon Adenoma, Papilloma, Sq F	na. Carcinoma	a. Basoso. Tumor (M or I	3). Basal Cell Adeno			1/50 (2%)		
verall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%
Skin: Fibroma		4/50 (8%)				0/50 (0%)		
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Skin: Fibroma, Fibrosarcoma, S	arcoma, Myxo	oma, Myxosarcoma, or F 4/50 (8%)	ibrous Histiocytoma			0/50 (0%)		
Overall Incidence	Total	4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Skin: Fibrosarcoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
Skin: Fibrosarcoma, Sarcoma, N	Myxosarcoma	, or Fibrous Histiocytom 0/50 (0%)				0/50 (0%)		
		0,00 (0,0)				3,00 (0,0)		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 232 Report Date: 06/05/2013					
			Male			Female			
#Skin: Fibrous Histiocytoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
		()				()			
#Skin: Hemangiosarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
						. ,		30 0%	
#Skin: Keratoacanthoma Overall Incidence	Total	4/50 (8%) 4/50 (8%)	Mean 8%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Lipoma		2/50 (4%)				0/50 (0%)			
Overall Incidence	Total	2/50 (4%)	Mean 4%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Liposarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neural Crest Tumor									
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxic o Tumor Incide		Page: 233 Report Date: 06/05/2013				
			Male			Female			
#Skin: Neurofibroma or Schwann	oma benign	0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Skin: Neurofibrosarcoma or Sch						0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Neurofibrosarcoma, Neuro Overall Incidence				SD 0%	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	
#Skin: Sarcoma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
	TOLAI	()		50 0%		()	wean 0%	SD 0%	
#Skin: Schwannoma Benign		0/50 (0%)				1/50 (2%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	1/50 (2%)	Mean 2%	SD 0%	
#Skin: Schwannoma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC	S		Toxico Tumor Incide		Page: 234 Report Date: 06/05/2013			
			Male			Female		
#Skin: Squamous Cell Carcinoma	a	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Carcinoma or Carcinoma	a, Basal Cell (0/50 (0%)	us Tumor (malignar			0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma						0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma						0/50 (0%)		
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Skin: Squamous Cell Papilloma		or Keratoacanthoma 5/50 (10%)				0/50 (0%)		
Overall Incidence	Total	5/50 (10%)	Mean 10%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*: Denominator is number of anima #: Denominator is number of anima		examined microscopically						

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 235 Report Date: 06/05/2013					
			Male			Female			
#Skin: Trichoepithelioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland:									
Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Spinal Cord: Glioma Malignant		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Stomach, Glandular: Carcinoma or Adenoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 236 Report Date: 06/05/2013					
			Male			Female			
#Stomach, Glandular: Sarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Testes: Adenoma		27/50 (54%)							
Overall Incidence	Total	27/50 (54%)	Mean 54%	SD 0%					
*Testes: Hemangioma Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%					
*Thymus: Thymoma Benign Overall Incidence	Total	0/45 (0%) 0/45 (0%)	Mean 0%	SD 0%	Total	0/47 (0%) 0/47 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma Malignant		0/45 (0%)				0/47 (0%)			
Overall Incidence	Total	0/45 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)	Mean 0%	SD 0%	
*Thymus: Thymoma NOS		0/45 (0%)				0/47 (0%)			
Overall Incidence	Total	0/45 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)	Mean 0%	SD 0%	

			Page: 237 Report Date: 06/05/2013				
		Male				Female	
it, NOS	0/45 (0%)				0/47 (0%)		
Total	0/45 (0%)	Mean 0%	SD 0%	Total	0/47 (0%)	Mean 0%	SD 0%
	8/50 (16%)				3/50 (6%)		
Total	8/50 (16%)	Mean 16%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%
	1/50 (2%)				0/50 (0%)		
Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
	8/50 (16%)				3/50 (6%)		
Total	8/50 (16%)	Mean 16%	SD 0%	Total	3/50 (6%)	Mean 6%	SD 0%
					0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
					0/50 (0%)		
Total	0/50 (0%)	Mean 0%	SD 0%	Total	()	Mean 0%	SD 0%
	Total Total Total : Total	$\begin{array}{cccc} & 0/45 & (0\%) \\ Total & 0/45 & (0\%) \\ \end{array} \\ & 8/50 & (16\%) \\ \end{array} \\ Total & 8/50 & (16\%) \\ \end{array} \\ \hline Total & 1/50 & (2\%) \\ \end{array} \\ \hline Total & 1/50 & (2\%) \\ \end{array} \\ \hline Total & 8/50 & (16\%) \\ \end{array} \\ \hline Total & 8/50 & (16\%) \\ \end{array} \\ \vdots \\ \hline 0/50 & (0\%) \\ \hline Total & 0/50 & (0\%) \\ \hline Total & 0/50 & (0\%) \\ \hline \end{array}$	Tumor Incide Male nt, NOS 0/45 (0%) Total 0/50 (16%) Total 1/50 (2%) Total 1/50 (2%) Total 8/50 (16%) Mean 16% E 0/50 (0%) Total 0/50 (0%) Total 0/50 (0%) Mean 0% E 0/50 (0%) Mean 0%	Tumor Incidence for Selected Contr Route: SKIN Vehicle: ACETON Male mt, NOS 0/45 (0%) Total 0/50 (16%) Total 0/50 (16%) Total 1/50 (2%) Total 1/50 (2%) Total 8/50 (16%) Total 0/50 (0%) Total 0/50 (0%) Mean 0% SD 0%	Vehicle: ACETONE Male nt, NOS 0/45 (0%) Mean 0% SD 0% Total 0/45 (0%) Mean 0% SD 0% Total Total 0/45 (0%) Mean 0% SD 0% Total 50 (16%) Mean 16% SD 0% Total 1/50 (2%) Mean 2% SD 0% Total 1/50 (2%) Mean 2% SD 0% Total 1/50 (2%) Mean 2% SD 0% Total 1/50 (2%) Mean 16% SD 0% Total 0/50 (16%) Mean 16% SD 0% Total 0/50 (0%) Mean 0% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ACETONE Male nt, NOS 0/45 (0%) Mean 0% SD 0% Total 0/47 (0%) Total 0/45 (0%) Mean 0% SD 0% Total 0/47 (0%) Total 0/45 (0%) Mean 0% SD 0% Total 0/47 (0%) Total 8/50 (16%) Mean 16% SD 0% Total 3/50 (6%) Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) Total 1/50 (2%) Mean 16% SD 0% Total 3/50 (6%) Total 8/50 (16%) Mean 16% SD 0% Total 3/50 (6%) Total 0/50 (0%) Mean 16% SD 0% Total 3/50 (6%) Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Wean 0% SD 0% Total 0/50 (0%) 0/50 (0%) 0/50 (0%)	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ACETONE Report Dat Route: SKIN Vehicle: ACETONE Male Female Male Female Male Female Male SD 0% Total 0/47 (0%) Mean 0% O/45 (0%) Mean 0% SD 0% Total 0/47 (0%) Mean 0% Total 0/45 (16%) Mean 16% SD 0% Total 3/50 (6%) Mean 6% Total 1/50 (2%) Mean 2% SD 0% Total 0/50 (0%) Mean 0% Total 8/50 (16%) Mean 16% SD 0% Total 3/50 (6%) Mean 0% Total 8/50 (16%) Mean 16% SD 0% Total 3/50 (6%) Mean 6% Total 0/50 (0%) Mean 16% SD 0% Total 0/50 (0%) Mean 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0% U 0/50 (0%) Mean 0% SD 0% Total 0/50 (0%) Mean 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ology Data Manageme ence for Selected Contr Route: SKIN Vehicle: ACETON	ol Animal Groups		Page: 238 Report Dat	e: 06/05/2013
			Male	······································			Female	
*Thyroid Gland: Follicular Cel Carcinoma or Adenoma	l:	0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Carcinoma (Overall Incidence	or Papillom a Total	a Squamous 1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
#Tongue: Squamous Cell Papilloma		1/50 (2%)				0/50 (0%)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
#Tooth: Adamantinoma Malignant		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%
*Urinary Bladder: Carcinoma		0/50 (0%)				0/50 (0%)		
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				Page: 239 Report Date: 06/05/2013					
			Male			Female			
*Urinary Bladder: Carcinoma or Papilloma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Urinary Bladder: Hemangiosarcoma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
*Urinary Bladder: Papilloma		0/50 (0%)				0/50 (0%)			
Overall Incidence	Total	0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Adenoma						0/50 (0%)			
Overall Incidence					Total	0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Carcinoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
#Uterus: Leiomyosarcoma									
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	

