

**TDMS No.** 88006-03

**Test Type:** CHRONIC

**Route:** RESPIRATORY EXPOSURE WHOLE BODY

**Species/Strain:** RATS/F 344

**P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS**

ALPHA-METHYLSTYRENE

**CAS Number:** 98-83-9

**Pathologist:** RENNE, R.

Revised F1

**Date Report Requested:** 02/02/2006

**Time Report Requested:** 13:47:17

**First Dose M/F:** 08/06/01 / 08/06/01

**Lab:** BNW

**C Number:** C88006B

**Lock Date:** 03/26/2004

**Cage Range:** 1 - 9999

**Date Range:** 1-JAN-1940 to 17-SEP-2040

**Reasons For Removal:** ALL

**Removal Date Range:** JAN /1 /1940 - SEP /17 /2040

**Treatment Groups:** Include 1 CONTROL

Include 2 CONTROL

Include 3 100 PPM

Include 4 100 PPM

Include 5 300 PPM

Include 6 300 PPM

Include 7 1000 PPM

Include 8 1000 PPM

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**SUMMARY OF STATISTICALLY SIGNIFICANT ( $P \leq .05$ ) RESULTS IN THE ANALYSIS OF ALPHA-METHYLSTYRENE**

**MALE RATS**

**Organ**

Adrenal Cortex

Brain

Kidney

Kidney: Bilateral

Kidney: Papilla

Larynx

Liver

Liver: Bile Duct

Lung

Lung: Alveolus

Nose: Glands

Nose: Olfactory Epithelium

Pituitary Gland

Prostate

Spleen

Stomach, Forestomach

**FEMALE RATS**

**Organ**

Adrenal Cortex

Adrenal Medulla

Brain

Clitoral Gland

Eye

Kidney

**Morphology**

Vacuolization Cytoplasmic

Compression

Infarct

Nephropathy

Infarct

Mineralization

Inflammation

Inflammation Chronic

Angiectasis

Basophilic Focus

Hepatodiaphragmatic Nodule

Hyperplasia

Hemorrhage

Infiltration Cellular Histiocyte

Dilatation

Degeneration

Hyperplasia Basal Cell

Hyperplasia

Hyperplasia

Inflammation

Necrosis

Ulcer

**Morphology**

Angiectasis

Hyperplasia

Hemorrhage

Cyst

Atrophy

Nephropathy

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**SUMMARY OF STATISTICALLY SIGNIFICANT ( $P \leq .05$ ) RESULTS IN THE ANALYSIS OF ALPHA-METHYLSTYRENE**

Kidney: Papilla  
Kidney: Pelvis, Transitional Epithelium

Kidney: Renal Tubule  
Larynx  
Liver

Lung: Alveolus  
Nose: Olfactory Epithelium

Ovary  
Pituitary Gland  
Pleura  
Stomach, Forestomach  
Thyroid Gland: Follicular Cell  
Uterus: Cervix, Myometrium

Mineralization  
Hyperplasia  
Mineralization  
Pigmentation  
Inflammation Chronic  
Clear Cell Focus  
Vacuolization Cytoplasmic  
Infiltration Cellular Histiocyte  
Degeneration  
Hyperplasia Basal Cell  
Cyst  
Hyperplasia  
Inflammation Chronic  
Hyperplasia  
Hyperplasia  
Hyperplasia

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Angiectasis

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	0/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Hyperplasia

LESION RATES

OVERALL (a)	14/50 (28%)	10/50 (20%)	12/50 (24%)	9/50 (18%)
POLY-3 RATE (b)	14/43.86	10/45.08	12/43.71	9/42.07
POLY-3 PERCENT (g)	31.9%	22.2%	27.5%	21.4%
TERMINAL (d)	8/27 (30%)	8/32 (25%)	6/23 (26%)	2/22 (9%)
FIRST INCIDENCE	548	705	558	562

STATISTICAL TESTS

LIFE TABLE	P=0.431N	P=0.134N	P=0.519N	P=0.290N
POLY 3	P=0.264N	P=0.211N	P=0.411N	P=0.193N
POLY 1.5	P=0.252N	P=0.221N	P=0.411N	P=0.188N
POLY 6	P=0.272N	P=0.203N	P=0.420N	P=0.196N
LOGISTIC REGRESSION	P=0.258N	P=0.182N	P=0.410N	P=0.183N
COCH-ARM / FISHERS	P=0.218N	P=0.241N	P=0.410N	P=0.171N
ORDER RESTRICTED	P=0.208N	(e)	(e)	(e)

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Hypertrophy

LESION RATES

OVERALL (a)	2/50 (4%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/42.38	2/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	4.7%	4.5%	0%	0%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	624	729 (T)	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.170N	P=0.639N	P=0.257N	P=0.268N
POLY 3	P=0.143N	P=0.673N	P=0.239N	P=0.249N
POLY 1.5	P=0.140N	P=0.681N	P=0.238N	P=0.245N
POLY 6	P=0.146N	P=0.663N	P=0.242N	P=0.254N
LOGISTIC REGRESSION	P=0.146N	P=0.676N	P=0.237N	P=0.239N
COCH-ARM / FISHERS	P=0.136N	P=0.691N	P=0.247N	P=0.247N
ORDER RESTRICTED	P=0.126N	(e)	(e)	(e)