/ersion: Jun2013 Contract/Lab: All Laboratories	Toxicology Data Management System Tumor Incidence for Selected Control Animal Gro	oups		Page: 240 Report Date: 06/05/2013		
Species: RATS	Route: SKIN					
Strain: F 344/N	Vehicle: ACETONE					
ength of Study: CHRONIC						
	Male			Female		
#Uterus:						
Polyp Stromal			0/50 (400/)			
Overall Incidence	Tota	al	9/50 (18%) 9/50 (18%)	Mean 18%	SD 0%	
tUterus:						
Sarcoma			0/50 (0%)			
Overall Incidence	Tota		0/50 (0%)	Mean 0%	SD 0%	
#Uterus:						
Sarcoma Stromal			0/50 (00/)			
Overall Incidence	Tota	al	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
fUterus:						
Sarcoma Stromal or Polyp Stromal						
Overall Incidence	Tota		9/50 (18%) 9/50 (18%)	Mean 18%	SD 0%	
#Uterus:						
Schwannoma Malignant						
Overall Incidence	Tota	al	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	
έVagina: Polyp						
i oiàb			1/50 (2%)			
Overall Incidence	Tota	al	1/50 (2%)	Mean 2%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratorie: Species: RATS Strain: F 344/N Length of Study: CHRONIC	s		Page: 241 Report Date: 06/05/2013					
			Male			Female		
#Vagina: Sarcoma						0/50 (0%)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
¢Vagina: Schwannoma Malignant						0/50 (00/)		
Overall Incidence					Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Zymbal's Gland: Adenoma		1/50 (2%)				0/50 (09/)		
Overall Incidence	Total	1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Zymbal's Gland: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%
Zymbal's Gland: Carcinoma or Adenoma						0/50 (0%/)		
Overall Incidence	Total	1/50 (2%) 1/50 (2%)	Mean 2%	SD 0%	Total	0/50 (0%) 0/50 (0%)	Mean 0%	SD 0%

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: SKIN Vehicle: ETHANOL

				Stu	dy 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		
Southern Research Institute Battelle Columbus Laboratory	059500305 059903203	04/05/04 09/15/04	729 727	50(1) 50(1)	27(683) 23(651)	508.5 510.1	Methyl trans-styryl ketone Pyrogallol
					Female		
Southern Research Institute Battelle Columbus Laboratory	059500305 059903203	04/05/04 09/16/04	732 728	50(1) 50(1)	30(685) 29(670)	356.2 351.0	Methyl trans-styryl ketone Pyrogallol

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incider	-	Page: 243 Report Date: 06/05/2013			
			Male				0 (90%) Mean 90% SD 5.66% 0 (44%) 12/50 (24%) 0 (34%) Mean 34% SD 14.14% 0 (98%) 45/50 (90%) 0 (94%) Mean 94% SD 5.66% 0 (0%) 0/50 (0%)	
#All Organs: Benign Tumors		46/50 (92%)	47/50 (94%)			47/50 (94%)	43/50 (86%)	
Overall Incidence	Total	93/100 (93%)	Mean 93%	SD 1.41%	Total	90/100 (90%)	Mean 90%	SD 5.66%
#All Organs: Malignant Tumors		22/50 (660/)	22/50 (449/)			22/50 (449/)	12/50 (249/)	
Overall Incidence	Total	33/50 (66%) 55/100 (55%)	22/50 (44%) Mean 55%	SD 15.56%	Total	22/50 (44%) 34/100 (34%)		SD 14.14%
#All Organs: Malignant and Benign Tumc Overall Incidence	ors Total	48/50 (96%) 97/100 (97%)	49/50 (98%) Mean 97%	SD 1.41%	Total	· · /	()	SD 5 66%
		, ,		SD 1.41%		· · ·		SD 5.00%
All Organs: Hemangioma		0/50 (0%)	1/50 (2%)			()	()	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%
All Organs: Hemangiosarcoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
All Organs: Hemangiosarcoma or Hema		0/50 (0%)	1/50 (2%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Management nce for Selected Contro Route: SKIN Vehicle: ETHANOL	te: 06/05/2013					
			Male				Female 0/50 (0%) Mean 0% SD 0%			
#All Organs: Histiocytic Sarcoma										
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	Mean 0%			
#All Organs: Leukemia: Lymphocytic, Mo		ononuclear, or Undifferent	tiated							
Overall Incidence	Total	26/50 (52%) 37/100 (37%)	11/50 (22%) Mean 37%	SD 21.21%	Total	18/50 (36%) 26/100 (26%)	8/50 (16%) Mean 26%	SD 14.14%		
#All Organs: Malignant Lymphoma: Histi Overall Incidence		nphocytic, Mixed, NOS, or 0/50 (0%) 0/100 (0%)		I Type SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
All Organs: Mesothelioma: Benign, Mali			2/50 (4%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	6/100 (6%)	Mean 6%	SD 2.83%	Total	0/100 (0%)	Mean 0%	SD 0%		
Overall Incidence		· · ·				()				
Overall Incidence #All Organs: Mesothelioma: Malignant		6/100 (6%)								
Overall Incidence #All Organs:		6/100 (6%) 4/50 (8%)	2/50 (4%)			0/50 (0%)	0/50 (0%)			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contro Route: SKIN Vehicle: ETHANOL	ol Animal Groups		Page: 245 Report Da	te: 06/05/2013
			Male				Mean 0% SD 0% (0%) 1/50 (2%) 5) Mean 1% SD 1.41% (8%) 1/50 (2%) 5) Mean 5% SD 4.24% (0%) 0/50 (0%)	
#All Organs: Osteosarcoma		1/50 (2%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%
#All Organs: Osteosarcoma or Osteoma								
Overall Incidence	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%	Total	0/50 (0%) 1/100 (1%)	()	SD 1.41%
Adrenal Cortex: Adenoma		- / />				(
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	5/100 (5%)		SD 4.24%
Adrenal Cortex: Carcinoma		1/50 (2%)	0/50 (0%)				0/50 (0%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	()	SD 0%
Adrenal Medulla: Pheochromocytoma Benign		44/40 (000%)	4/50 (02/)			4/40 (00/)	4/50 (00/)	
Overall Incidence	Total	11/49 (22%) 15/99 (15.15%)	4/50 (8%) Mean 15.22%	SD 10.22%	Total	1/49 (2%) 2/99 (2.02%)	1/50 (2%) Mean 2.02%	SD 0.03%
Adrenal Medulla: Pheochromocytoma Comple		0/49 (0%)	0/50 (0%)			0/49 (0%)	0/50 (0%)	
Overall Incidence	Total	0/49 (0%) 0/99 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/49 (0%)	0/50 (0%) Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contr Route: SKIN Vehicle: ETHANOI	ol Animal Groups					
			Male		Female 0/49 (0%) 0/50 (0%) Total 0/99 (0%) Mean 0% SD 0% 1/49 (2%) 1/50 (2%) Total 2/99 (2.02%) Mean 2.02% SD 0.03% 0/50 (0%) 0/50 (0%) Mean 0% SD 0% 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/100 (0%) Mean 0% SD 0%					
*Adrenal Medulla: Pheochromocytoma Malign	ant	0/49 (0%)	1/50 (2%)			0/49 (0%)	0/50 (0%)			
Overall Incidence	Total	1/99 (1.01%)	Mean 1%	SD 1.41%		()	Mean 0%	SD 0%		
*Adrenal Medulla: Pheochromocytoma: Benig			5/50 (10%)				1/50 (2%)			
Overall Incidence	Total	16/99 (16.16%) ´	Mean 16.22%	SD 8.8%	Total	()	()	SD 0.03%		
#Blood Vessel: Leiomyosarcoma	T .(.)	0/50 (0%)	0/50 (0%)	00.0%	Total	()	()	05.0%		
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%		· · ·				
[#] Bone: Chordoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%		()	Mean 0%	SD 0%		
#Bone: Osteoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	1/50 (2%)			
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	1/100 (1%)	Mean 1%	SD 1.41%		
#Bone: Osteosarcoma		1/50 (2%)	0/50 (0%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 247 Report Date: 06/05/2013					
			Male		0 (1%) Mean 1% SD 1.41% 0 (0%) 0/50 (0%) 0 (0%) Mean 0% SD 0% 0 (0%) 0/50 (0%) 0 (0%) Mean 0% SD 0% 0 (0%) 0/50 (0%)			
#Bone: Osteosarcoma or Osteoma Overall Incidence	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%	Total	0/50 (0%) 1/100 (1%)	· · ·	SD 141%
*Brain:								
Glioma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
*Brain: Glioma Benign Overall Incidence		0/50 (0%)	0/50 (0%)		Tatal	· · ·	()	
	Total	0/100 (0%)	Mean 0%	SD 0%	Total	. ,		
*Brain: Glioma Malignant		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
*Brain: Oligodendroglioma, Glioma		rtoma 0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
*Brain: Osteosarcoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme nce for Selected Contro Route: SKIN Vehicle: ETHANOL	ol Animal Groups				
			Male				/100 (9%) Mean 9% SD 4.24% 3/50 (6%) 1/50 (2%) /100 (4%) Mean 4% SD 2.83% 9/50 (18%) 4/50 (8%) /100 (13%) Mean 13% SD 7.07% 0/50 (0%) 0/50 (0%) /100 (0%) Mean 0% SD 0%		
*Clitoral/Preputial Gland: Adenoma									
Overall Incidence	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%	Total	9/100 (9%)	Mean 9%		
Clitoral/Preputial Gland: Carcinoma									
Overall Incidence	Total	3/50 (6%) 3/100 (3%)	0/50 (0%) Mean 3%	SD 4.24%	Total	3/50 (6%) 4/100 (4%)	· · ·	SD 2.83%	
Clitoral/Preputial Gland: Carcinoma or Adenoma									
Overall Incidence	Total	4/50 (8%) 4/100 (4%)	0/50 (0%) Mean 4%	SD 5.66%	Total	13/100 (13%)	Mean 13%		
Clitoral/Preputial Gland: Sarcoma									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/100 (0%)	()	SD 0%	
Ear: Neural Crest Tumor									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
Eye: Melanoma Benign						- / / / / `			
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme ice for Selected Contro Route: SKIN Vehicle: ETHANOL	ol Animal Groups	Page: 249 Report Da	t e: 06/05/2013	
			Male				Female	
#Eye: Melanoma Malignant								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Harderian Gland: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	2/50 (4%) 2/100 (2%)	0/50 (0%) Mean 2%	SD 2.83%
#Harderian Gland: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Harderian Gland: Carcinoma or Adenoma						2/50 (404)		
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	2/50 (4%) 2/100 (2%)	0/50 (0%) Mean 2%	SD 2.83%
Heart: Schwannoma Benign								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Heart: Schwannoma Malignant						- / //		
Overall Incidence	Total	0/50 (0%) 2/100 (2%)	2/50 (4%) Mean 2%	SD 2.83%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contro Route: SKIN Vehicle: ETHANOL	ol Animal Groups	te: 06/05/2013		
			Male				Female	
#Intestine Large: Colon/Rectu Adenoma	m:							
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Intestine Large: Colon/Rectu Carcinoma or Adenoma								
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Intestine Small: Duodenum: Leiomyoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Intestine Small: Duodenum: Schwannoma Malignant								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Intestine Small: Ileum: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%
#Intestine Small: Jejunum: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme ce for Selected Contr Route: SKIN Vehicle: ETHANO	ol Animal Groups		e: 06/05/2013	
			Male	/50 (0%) 0/50 (0%) 0/50 (0%) ean 0% SD 0% Total 0/100 (0%) Mean 0% SD 0 /50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) SD 0 /50 (0%) SD 0% Total 0/100 (0%) Mean 0% SD 0 /50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% SD 0 /50 (0%) 0/50 (0%) 1/50 (2%)				
#Intestine Small: Jejunum: Leiomyoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
#Intestine Small: Jejunum: Leiomyosarcoma			0/50 (00/)			0/50 (00/.)	0/50 (00/)	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	()	SD 0%	Total	()	()	SD 0%
		()						
#Intestine Small: Site Unspeci Adenoma	fied:							
		0/50 (0%)	()	05		()	()	05 ((10)
Overall Incidence	Total	0/100 (0%)				()		SD 1.41%
#Intestine Small: Site Unspeci Carcinoma	fied:							
o	-	0/50 (0%)	0/50 (0%)	00.00/	T	0/50 (0%)	0/50 (0%)	OD 00/
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
#Intestine Small: Site Unspeci Carcinoma or Adenoma	fied:							
		0/50 (0%)	0/50 (0%)			0/50 (0%)	1/50 (2%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	1/100 (1%)	Mean 1%	SD 1.41%
#Intestine Small: Site Unspeci Leiomyoma	fied:							
O	T . ()	0/50 (0%)	0/50 (0%)	00.001	T / 1	0/50 (0%)	0/50 (0%)	CD 00/
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contr Route: SKIN Vehicle: ETHANOI	ol Animal Groups		Page: 252 Report Dat	e: 06/05/2013				
			Male				Female					
#Intestine Small: Site Unspecified: Leiomyosarcoma												
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%				
fIntestine Small: Site Unspec Schwannoma Malignant												
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%				
Islets, Pancreatic: Adenoma						-/ />						
Overall Incidence	Total	5/49 (10%) 8/99 (8.08%)	3/50 (6%) Mean 8.1%	SD 2.97%	Total	3/49 (6%) 5/99 (5.05%)	2/50 (4%) Mean 5.06%	SD 1.5%				
Islets, Pancreatic: Carcinoma												
Overall Incidence	Total	3/49 (6%) 3/99 (3.03%)	0/50 (0%) Mean 3.06%	SD 4.33%	Total	0/49 (0%) 0/99 (0%)	0/50 (0%) Mean 0%	SD 0%				
Islets, Pancreatic: Carcinoma or Adenoma		8/49 (16%)				3/49 (6%)	2/50 (49/)					
Overall Incidence	Total	11/99 (11.11%) ´	3/50 (6%) Mean 11.16%	SD 7.3%	Total	5/99 (5.05%)	2/50 (4%) Mean 5.06%	SD 1.5%				
Kidney: Pelvis and Transition Papilloma		um:										
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme ce for Selected Contr Route: SKIN Vehicle: ETHANO	ol Animal Groups		te: 06/05/2013	
			Male				Female	
[•] Kidney: Renal Tubule: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Kidney: Renal Tubule: Carcinoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Kidney: Renal Tubule: Carcinoma or Adenoma			- (- (()	- / /	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Kidney: Renal Tubule: Lipoma						0/50 (00/)	4/50 (20/)	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%
Kidney: Renal Tubule: Mesenchymal Tumor Malign								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Kidney: Renal Tubule: Sarcoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme nce for Selected Contr Route: SKIN Vehicle: ETHANO	ol Animal Groups	Page: 254 Report Da	t e: 06/05/2013	
			Male				Female	
*Liver: Hepatocellular Adenoma Overall Incidence	Total	2/50 (4%) 3/100 (3%)	1/50 (2%) Mean 3%	SD 1.41%	Total	0/50 (0%) 2/100 (2%)	2/50 (4%) Mean 2%	SD 2.83%
	10tai	3/100 (3%)		50 1.41%	TOLAI	2/100 (2%)		50 2.03%
*Liver: Hepatocellular Carcinoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma o			0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
*Liver: Hepatocellular Carcinoma o		llular Adenoma 2/50 (4%)	1/50 (2%)			0/50 (0%)	2/50 (4%)	
Overall Incidence	Total	3/100 (3%)	Mean 3%	SD 1.41%	Total	2/100 (2%)	Mean 2%	SD 2.83%
*Liver: Hepatocellular Carcinoma, H		lar Adenoma, or Hepatobl 2/50 (4%)				0/50 (0%)	2/50 (4%)	
Overall Incidence	Total	3/100 (3%)	Mean 3%	SD 1.41%	Total	2/100 (2%)	Mean 2%	SD 2.83%
*Liver: Ito Cell Tumor Benign		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%