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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Vacuolization Cytoplasmic

LESION RATES

OVERALL (a)	9/50 (18%)	21/50 (42%)	10/50 (20%)	5/50 (10%)
POLY-3 RATE (b)	9/43.38	21/45.92	10/43.06	5/41.40
POLY-3 PERCENT (g)	20.8%	45.7%	23.2%	12.1%
TERMINAL (d)	5/27 (19%)	18/32 (56%)	4/23 (17%)	3/22 (14%)
FIRST INCIDENCE	522	562	596	401

STATISTICAL TESTS

LIFE TABLE	P=0.049N*	P=0.030*	P=0.416	P=0.284N
POLY 3	P=0.012N*	P=0.009**	P=0.493	P=0.216N
POLY 1.5	P=0.011N*	P=0.008**	P=0.495	P=0.209N
POLY 6	P=0.013N*	P=0.010**	P=0.484	P=0.228N
LOGISTIC REGRESSION	P=0.015N*	P=0.014*	P=0.500	P=0.187N
COCH-ARM / FISHERS	P=0.011N*	P=0.008**	P=0.500	P=0.194N
ORDER RESTRICTED	P=0.013N*	(e)	(e)	(e)

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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Medulla  
Hyperplasia

LESION RATES

OVERALL (a)	15/50 (30%)	13/50 (26%)	9/50 (18%)	14/50 (28%)
POLY-3 RATE (b)	15/44.83	13/46.02	9/43.10	14/41.13
POLY-3 PERCENT (g)	33.5%	28.3%	20.9%	34%
TERMINAL (d)	8/27 (30%)	10/32 (31%)	5/23 (22%)	7/22 (32%)
FIRST INCIDENCE	345	562	563	656

STATISTICAL TESTS

LIFE TABLE	P=0.282	P=0.262N	P=0.199N	P=0.495
POLY 3	P=0.414	P=0.377N	P=0.136N	P=0.569
POLY 1.5	P=0.453	P=0.393N	P=0.131N	P=0.577N
POLY 6	P=0.375	P=0.356N	P=0.146N	P=0.539
LOGISTIC REGRESSION	P=0.474	P=0.447N	P=0.120N	P=0.536N
COCH-ARM / FISHERS	P=0.533	P=0.412N	P=0.121N	P=0.500N
ORDER RESTRICTED	P=0.406	(e)	(e)	(e)



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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Brain  
Compression

LESION RATES

OVERALL (a)	11/50 (22%)	11/50 (22%)	8/50 (16%)	2/50 (4%)
POLY-3 RATE (b)	11/42.98	11/46.75	8/42.83	2/40.90
POLY-3 PERCENT (g)	25.6%	23.5%	18.7%	4.9%
TERMINAL (d)	7/27 (26%)	4/32 (13%)	5/23 (22%)	0/22 (0%)
FIRST INCIDENCE	618	612	565	565

STATISTICAL TESTS

LIFE TABLE	P=0.016N*	P=0.446N	P=0.406N	P=0.020N*
POLY 3	P=0.006N**	P=0.507N	P=0.304N	P=0.008N**
POLY 1.5	P=0.005N**	P=0.543N	P=0.304N	P=0.008N**
POLY 6	P=0.007N**	P=0.460N	P=0.313N	P=0.009N**
LOGISTIC REGRESSION	P=0.005N**	P=0.574N	P=0.306N	P=0.010N**
COCH-ARM / FISHERS	P=0.004N**	P=0.595N	P=0.306N	P=0.007N**
ORDER RESTRICTED	P=0.010N**	(e)	(e)	(e)

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Brain  
Hemorrhage

LESION RATES

OVERALL (a)	7/50 (14%)	2/50 (4%)	4/50 (8%)	2/50 (4%)
POLY-3 RATE (b)	7/43.73	2/45.36	4/42.24	2/40.28
POLY-3 PERCENT (g)	16%	4.4%	9.5%	5%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	2/23 (9%)	0/22 (0%)
FIRST INCIDENCE	554	624	680	701

STATISTICAL TESTS

LIFE TABLE	P=0.224N	P=0.064N	P=0.313N	P=0.112N
POLY 3	P=0.188N	P=0.070N	P=0.279N	P=0.098N
POLY 1.5	P=0.174N	P=0.073N	P=0.271N	P=0.091N
POLY 6	P=0.206N	P=0.066N	P=0.299N	P=0.109N
LOGISTIC REGRESSION	P=0.151N	P=0.109N	P=0.261N	P=0.079N
COCH-ARM / FISHERS	P=0.151N	P=0.080N	P=0.262N	P=0.080N
ORDER RESTRICTED	P=0.053N	(e)	(e)	(e)

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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye  
Atrophy

LESION RATES

OVERALL (a)	0/49 (0%)	0/49 (0%)	1/50 (2%)	1/49 (2%)
POLY-3 RATE (b)	0/41.33	0/44.04	1/42.00	1/39.20
POLY-3 PERCENT (g)	0%	0%	2.4%	2.6%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	---	---	729 (T)	701