/ersion: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incider	Page: 255 Report Da	te: 06/05/2013			
			Male				Female	
*Lung: Alveolar/Bronchiolar Aden	oma	0/50 (49/)	4/50 (00/)			4/50 (00/)	0/50 (0%)	
Overall Incidence	Total	2/50 (4%) 3/100 (3%)	1/50 (2%) Mean 3%	SD 1.41%	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%
*Lung: Alveolar/Bronchiolar Carci								
Overall Incidence	Total	0/50 (0%) 3/100 (3%)	3/50 (6%) Mean 3%	SD 4.24%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
*Lung: Alveolar/Bronchiolar Carci Overall Incidence				SD 2.83%	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%
Lung: Fibrosarcoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Dverall Incidence Mammary Gland: Adenolipoma	Total			SD 0%	Total		Mean 0%	SD 0%
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Mammary Gland: Adenoma		0/50 (0%)	0/50 (0%)			1/50 (2%)	2/50 (4%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	3/100 (3%)	2/30 (4%) Mean 3%	SD 1.41%

Version: Jun2013 Contract/Lab: All Laborator Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Managemen nce for Selected Contro Route: SKIN Vehicle: ETHANOL	ol Animal Groups	te: 06/05/2013		
			Male				Female	
#Mammary Gland: Carcinoma		0/50 (0%)	1/50 (2%)			2/50 (4%)	1/50 (2%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	3/100 (3%)	Mean 3%	SD 1.41%
#Mammary Gland: Carcinoma or Adenoma		0/50 (0%)	1/50 (2%)			3/50 (6%)	3/50 (6%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	6/100 (6%)	Mean 6%	SD 0%
#Mammary Gland: Fibroadenoma		2/50 (4%)	0/50 (0%)			19/50 (38%)	24/50 (48%)	
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 2.83%	Total	43/100 (43%)	Mean 43%	SD 7.07%
#Mammary Gland: Fibroma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
#Mammary Gland: Fibroma, Fibroadenoma								
Overall Incidence	Total	2/50 (4%) 2/100 (2%)	0/50 (0%) Mean 2%	SD 2.83%	Total	19/50 (38%) 44/100 (44%)	25/50 (50%) Mean 44%	SD 8.49%
#Mammary Gland: Fibroma, Fibroadenoma		Adenoma						
		2/50 (4%)	1/50 (2%)			21/50 (42%)	26/50 (52%)	