STATISTICAL TESTS

LIFE TABLE	P=0.278	(e)	P=0.468	P=0.493
POLY 3	P=0.298	(e)	P=0.503	P=0.489
POLY 1.5	P=0.307	(e)	P=0.504	P=0.493
POLY 6	P=0.288	(e)	P=0.501	P=0.485
LOGISTIC REGRESSION	P=0.290	(e)	P=0.468	P=0.487
COCH-ARM / FISHERS	P=0.324	(e)	P=0.505	P=0.500
ORDER RESTRICTED	P=0.241	(e)	(e)	(e)

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Species/Strain: RATS/F 344

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TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Lens  
Cataract

LESION RATES

OVERALL (a)	3/49 (6%)	0/49 (0%)	5/50 (10%)	1/49 (2%)
POLY-3 RATE (b)	3/41.37	0/44.04	5/42.44	1/39.20
POLY-3 PERCENT (g)	7.3%	0%	11.8%	2.6%
TERMINAL (d)	2/27 (7%)	0/32 (0%)	3/23 (13%)	0/21 (0%)
FIRST INCIDENCE	718	---	656	701

STATISTICAL TESTS

LIFE TABLE	P=0.509N	P=0.093N	P=0.292	P=0.374N
POLY 3	P=0.453N	P=0.107N	P=0.370	P=0.324N
POLY 1.5	P=0.433N	P=0.112N	P=0.369	P=0.318N
POLY 6	P=0.477N	P=0.102N	P=0.366	P=0.331N
LOGISTIC REGRESSION	P=0.455N	P=0.092N	P=0.348	P=0.345N
COCH-ARM / FISHERS	P=0.397N	P=0.121N	P=0.369	P=0.309N
ORDER RESTRICTED	P=0.281N	(e)	(e)	(e)

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Lens  
Mineralization

LESION RATES

OVERALL (a)	0/49 (0%)	0/49 (0%)	0/50 (0%)	0/49 (0%)
POLY-3 RATE (b)	0/41.33	0/44.04	0/42.00	0/39.08
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

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Species/Strain: RATS/F 344

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Retina  
Atrophy

LESION RATES

OVERALL (a)	1/49 (2%)	0/49 (0%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	1/41.33	0/44.04	1/42.00	0/39.08
POLY-3 PERCENT (g)	2.4%	0%	2.4%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	729 (T)	---	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.535N	P=0.466N	P=0.726	P=0.550N
POLY 3	P=0.487N	P=0.487N	P=0.757N	P=0.511N
POLY 1.5	P=0.479N	P=0.492N	P=0.757N	P=0.507N
POLY 6	P=0.497N	P=0.481N	P=0.761N	P=0.516N
LOGISTIC REGRESSION	P=0.535N	(e)	P=0.726	(e)
COCH-ARM / FISHERS	P=0.464N	P=0.500N	P=0.747N	P=0.500N
ORDER RESTRICTED	P=0.261N	(e)	(e)	(e)

TDMS No. 88006-03  
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 Species/Strain: RATS/F 344

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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Sclera  
 Metaplasia Osseous

**LESION RATES**

OVERALL (a)	32/49 (65%)	32/49 (65%)	32/50 (64%)	25/49 (51%)
POLY-3 RATE (b)	32/46.48	32/45.91	32/44.55	25/42.10
POLY-3 PERCENT (g)	68.9%	69.7%	71.8%	59.4%
TERMINAL (d)	17/27 (63%)	25/32 (78%)	18/23 (78%)	11/21 (52%)
FIRST INCIDENCE	345	579	618	558

**STATISTICAL TESTS**

LIFE TABLE	P=0.514N	P=0.264N	P=0.372	P=0.397N
POLY 3	P=0.151N	P=0.556	P=0.466	P=0.233N
POLY 1.5	P=0.114N	P=0.571	P=0.533	P=0.183N
POLY 6	P=0.196N	P=0.526	P=0.369	P=0.295N
LOGISTIC REGRESSION	P=0.132N	P=0.523N	P=0.529N	P=0.142N
COCH-ARM / FISHERS	P=0.059N	P=0.584N	P=0.530N	P=0.110N
ORDER RESTRICTED	P=0.207N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Harderian Gland  
Inflammation Chronic

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	0/44.96	2/42.84	0/40.08
POLY-3 PERCENT (g)	0%	0%	4.7%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	596	---

STATISTICAL TESTS

LIFE TABLE	P=0.702N	(e)	P=0.250	(e)
POLY 3	P=0.701N	(e)	P=0.241	(e)
POLY 1.5	P=0.693N	(e)	P=0.239	(e)
POLY 6	P=0.711N	(e)	P=0.242	(e)
LOGISTIC REGRESSION	P=0.614N	(e)	P=0.248	(e)
COCH-ARM / FISHERS	P=0.675N	(e)	P=0.247	(e)
ORDER RESTRICTED	P=0.251	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Heart  
 Cardiomyopathy**

**LESION RATES**

OVERALL (a)	7/50 (14%)	3/50 (6%)	4/50 (8%)	6/50 (12%)
POLY-3 RATE (b)	7/44.95	3/44.96	4/43.10	6/40.96
POLY-3 PERCENT (g)	15.6%	6.7%	9.3%	14.7%
TERMINAL (d)	2/27 (7%)	3/32 (9%)	1/23 (4%)	3/22 (14%)
FIRST INCIDENCE	495	729 (T)	563	519

**STATISTICAL TESTS**

LIFE TABLE	P=0.348	P=0.128N	P=0.283N	P=0.577N
POLY 3	P=0.400	P=0.156N	P=0.284N	P=0.572N
POLY 1.5	P=0.422	P=0.157N	P=0.276N	P=0.546N
POLY 6	P=0.376	P=0.155N	P=0.298N	P=0.601N
LOGISTIC REGRESSION	P=0.544	P=0.275N	P=0.248N	P=0.442N
COCH-ARM / FISHERS	P=0.464	P=0.159N	P=0.262N	P=0.500N
ORDER RESTRICTED	P=0.339N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

Heart: Atrium  
 Thrombosis

**LESION RATES**

OVERALL (a)	3/50 (6%)	1/50 (2%)	5/50 (10%)	5/50 (10%)
POLY-3 RATE (b)	3/42.62	1/45.30	5/43.31	5/40.50
POLY-3 PERCENT (g)	7%	2.2%	11.5%	12.4%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	2/22 (9%)
FIRST INCIDENCE	618	633	560	669

**STATISTICAL TESTS**

LIFE TABLE	P=0.116	P=0.270N	P=0.354	P=0.293
POLY 3	P=0.131	P=0.283N	P=0.365	P=0.328
POLY 1.5	P=0.144	P=0.292N	P=0.361	P=0.337
POLY 6	P=0.118	P=0.273N	P=0.366	P=0.317
LOGISTIC REGRESSION	P=0.174	P=0.348N	P=0.359	P=0.333
COCH-ARM / FISHERS	P=0.169	P=0.309N	P=0.357	P=0.357
ORDER RESTRICTED	P=0.154	(e)	(e)	(e)

---

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Intestine Small, Jejunum  
 Diverticulum**

**LESION RATES**

OVERALL (a)	0/46 (0%)	0/47 (0%)	0/44 (0%)	0/47 (0%)
POLY-3 RATE (b)	0/39.94	0/42.75	0/38.91	0/37.43
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Islets, Pancreatic  
Hyperplasia

LESION RATES

OVERALL (a)	1/50 (2%)	3/50 (6%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/42.01	3/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	2.4%	6.7%	0%	0%
TERMINAL (d)	1/27 (4%)	3/32 (9%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	729 (T)	729 (T)	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.213N	P=0.367	P=0.532N	P=0.541N
POLY 3	P=0.168N	P=0.330	P=0.500N	P=0.509N
POLY 1.5	P=0.167N	P=0.320	P=0.500N	P=0.507N
POLY 6	P=0.168N	P=0.342	P=0.502N	P=0.513N
LOGISTIC REGRESSION	P=0.213N	P=0.367	(e)	(e)
COCH-ARM / FISHERS	P=0.166N	P=0.309	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.135N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney  
Cyst

LESION RATES

OVERALL (a)	2/50 (4%)	2/50 (4%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	2/42.59	2/44.96	2/42.16	0/40.08
POLY-3 PERCENT (g)	4.7%	4.5%	4.7%	0%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	1/23 (4%)	0/22 (0%)
FIRST INCIDENCE	548	729 (T)	688	---

STATISTICAL TESTS

LIFE TABLE	P=0.202N	P=0.644N	P=0.662	P=0.265N
POLY 3	P=0.177N	P=0.675N	P=0.691	P=0.251N
POLY 1.5	P=0.170N	P=0.682N	P=0.692	P=0.246N
POLY 6	P=0.186N	P=0.665N	P=0.687	P=0.256N
LOGISTIC REGRESSION	P=0.164N	P=0.687	P=0.695N	P=0.219N
COCH-ARM / FISHERS	P=0.157N	P=0.691N	P=0.691N	P=0.247N
ORDER RESTRICTED	P=0.200N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney  
Infarct

LESION RATES

OVERALL (a)	3/50 (6%)	0/50 (0%)	0/50 (0%)	7/50 (14%)
POLY-3 RATE (b)	3/42.96	0/44.96	0/42.00	7/42.14
POLY-3 PERCENT (g)	7%	0%	0%	16.6%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	1/22 (5%)
FIRST INCIDENCE	495	---	---	519

STATISTICAL TESTS

LIFE TABLE	P=0.003**	P=0.109N	P=0.135N	P=0.141
POLY 3	P=0.003**	P=0.110N	P=0.122N	P=0.147
POLY 1.5	P=0.003**	P=0.114N	P=0.121N	P=0.149
POLY 6	P=0.003**	P=0.106N	P=0.126N	P=0.149
LOGISTIC REGRESSION	P=0.008**	P=0.167N	P=0.113N	P=0.185
COCH-ARM / FISHERS	P=0.004**	P=0.121N	P=0.121N	P=0.159
ORDER RESTRICTED	P=0.002**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney  
Nephropathy

LESION RATES

OVERALL (a)	41/50 (82%)	46/50 (92%)	46/50 (92%)	45/50 (90%)
POLY-3 RATE (b)	41/46.39	46/48.25	46/47.78	45/46.91
POLY-3 PERCENT (g)	88.4%	95.3%	96.3%	95.9%
TERMINAL (d)	27/27 (100%)	32/32 (100%)	23/23 (100%)	22/22 (100%)
FIRST INCIDENCE	345	579	558	200