			nce for Selected Contro Route: SKIN	ol Animal Groups		Page: 257 Report Da	te: 06/05/2013
		Male			Mean 0% SD 0% 0 (0%) 2/50 (4%) 0 (2%) Mean 2% SD 2.83% 3 (0%) 0/50 (0%) (0%) Mean 0% SD 0%		
	0/50 (0%)	1/50 (2%)			0/50 (0%)	0/50 (0%)	
Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	
Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	2/100 (2%)	· · ·	SD 2.83%
Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	()	· · ·	SD 0%
••••••							
•	0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
	nx, Tooth, Gingiva):						
Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
ngue, Phary	vnx, Tooth, Gingiva): iquamous, or Papilloma					0/50 (0%)	
Total	2/100 (2%)	Mean 2%	SD 0%	Total	()	Mean 0%	SD 0%
	Total Total ngue, Phary jilloma Total Total Total Total Papilloma S	1/50 (2%) Total 1/100 (1%) 0/50 (0%) Total 0/100 (0%) ngue, Pharynx, Tooth, Gingiva): 0/50 (0%) Total 0/100 (0%) ngue, Pharynx, Tooth, Gingiva): 1/50 (2%) Total 2/100 (2%) ngue, Pharynx, Tooth, Gingiva): 1/50 (2%) Total 2/100 (2%) Note, Pharynx, Tooth, Gingiva): Papilloma Squamous, or Papilloma 1/50 (2%)	Male Male 0/50 (0%) 1/50 (2%) Total 1/100 (1%) 1/50 (2%) 0/50 (0%) Total 1/100 (1%) Mean 1% 1/50 Total 1/100 (1%) Mean 1% 0/50 (0%) Total 1/100 (1%) Mean 1% 0/50 (0%) Mean 1% 0/50 (0%) Mean 0% Mean 0% ngue, Pharynx, Tooth, Gingiva): 0/50 (0%) Multiple 1/50 (2%) 1/50 (2%) Total 2/100 (2%) Mean 2% mgue, Pharynx, Tooth, Gingiva): Mean 2% mgue, Pharynx, Tooth, Gingiva): 1/50 (2%) Total 2/100 (2%) 1/50 (2%)	Tumor Incidence for Selected Control Route: SKIN Vehicle: ETHANOL Male Male 1/100 (1%) 1/50 (2%) Total 1/100 (1%) 1/50 (2%) 0/50 (0%) Total 1/100 (1%) 1/50 (2%) 0/50 (0%) Total 1/100 (1%) 0/50 (0%) 0/50 (0%) Total 0/100 (0%) 0/50 (0%) 0/50 (0%) Mean 1% SD 1.41% 0/50 (0%) 0/50 (0%) Mean 1% SD 0% mgue, Pharynx, Tooth, Gingiva): 0/50 (0%) 1/50 (2%) 1/50 (2%) Total 0/100 (0%) Mean 0% SD 0% mgue, Pharynx, Tooth, Gingiva): 1/50 (2%) Total 2/100 (2%) 1/50 (2%) Total 2/100 (2%) Mean 2% SD 0% mgue, Pharynx, Tooth, Gingiva): Papilloma 1/50 (2%) Papilloma Squamous, or Papilloma 1/50 (2%) 1/50 (2%)	Vehicle: ETHANOL Male 0/50 (0%) 1/50 (2%) Total 1/100 1% SD 1.41% Total 1/50 (2%) 0/50 (0%) Mean 1% SD 1.41% Total 1/50 (2%) 0/50 (0%) Mean 1% SD 1.41% Total 1/100 (1%) Mean 1% SD 1.41% Total 1/100 0/50 (0%) Mean 1% SD 1.41% Total 1/100 0/50 (0%) Mean 1% SD 0.41% Total 0/50 (0%) Mean 0% SD 0% Total Illoma 0/50 (0%) Mean % SD 0% Total Ingue, Pharynx, Tooth, Gingiva): Mean 2% SD 0% Total 1/50 (2%) 1/50 (2%) Notal SD Notal	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ETHANOL Male Male 0/50 (0%) 1/50 (2%) 0/50 (0%) 0/50 (0%) Total 1/100 (1%) Mean 1% SD 1.41% Total 0/100 (0%) 1/50 (2%) 0/50 (0%) Mean 1% SD 1.41% Total 0/50 (0%) Total 1/100 (1%) Mean 1% SD 1.41% Total 0/50 (0%) 1/50 (2%) 0/50 (0%) Mean 1% SD 1.41% Total 0/48 (0%) Total 1/100 (1%) Mean 0% SD 0% Total 0/48 (0%) Male 0/50 (0%) 0/50 (0%) Mean 0% SD 0% Total 0/100 (0%) mgue, Pharynx, Tooth, Gingiva): man 0% SD 0% Total 0/100 (0%) ngue, Pharynx, Tooth, Gingiva): 1/50 (2%) 1/50 (2%) SD 0% Total 0/100 (0%) mgue, Pharynx, Tooth, Gingiva): 1/50 (2%) Mean 2% SD 0% Total 0/100 (0%) Total 1/50 (2%) 1/50 (2%) SD 0%	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ETHANOL Report Dat Source: SKIN Vehicle: ETHANOL Male Female 0/50 (0%) 1/50 (2%) Total 1/100 1% SD 1.41% Total 0/50 (0%) Mean 0% Total 1/50 (2%) 0/50 (0%) Mean 0% Mean 0% Total 1/50 (2%) 0/50 (0%) Mean 0% Mean 0% Total 1/50 (2%) 0/50 (0%) Mean 2% Mean 0% Total 0/50 (0%) Mean 0% SD 0% Total 0/48 (0%) M/50 (0%) Male 0/50 (0%) Mean 0% SD 0% Total 0/48 (0%) Mean 0% Total 0/100 0/50 (0%) Mean 0% SD 0% Total 0/100 0%) Mean 0% Indem 0% SD 0% Total 0/100 0%) Mean 0% Mean 0% Mean 0%<

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Management nce for Selected Contro Route: SKIN Vehicle: ETHANOL	Page: 258 Report Date: 06/05/2013			
			Male				Female	
#Oral Mucosa: Squamous Cell Carcinon	na	1/50 (2%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%
#Oral Mucosa: Squamous Cell Papillom	a		- / /					
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
*Ovary: Cystadenoma Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Ovary: Fibrosarcoma						0/50 (0%)	0/50 (0%)	
Overall Incidence					Total	0/100 (0%)	Mean 0%	SD 0%
Ovary: Granulosa Cell Tumor Be	enign							
Overall Incidence					Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%
*Ovary: Granulosa Cell Tumor Ma								
Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%