STATISTICAL TESTS

LIFE TABLE	P=0.026*	P=0.449N	P=0.092	P=0.067
POLY 3	P=0.184	P=0.147	P=0.100	P=0.114
POLY 1.5	P=0.224	P=0.129	P=0.087	P=0.131
POLY 6	P=0.186	P=0.193	P=0.159	P=0.135
LOGISTIC REGRESSION	P=0.065	P=0.305	P=0.118	P=0.079
COCH-ARM / FISHERS	P=0.332	P=0.117	P=0.117	P=0.194
ORDER RESTRICTED	P=0.035*	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Bilateral Infarct

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/42.01	0/44.96	0/42.00	2/40.94
POLY-3 PERCENT (g)	0%	0%	0%	4.9%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	---	579

STATISTICAL TESTS

LIFE TABLE	P=0.036*	(e)	(e)	P=0.229
POLY 3	P=0.038*	(e)	(e)	P=0.231
POLY 1.5	P=0.039*	(e)	(e)	P=0.232
POLY 6	P=0.037*	(e)	(e)	P=0.231
LOGISTIC REGRESSION	P=0.061	(e)	(e)	P=0.268
COCH-ARM / FISHERS	P=0.042*	(e)	(e)	P=0.247
ORDER RESTRICTED	P=0.027*	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney: Papilla  
 Mineralization**

**LESION RATES**

OVERALL (a)	12/50 (24%)	16/50 (32%)	10/50 (20%)	33/50 (66%)
POLY-3 RATE (b)	12/43.21	16/45.76	10/44.03	33/44.97
POLY-3 PERCENT (g)	27.8%	35%	22.7%	73.4%
TERMINAL (d)	6/27 (22%)	13/32 (41%)	3/23 (13%)	17/22 (77%)
FIRST INCIDENCE	646	624	558	519

**STATISTICAL TESTS**

LIFE TABLE	P<0.001**	P=0.433	P=0.478N	P<0.001**
POLY 3	P<0.001**	P=0.307	P=0.382N	P<0.001**
POLY 1.5	P<0.001**	P=0.286	P=0.393N	P<0.001**
POLY 6	P<0.001**	P=0.328	P=0.379N	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P=0.343	P=0.405N	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.252	P=0.405N	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Pelvis Dilatation

LESION RATES

OVERALL (a)	0/50 (0%)	2/50 (4%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	2/44.97	2/42.48	0/40.08
POLY-3 PERCENT (g)	0%	4.5%	4.7%	0%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	726	649	---

STATISTICAL TESTS

LIFE TABLE	P=0.428N	P=0.281	P=0.245	(e)
POLY 3	P=0.393N	P=0.252	P=0.239	(e)
POLY 1.5	P=0.387N	P=0.246	P=0.238	(e)
POLY 6	P=0.400N	P=0.260	P=0.239	(e)
LOGISTIC REGRESSION	P=0.389N	P=0.280	P=0.238	(e)
COCH-ARM / FISHERS	P=0.373N	P=0.247	P=0.247	(e)
ORDER RESTRICTED	P=0.283	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney: Pelvis, Transitional Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	1/50 (2%)	2/50 (4%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	1/42.06	2/44.96	1/42.39	1/40.08
POLY-3 PERCENT (g)	2.4%	4.5%	2.4%	2.5%
TERMINAL (d)	0/27 (0%)	2/32 (6%)	0/23 (0%)	1/22 (5%)
FIRST INCIDENCE	718	729 (T)	618	729 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.633N	P=0.562	P=0.744	P=0.715
POLY 3	P=0.566N	P=0.523	P=0.759N	P=0.750
POLY 1.5	P=0.559N	P=0.514	P=0.760N	P=0.753
POLY 6	P=0.573N	P=0.535	P=0.760N	P=0.747
LOGISTIC REGRESSION	P=0.578N	P=0.561	P=0.762N	P=0.741
COCH-ARM / FISHERS	P=0.546N	P=0.500	P=0.753N	P=0.753N
ORDER RESTRICTED	P=0.613N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney: Pelvis, Transitional Epithelium  
 Mineralization**

**LESION RATES**

OVERALL (a)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/42.01	0/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	2.4%	0%	0%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	729 (T)	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.544N	P=0.466N	P=0.532N	P=0.541N
POLY 3	P=0.508N	P=0.486N	P=0.500N	P=0.509N
POLY 1.5	P=0.505N	P=0.492N	P=0.500N	P=0.507N
POLY 6	P=0.512N	P=0.480N	P=0.502N	P=0.513N
LOGISTIC REGRESSION	P=0.544N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.500N	P=0.500N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.129N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney: Renal Tubule  
 Pigmentation**

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	0/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Larynx  
 Foreign Body

**LESION RATES**

OVERALL (a)	4/50 (8%)	5/49 (10%)	2/50 (4%)	5/50 (10%)
POLY-3 RATE (b)	4/43.72	5/44.42	2/42.00	5/42.14
POLY-3 PERCENT (g)	9.2%	11.3%	4.8%	11.9%
TERMINAL (d)	0/27 (0%)	4/32 (13%)	2/23 (9%)	0/22 (0%)
FIRST INCIDENCE	548	624	729 (T)	401