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Species: RATS				Route: SKIN					
Strain: F 344/N	_			Vehicle: ETHANOL	-				
Length of Study: CHRONI	С								
			Male				Female		
'Ovary: Granulosa Cell Tumor: I	Benign. Maligna	nt. NOS							
		,				1/50 (2%)	1/50 (2%)		
Overall Incidence					Total	2/100 (2%)	Mean 2%	SD 0%	
'Ovary: Granulosa-Theca Tumo									
						0/50 (0%)	0/50 (0%)		
Overall Incidence					Total	0/100 (0%)	Mean 0%	SD 0%	
'Ovary: Schwannoma Malignan	t								
						0/50 (0%)	0/50 (0%)		
Overall Incidence					Total	0/100 (0%)	Mean 0%	SD 0%	
^t Ovary: Sertoli Cell Tumor Malig	gnant								
.					T ()	0/50 (0%)	0/50 (0%)	00.00/	
Overall Incidence					Total	0/100 (0%)	Mean 0%	SD 0%	
[*] Ovary: Tubulostromal Adenom	a								
						0/50 (0%)	0/50 (0%)	65	
Overall Incidence					Total	0/100 (0%)	Mean 0%	SD 0%	
*Pancreas: Adenoma									
	-	0/49 (0%)	0/50 (0%)	00.00/	T ()	0/49 (0%)	0/50 (0%)	00.00/	
Overall Incidence	Total	0/99 (0%)	Mean 0%	SD 0%	Total	0/99 (0%)	Mean 0%	SD 0%	

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: SKIN Vehicle: ETHANOL						Page: 260 Report Date: 06/05/2013		
			Male				Female			
*Pancreas: Carcinoma or Adenoma		0/49 (0%)	0/50 (0%)			0/49 (0%)	0/50 (0%)			
Overall Incidence	Total	0/99 (0%)	Mean 0%	SD 0%	Total	0/99 (0%)	Mean 0%	SD 0%		
*Pancreas: Mixed Tumor Benign		0/49 (0%)	0/50 (0%)			0/49 (0%)	0/50 (0%)			
Overall Incidence	Total	0/99 (0%)	Mean 0%	SD 0%	Total	0/99 (0%)	Mean 0%	SD 0%		
*Parathyroid Gland: Adenoma		0/49 (0%)	0/50 (0%)			1/50 (2%)	0/49 (0%)			
Overall Incidence	Total	0/99 (0%)	Mean 0%	SD 0%	Total	1/99 (1.01%)	Mean 1%	SD 1.41%		
*Pituitary Gland: Pars Distalis Adenoma			33/50 (66%)			31/50 (62%)	25/50 (50%)			
Overall Incidence	Total	66/100 (66%)	Mean 66%	SD 0%	Total	56/100 (56%)	Mean 56%	SD 8.49%		
*Pituitary Gland: Pars Distalis Carcinoma										
Overall Incidence	Total	2/50 (4%) 2/100 (2%)	0/50 (0%) Mean 2%	SD 2.83%	Total	2/50 (4%) 2/100 (2%)	0/50 (0%) Mean 2%	SD 2.83%		
*Pituitary Gland: Pars Distalis Carcinoma or Adenoma			33/50 (66%)			33/50 (66%)	25/50 (50%)			
Overall Incidence	Total	68/100 (68%)	Mean 68%	SD 2.83%	Total	58/100 (58%)	23/30 (30%) Mean 58%	SD 11.31%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contro Route: SKIN Vehicle: ETHANOL	Page: 261 Report Dat	e: 06/05/2013		
			Male				Female	
Pituitary Gland: Pars Distalis Ganglioneuroma	s or Unspeci	fied Site:						
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Pituitary Gland: Pars Intermo Adenoma								
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Pituitary Gland: Pars Intermo Carcinoma or Adenoma						0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Pituitary Gland: Pars Nervos Craniopharyngioma						0/50 (00/)	0/50 /00/)	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
Prostate: Adenoma								
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%				
Prostate: Carcinoma or Adenoma		0/50 (0%)						
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%				

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incider	Page: 262 Report Date	e: 06/05/2013			
			Male				Report Date: 06/05/2013 Female (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%) (0%) 0/50 (0%)	
*Salivary Glands: Carcinoma		0/50 (0%)	4/50 (00/)			0/50 (00/)	0/50 (0)()	
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	
*Salivary Glands: Carcinoma or Adenoma								
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	()	SD 0%
Salivary Glands: Sarcoma			0/50 (00/)				0/50 (00/)	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	
Salivary Glands: Schwannoma Malignant		0/50 (0%)	1/50 (2%)					
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	()	SD 0%
Seminal Vesicle: Adenoma		0/50 (0%)	0/50 (0%)					
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%				
Skeletal Muscle: Fibrous Histiocytoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				logy Data Manageme nce for Selected Contr Route: SKIN Vehicle: ETHANOI	Page: 263 Report Da	te: 06/05/2013		
			Male				Female	
#Skeletal Muscle: Lipoma Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
		. ,				0,100 (0,0)		
#Skin: Basal Cell Adenoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
#Skin: Basal Cell Adenoma or Bas Overall Incidence	osquamous Total	Tumor Benign 0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Skin:								
Basal Cell Adenoma, Basos	quamous T					0/50 (00/)	0/50 (00()	
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
#Skin: Basal Cell Carcinoma								
Overall Incidence	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%
#Skin: Basal Cell Carcinoma or Ba								
		1/50 (2%)	0/50 (0%)			0/50 (0%)	1/50 (2%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	1/100 (1%)	Mean 1%	SD 1.41%

Skin: Basal Cell Carcinoma, Basa NOS), or Trichoepithelioma			Male					
Basal Cell Carcinoma, Basa							Female	
		oma, Basosquamous Tum	or (benign, maligna	nt or				
		1/50 (2%)	0/50 (0%)			0/50 (0%)	1/50 (2%)	
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	1/100 (1%)	Mean 1%	SD 1.41%
Skin:								
Basal or Sq. Cell Carcinoma Adenoma, Papilloma, Sq Pa	a, Carcinom pilloma, Ke	ratoacanthoma, Trichoepi	ithelioma	na,		0/50 (001)		
	T	7/50 (14%)	3/50 (6%)		T ()	0/50 (0%)	1/50 (2%)	
Overall Incidence	Total	10/100 (10%)	Mean 10%	SD 5.66%	Total	1/100 (1%)	Mean 1%	SD 1.41%
Skin: Fibroma								
		5/50 (10%)	1/50 (2%)			3/50 (6%)	1/50 (2%)	
Overall Incidence	Total	6/100 (6%)	Mean 6%	SD 5.66%	Total	4/100 (4%)	Mean 4%	SD 2.83%
Skin: Fibroma, Fibrosarcoma, Sar	rcoma, Myxo	oma, Myxosarcoma, or Fil 7/50 (14%)	brous Histiocytoma 1/50 (2%)			3/50 (6%)	1/50 (2%)	
Overall Incidence	Total	8/100 (8%)	Mean 8%	SD 8.49%	Total	4/100 (4%)	Mean 4%	SD 2.83%
Skin: Fibrosarcoma								
		2/50 (4%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 2.83%	Total	0/100 (0%)	Mean 0%	SD 0%
Skin: Fibrosarcoma, Sarcoma, My								
······································		2/50 (4%)	0/50 (0%)			0/50 (0%)	0/50 (0%)	
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 2.83%	Total	0/100 (0%)	Mean 0%	SD 0%