**STATISTICAL TESTS**

LIFE TABLE	P=0.361	P=0.573	P=0.358N	P=0.471
POLY 3	P=0.437	P=0.510	P=0.355N	P=0.477
POLY 1.5	P=0.446	P=0.502	P=0.347N	P=0.484
POLY 6	P=0.426	P=0.519	P=0.372N	P=0.467
LOGISTIC REGRESSION	P=0.549	P=0.398	P=0.328N	P=0.609
COCH-ARM / FISHERS	P=0.465	P=0.487	P=0.339N	P=0.500
ORDER RESTRICTED	P=0.464	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Larynx  
Inflammation

LESION RATES

OVERALL (a)	6/50 (12%)	0/49 (0%)	4/50 (8%)	2/50 (4%)
POLY-3 RATE (b)	6/43.36	0/44.04	4/42.67	2/40.24
POLY-3 PERCENT (g)	13.8%	0%	9.4%	5%
TERMINAL (d)	2/27 (7%)	0/32 (0%)	1/23 (4%)	1/22 (5%)
FIRST INCIDENCE	554	---	596	688

STATISTICAL TESTS

LIFE TABLE	P=0.398N	P=0.014N*	P=0.408N	P=0.180N
POLY 3	P=0.355N	P=0.014N*	P=0.379N	P=0.157N
POLY 1.5	P=0.338N	P=0.015N*	P=0.375N	P=0.148N
POLY 6	P=0.377N	P=0.013N*	P=0.391N	P=0.168N
LOGISTIC REGRESSION	P=0.300N	P=0.023N*	P=0.368N	P=0.136N
COCH-ARM / FISHERS	P=0.306N	P=0.014N*	P=0.370N	P=0.134N
ORDER RESTRICTED	P=0.077N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Larynx  
 Inflammation Chronic**

**LESION RATES**

OVERALL (a)	4/50 (8%)	11/49 (22%)	6/50 (12%)	10/50 (20%)
POLY-3 RATE (b)	4/42.55	11/45.02	6/42.56	10/42.51
POLY-3 PERCENT (g)	9.4%	24.4%	14.1%	23.5%
TERMINAL (d)	2/27 (7%)	7/32 (22%)	4/23 (17%)	4/22 (18%)
FIRST INCIDENCE	646	624	652	401

**STATISTICAL TESTS**

LIFE TABLE	P=0.096	P=0.091	P=0.322	P=0.056
POLY 3	P=0.185	P=0.054	P=0.368	P=0.069
POLY 1.5	P=0.189	P=0.048*	P=0.369	P=0.069
POLY 6	P=0.181	P=0.063	P=0.362	P=0.068
LOGISTIC REGRESSION	P=0.189	P=0.051	P=0.368	P=0.079
COCH-ARM / FISHERS	P=0.203	P=0.041*	P=0.370	P=0.074
ORDER RESTRICTED	P=0.065	(e)	(e)	(e)

---



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Larynx: Respiratory Epithelium  
Hyperplasia

LESION RATES

OVERALL (a)	0/50 (0%)	2/49 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	2/44.66	0/42.00	0/40.08
POLY-3 PERCENT (g)	0%	4.5%	0%	0%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	529	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.425N	P=0.265	(e)	(e)
POLY 3	P=0.385N	P=0.251	(e)	(e)
POLY 1.5	P=0.387N	P=0.244	(e)	(e)
POLY 6	P=0.381N	P=0.260	(e)	(e)
LOGISTIC REGRESSION	P=0.349N	P=0.156	(e)	(e)
COCH-ARM / FISHERS	P=0.391N	P=0.242	(e)	(e)
ORDER RESTRICTED	P=0.269N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
Angiectasis

LESION RATES

OVERALL (a)	0/50 (0%)	1/50 (2%)	1/50 (2%)	4/50 (8%)
POLY-3 RATE (b)	0/42.01	1/45.06	1/42.00	4/40.16
POLY-3 PERCENT (g)	0%	2.2%	2.4%	10%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	1/23 (4%)	3/22 (14%)
FIRST INCIDENCE	---	705	729 (T)	709

STATISTICAL TESTS

LIFE TABLE	P=0.009**	P=0.550	P=0.468	P=0.044*
POLY 3	P=0.015*	P=0.514	P=0.500	P=0.054
POLY 1.5	P=0.016*	P=0.508	P=0.500	P=0.056
POLY 6	P=0.014*	P=0.521	P=0.498	P=0.052
LOGISTIC REGRESSION	P=0.011*	P=0.514	P=0.468	P=0.048*
COCH-ARM / FISHERS	P=0.019*	P=0.500	P=0.500	P=0.059
ORDER RESTRICTED	P=0.010**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Basophilic Focus

**LESION RATES**

OVERALL (a)	2/50 (4%)	9/50 (18%)	3/50 (6%)	1/50 (2%)
POLY-3 RATE (b)	2/42.59	9/44.98	3/42.10	1/40.08
POLY-3 PERCENT (g)	4.7%	20%	7.1%	2.5%
TERMINAL (d)	1/27 (4%)	8/32 (25%)	2/23 (9%)	1/22 (5%)
FIRST INCIDENCE	548	723	705	729 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.136N	P=0.051	P=0.457	P=0.550N
POLY 3	P=0.083N	P=0.030*	P=0.495	P=0.521N
POLY 1.5	P=0.079N	P=0.029*	P=0.497	P=0.514N
POLY 6	P=0.088N	P=0.033*	P=0.488	P=0.529N
LOGISTIC REGRESSION	P=0.098N	P=0.039*	P=0.500	P=0.498N
COCH-ARM / FISHERS	P=0.074N	P=0.026*	P=0.500	P=0.500N
ORDER RESTRICTED	P=0.078N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Clear Cell Focus