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: SKIN Vehicle: ETHANOL						Page: 265 Report Date: 06/05/2013			
			Male			Female						
#Skin: Fibrous Histiocytoma Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 Mean	(0%) 0%	SD 0%			
#Skin: Hemangiosarcoma												
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 Mean	(0%) 0%	SD 0%			
¥Skin: Keratoacanthoma Overall Incidence	Total	4/50 (8%) 6/100 (6%)	2/50 (4%) Mean 6%	SD 2.83%	Total	0/50 (0%) 0/100 (0%)	0/50 Mear	(0%) 0%	SD 0%			
Skin: Lipoma Dverall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 Mean	(0%) 0%	SD 0%			
łSkin: Liposarcoma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50	(0%)				
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean	0%	SD 0%			
Skin: Neural Crest Tumor		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50	(0%)				
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean	0%	SD 0%			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC				ogy Data Manageme ce for Selected Conti Route: SKIN Vehicle: ETHANO	Page: 266 Report Date: 06/05/2013					
			Male			Female				
#Skin: Neurofibroma or Schwanno	ma benign									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
#Skin: Neurofibrosarcoma or Schv			0/50 (0%)			0/50 (0%)	1/50 (2%)			
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	1/100 (1%)	Mean 1%	SD 1.41%		
#Skin: Neurofibrosarcoma, Neurof Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%		
¢Skin: Sarcoma Dverall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
#Skin: Schwannoma Benign		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%		
#Skin: Schwannoma Malignant		0/50 (0%)	0/50 (0%)			0/50 (0%)	1/50 (2%)			
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	1/100 (1%)	Mean 1%	SD 1.41%		

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: SKIN Vehicle: ETHANOL						Page: 267 Report Date: 06/05/2013		
			Male		Female					
#Skin:										
Squamous Cell Carcinoma										
Overall Incidence	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
#Skin:										
Squamous Cell Carcinoma, or Carcinoma	Basal Cell C	arcinoma, Basosquamou	us Tumor (malignan	t or NOS),						
or Carcinoma		2/50 (4%)	0/50 (0%)			0/50 (0%)	1/50 (2%)			
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 2.83%	Total	1/100 (1%)	Mean 1%	SD 1.41%		
#Skin: Squamous Cell Papilloma										
		1/50 (2%)	1/50 (2%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%		
#Skin: Squamous Cell Papilloma or										
	i upinoinu	1/50 (2%)	1/50 (2%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%		
#Skin:										
Squamous Cell Papilloma, P	apilloma, So	-		a						
		6/50 (12%)	3/50 (6%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	9/100 (9%)	Mean 9%	SD 4.24%	Total	0/100 (0%)	Mean 0%	SD 0%		
#Skin:	apilloma, or	Keratoacanthoma								
	apilloma, or	Keratoacanthoma 5/50 (10%)	3/50 (6%)			0/50 (0%)	0/50 (0%)			

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Page: 268 Report Date: 06/05/2013						
			Male		Female				
#Skin: Trichoepithelioma									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Adenoma									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
#Skin: Sebaceous Gland: Carcinoma or Adenoma		0/50 (0%)	0/50 (00/)			0/50 (00/)	0/50 (00())		
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
tSpinal Cord: Glioma Malignant						0/50 (00/)	0/50 (00())		
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
∕Stomach, Glandular: Carcinoma									
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
∜Stomach, Glandular: Carcinoma or Adenoma						0/50 (00/.)	0/50 /00/)		
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	

		Page: 269 Report Date: 06/05/2013					
		Male	Female				
Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%
	34/50 (68%)	37/50 (74%)					
Total	71/100 (71%)	Mean 71%	SD 4.24%				
Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%				
Total	0/50 (0%)	0/47 (0%) Mean 0%	SD 0%	Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%
	0/50 (0%)				0/50 (0%)	0/50 (0%)	
Total	0/97 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
	0/50 (0%)	0/47 (0%)			0/50 (0%)	0/50 (0%)	
Total	0/97 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%
	Total Total Total	Total 0/100 (0%) 34/50 (68%) Total 71/100 (71%) 0/50 (0%) Total 1/100 (1%) 0/50 (0%) Total 0/97 (0%) Total 0/97 (0%) 0/50 (0%) 0/97 (0%)	Male Male 0/50 (0%) 0/50 (0%) Total 0/100 (0%) Mean 0% 34/50 (68%) Total 34/50 (68%) Total 71/100 (71%) Mean 71% Total 0/50 (0%) 1/100 (1%) Mean 71% Total 1/100 (1%) Mean 1% 0/97 (0%) Mean 0% 0/47 (0%) 0/50 (0%) 0/47 (0%) 0/50 (0%) 0/47 (0%) 0/50 (0%) 0/47 (0%)	Tumor Incidence for Selected Contra Route: SKIN Vehicle: ETHANOL Male 0/50 0%) 0/50 0%) Total 0/100 0%) Mean 0% SD 0% Total 0/100 0%) Mean 0% SD 0% Total 34/50 (68%) 37/50 (74%) SD 4.24% Total 71/100 71%) Mean 71% SD 4.24% Total 0/50 (0%) 1/50 (2%) SD 1.41% O/50 0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/47 (0%) SD 0% 0/50 (0%) 0/47 (0%) SD 0% 0/50 (0%) 0/47 (0%) SD 0%	Vehicle: ETHANOL Male Total 0/50 (0%) 0/100 (0%) 0/50 (0%) Mean 0% SD 0% Total Total 0/100 (0%) Mean 0% SD 0% Total Total 0/100 (0%) Mean 0% SD 0% Total Total 0/100 (1%) Mean 71% SD 4.24% Total 1/100 (1%) Mean 1% SD 1.41% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total Total 0/97 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/97 (0%) Mean 0% SD 0% Total	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ETHANOL Male 0/50 00% 0 0 <t< td=""><td>Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ETHANOL Report Dat Route: SKIN Vehicle: ETHANOL Male Female 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% Total 0/100 (0%) Mean 0% SD 0% Total 0/100 (0%) Mean 0% Total 34/50 (68%) 37/50 (74%) Mean 71% SD 4.24% Mean 0% Mean 0% Total 0/50 (0%) 1/50 (2%) Mean 1% SD 1.41% Mean 1% SD 1.41% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 2/100 (2%) 1/50 (2%) Mean 2% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/00 (0%) 0/50 (0%) Mean 0% 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/00 (0%) 0/50 (0%) Mean 0%</td></t<>	Tumor Incidence for Selected Control Animal Groups Route: SKIN Vehicle: ETHANOL Report Dat Route: SKIN Vehicle: ETHANOL Male Female 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) 0/50 (0%) Mean 0% Total 0/100 (0%) Mean 0% SD 0% Total 0/100 (0%) Mean 0% Total 34/50 (68%) 37/50 (74%) Mean 71% SD 4.24% Mean 0% Mean 0% Total 0/50 (0%) 1/50 (2%) Mean 1% SD 1.41% Mean 1% SD 1.41% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 2/100 (2%) 1/50 (2%) Mean 2% Total 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/00 (0%) 0/50 (0%) Mean 0% 0/50 (0%) 0/47 (0%) Mean 0% SD 0% Total 0/50 (0%) 0/00 (0%) 0/50 (0%) Mean 0%

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: SKIN Vehicle: ETHANOL						Page: 270 Report Date: 06/05/2013		
			Male			Female				
*Thymus: Thymoma: Benign, Malignar		0/50 (0%)	0/47 (0%)	05.0%	T	1/50 (2%)	1/50 (2%)	25 <i>ani</i>		
Overall Incidence	Total	0/97 (0%)	Mean 0%	SD 0%	Total	2/100 (2%)	Mean 2%	SD 0%		
*Thyroid Gland: C-Cell: Adenoma		6/46 (13%)	0/50 (199/)			7/50 (149/)	7/50 (149/)			
Overall Incidence	Total	15/96 (15.62%)	9/50 (18%) Mean 15.52%	SD 3.5%	Total	7/50 (14%) 14/100 (14%)	7/50 (14%) Mean 14%	SD 0%		
*Thyroid Gland: C-Cell: Carcinoma										
Overall Incidence	Total	0/46 (0%) 0/96 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	1/50 (2%) 1/100 (1%)	0/50 (0%) Mean 1%	SD 1.41%		
*Thyroid Gland: C-Cell: Carcinoma or Adenoma		6/46 (13%)	9/50 (18%)			8/50 (16%)	7/50 (14%)			
Overall Incidence	Total	15/96 (15.62%)	Mean 15.52%	SD 3.5%	Total	15/100 (15%)	Mean 15%	SD 1.41%		
*Thyroid Gland: Follicular Cell Adenoma										
Overall Incidence	Total	0/46 (0%) 0/96 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%		
*Thyroid Gland: Follicular Cell Carcinoma		()								
	Tatal	2/46 (4%)	0/50 (0%)		Tatal	0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	2/96 (2.08%)	Mean 2.17%	SD 3.07%	Total	0/100 (0%)	Mean 0%	SD 0%		

Version: Jun2013 Contract/Lab: All Laboratories Species: RATS Strain: F 344/N Length of Study: CHRONIC			Toxico Tumor Incider	Page: 271 Report Date: 06/05/2013					
			Male		Female				
*Thyroid Gland: Follicular Cell Carcinoma or Adenoma	:								
Overall Incidence	Total	2/46 (4%) 2/96 (2.08%)	0/50 (0%) Mean 2.17%	SD 3.07%	Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%	
∉Tongue: Squamous Cell Carcinoma									
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
≭Tongue: Squamous Cell Carcinoma c	or Papillom		4/50 (20/)			0/50 (00/.)	0/50 (0%)		
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
Tongue: Squamous Cell Papilloma		0/50 (0%)	0/50 (0%)			0/50 (0%)	0/50 (0%)		
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%	
FTooth: Adamantinoma Malignant									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	
Urinary Bladder: Carcinoma									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	

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: SKIN Vehicle: ETHANOL						Page: 272 Report Date: 06/05/2013			
			Male		Female						
*Urinary Bladder: Carcinoma or Papilloma		0/50 (0%)	1/50 (2%)			0/50 (0%)	0/50 (0%)				
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%	Total	0/100 (0%)	Mean 0%	SD 0%			
^t Urinary Bladder: Hemangiosarcoma		-/ /									
Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%			
Urinary Bladder: Papilloma			4/50 (00/)			0/50 (00/)	0/50 (00/)				
Overall Incidence	Total	0/50 (0%) 1/100 (1%)	1/50 (2%) Mean 1%	SD 1.41%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%			
Uterus: Adenoma						0/50 (00/)	0/50 /00/)				
Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%			
ŧUterus: Carcinoma											
Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%			
≭Uterus: Leiomyosarcoma											
Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%			

Version: Jun2013	Toxicology Data Management System						
Contract/Lab: All Laboratories	Tumor Incidence for Selected Control Animal Groups Route: SKIN	3	Report Da	te: 06/05/2013			
Species: RATS							
Strain: F 344/N	Vehicle: ETHANOL						
Length of Study: CHRONIC							
	Male		Female				
#Uterus:							
Polyp Stromal							
	-	10/50 (20%)	7/50 (14%)	00 40494			
Overall Incidence	Total	17/100 (17%)	Mean 17%	SD 4.24%			
#Uterus:							
Sarcoma							
		0/50 (0%)	1/50 (2%)				
Overall Incidence	Total	1/100 (1%)	Mean 1%	SD 1.41%			
#Uterus:							
Sarcoma Stromal							
		0/50 (0%)	0/50 (0%)				
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%			
#Uterus:							
Sarcoma Stromal or Polyp Stromal							
		10/50 (20%)	7/50 (14%)	65 (6 (6)			
Overall Incidence	Total	17/100 (17%)	Mean 17%	SD 4.24%			
#Uterus:							
Schwannoma Malignant			o /= o (o o /)				
	-	0/50 (0%)	0/50 (0%)				
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%			
#Vagina:							
Polyp							
		0/50 (0%)	0/50 (0%)				
Overall Incidence	Total	0/100 (0%)	Mean 0%	SD 0%			

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: SKIN Vehicle: ETHANOL						Page: 274 Report Date: 06/05/2013		
			Male		Female					
¥Vagina: Sarcoma Dverall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
Vagina: Schwannoma Malignant Overall Incidence					Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
Zymbal's Gland: Adenoma Overall Incidence	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
Zymbal's Gland: Carcinoma werall Incidence	Total	1/50 (2%) 2/100 (2%)	1/50 (2%) Mean 2%	SD 0%	Total	0/50 (0%) 0/100 (0%)	0/50 (0%) Mean 0%	SD 0%		
Zymbal's Gland: Carcinoma or Adenoma		1/50 (2%)	1/50 (2%)			0/50 (0%)	0/50 (0%)			
Overall Incidence	Total	2/100 (2%)	Mean 2%	SD 0%	Total	0/100 (0%)	Mean 0%	SD 0%		

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