**LESION RATES**

OVERALL (a)	9/50 (18%)	7/50 (14%)	5/50 (10%)	3/50 (6%)
POLY-3 RATE (b)	9/43.65	7/45.44	5/42.15	3/40.08
POLY-3 PERCENT (g)	20.6%	15.4%	11.9%	7.5%
TERMINAL (d)	6/27 (22%)	5/32 (16%)	3/23 (13%)	3/22 (14%)
FIRST INCIDENCE	522	646	705	729 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.123N	P=0.283N	P=0.262N	P=0.108N
POLY 3	P=0.078N	P=0.358N	P=0.209N	P=0.078N
POLY 1.5	P=0.070N	P=0.371N	P=0.203N	P=0.071N
POLY 6	P=0.090N	P=0.339N	P=0.223N	P=0.087N
LOGISTIC REGRESSION	P=0.071N	P=0.395N	P=0.194N	P=0.068N
COCH-ARM / FISHERS	P=0.056N	P=0.393N	P=0.194N	P=0.061N
ORDER RESTRICTED	P=0.063N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Degeneration Cystic

**LESION RATES**

OVERALL (a)	2/50 (4%)	2/50 (4%)	3/50 (6%)	1/50 (2%)
POLY-3 RATE (b)	2/42.01	2/44.96	3/42.19	1/40.24
POLY-3 PERCENT (g)	4.8%	4.5%	7.1%	2.5%
TERMINAL (d)	2/27 (7%)	2/32 (6%)	2/23 (9%)	0/22 (0%)
FIRST INCIDENCE	729 (T)	729 (T)	680	688

**STATISTICAL TESTS**

LIFE TABLE	P=0.473N	P=0.633N	P=0.439	P=0.551N
POLY 3	P=0.408N	P=0.670N	P=0.502	P=0.515N
POLY 1.5	P=0.397N	P=0.679N	P=0.501	P=0.511N
POLY 6	P=0.420N	P=0.657N	P=0.500	P=0.519N
LOGISTIC REGRESSION	P=0.431N	P=0.633N	P=0.477	P=0.527N
COCH-ARM / FISHERS	P=0.373N	P=0.691N	P=0.500	P=0.500N
ORDER RESTRICTED	P=0.426N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Eosinophilic Focus

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	0/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Hepatodiaphragmatic Nodule

**LESION RATES**

OVERALL (a)	0/50 (0%)	2/50 (4%)	5/50 (10%)	10/50 (20%)
POLY-3 RATE (b)	0/42.01	2/45.46	5/43.91	10/42.46
POLY-3 PERCENT (g)	0%	4.4%	11.4%	23.6%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	4/22 (18%)
FIRST INCIDENCE	---	579	560	367

**STATISTICAL TESTS**

LIFE TABLE	P<0.001**	P=0.266	P=0.038*	P<0.001**
POLY 3	P<0.001**	P=0.255	P=0.034*	P<0.001**
POLY 1.5	P<0.001**	P=0.248	P=0.032*	P<0.001**
POLY 6	P<0.001**	P=0.264	P=0.035*	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P=0.191	P=0.034*	P=0.002**
COCH-ARM / FISHERS	P<0.001**	P=0.247	P=0.028*	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Necrosis

**LESION RATES**

OVERALL (a)	2/50 (4%)	2/50 (4%)	3/50 (6%)	4/50 (8%)
POLY-3 RATE (b)	2/42.96	2/45.30	3/42.89	4/40.76
POLY-3 PERCENT (g)	4.7%	4.4%	7%	9.8%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	2/22 (9%)
FIRST INCIDENCE	554	633	558	579

**STATISTICAL TESTS**

LIFE TABLE	P=0.182	P=0.656N	P=0.512	P=0.300
POLY 3	P=0.204	P=0.675N	P=0.499	P=0.312
POLY 1.5	P=0.215	P=0.682N	P=0.499	P=0.320
POLY 6	P=0.191	P=0.666N	P=0.495	P=0.304
LOGISTIC REGRESSION	P=0.284	P=0.594	P=0.516	P=0.357
COCH-ARM / FISHERS	P=0.237	P=0.691N	P=0.500	P=0.339
ORDER RESTRICTED	P=0.263	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Vacuolization Cytoplasmic

**LESION RATES**

OVERALL (a)	3/50 (6%)	1/50 (2%)	4/50 (8%)	0/50 (0%)
POLY-3 RATE (b)	3/42.80	1/45.13	4/42.36	0/40.08
POLY-3 PERCENT (g)	7%	2.2%	9.4%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	1/23 (4%)	0/22 (0%)
FIRST INCIDENCE	522	684	681	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.187N	P=0.261N	P=0.454	P=0.141N
POLY 3	P=0.174N	P=0.286N	P=0.494	P=0.130N
POLY 1.5	P=0.163N	P=0.294N	P=0.496	P=0.126N
POLY 6	P=0.188N	P=0.277N	P=0.488	P=0.135N
LOGISTIC REGRESSION	P=0.143N	P=0.362N	P=0.500	P=0.109N
COCH-ARM / FISHERS	P=0.144N	P=0.309N	P=0.500	P=0.121N
ORDER RESTRICTED	P=0.103N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver: Bile Duct  
Dilatation

LESION RATES

OVERALL (a)	0/50 (0%)	2/50 (4%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	2/44.96	0/42.00	0/40.08
POLY-3 PERCENT (g)	0%	4.5%	0%	0%
TERMINAL (d)	0/27 (0%)	2/32 (6%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	729 (T)	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.449N	P=0.276	(e)	(e)
POLY 3	P=0.389N	P=0.252	(e)	(e)
POLY 1.5	P=0.390N	P=0.246	(e)	(e)
POLY 6	P=0.386N	P=0.260	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.276	(e)	(e)
COCH-ARM / FISHERS	P=0.392N	P=0.247	(e)	(e)
ORDER RESTRICTED	P=0.270N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver: Bile Duct  
Hyperplasia

LESION RATES

OVERALL (a)	30/50 (60%)	42/50 (84%)	39/50 (78%)	30/50 (60%)
POLY-3 RATE (b)	30/44.82	42/48.80	39/46.49	30/43.73
POLY-3 PERCENT (g)	66.9%	86.1%	83.9%	68.6%
TERMINAL (d)	20/27 (74%)	28/32 (88%)	20/23 (87%)	16/22 (73%)
FIRST INCIDENCE	495	529	558	519

STATISTICAL TESTS

LIFE TABLE	P=0.410	P=0.171	P=0.031*	P=0.273
POLY 3	P=0.192N	P=0.017*	P=0.037*	P=0.525
POLY 1.5	P=0.164N	P=0.011*	P=0.035*	P=0.530
POLY 6	P=0.217N	P=0.035*	P=0.046*	P=0.543
LOGISTIC REGRESSION	P=0.246N	P=0.017*	P=0.036*	P=0.468
COCH-ARM / FISHERS	P=0.109N	P=0.007**	P=0.041*	P=0.581N
ORDER RESTRICTED	P=0.096	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM
<b>Lung Hemorrhage</b>				
<b>LESION RATES</b>				
OVERALL (a)	7/50 (14%)	3/50 (6%)	1/50 (2%)	7/50 (14%)
POLY-3 RATE (b)	7/42.92	3/45.46	1/42.27	7/42.74
POLY-3 PERCENT (g)	16.3%	6.6%	2.4%	16.4%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	0/23 (0%)	1/22 (5%)
FIRST INCIDENCE	660	579	657	200
<b>STATISTICAL TESTS</b>				
LIFE TABLE	P=0.197	P=0.116N	P=0.048N*	P=0.543
POLY 3	P=0.251	P=0.134N	P=0.031N*	P=0.611
POLY 1.5	P=0.259	P=0.143N	P=0.031N*	P=0.612
POLY 6	P=0.242	P=0.125N	P=0.033N*	P=0.608
LOGISTIC REGRESSION	P=0.355	P=0.155N	P=0.033N*	P=0.561N
COCH-ARM / FISHERS	P=0.274	P=0.159N	P=0.030N*	P=0.613N
ORDER RESTRICTED	P=0.173	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lung  
Inflammation Chronic

LESION RATES

OVERALL (a)	4/50 (8%)	1/50 (2%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	4/42.40	1/44.96	3/42.00	2/40.08
POLY-3 PERCENT (g)	9.4%	2.2%	7.1%	5%
TERMINAL (d)	3/27 (11%)	1/32 (3%)	3/23 (13%)	2/22 (9%)
FIRST INCIDENCE	618	729 (T)	729 (T)	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.583N	P=0.138N	P=0.572N	P=0.424N
POLY 3	P=0.498N	P=0.161N	P=0.505N	P=0.363N
POLY 1.5	P=0.481N	P=0.168N	P=0.503N	P=0.354N
POLY 6	P=0.518N	P=0.153N	P=0.514N	P=0.373N
LOGISTIC REGRESSION	P=0.521N	P=0.156N	P=0.513N	P=0.367N
COCH-ARM / FISHERS	P=0.450N	P=0.181N	P=0.500N	P=0.339N
ORDER RESTRICTED	P=0.294N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

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**Lung: Alveolar Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	3/50 (6%)	6/50 (12%)	6/50 (12%)	3/50 (6%)
POLY-3 RATE (b)	3/42.49	6/45.70	6/42.45	3/40.20
POLY-3 PERCENT (g)	7.1%	13.1%	14.1%	7.5%
TERMINAL (d)	2/27 (7%)	4/32 (13%)	4/23 (17%)	2/22 (9%)
FIRST INCIDENCE	587	612	649	701

**STATISTICAL TESTS**

LIFE TABLE	P=0.510N	P=0.316	P=0.196	P=0.586
POLY 3	P=0.421N	P=0.279	P=0.240	P=0.637
POLY 1.5	P=0.401N	P=0.264	P=0.241	P=0.645
POLY 6	P=0.446N	P=0.298	P=0.235	P=0.628
LOGISTIC REGRESSION	P=0.413N	P=0.240	P=0.240	P=0.640
COCH-ARM / FISHERS	P=0.364N	P=0.243	P=0.243	P=0.661N
ORDER RESTRICTED	P=0.397	(e)	(e)	(e)

---

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lung: Alveolus  
Emphysema

LESION RATES

OVERALL (a)	0/50 (0%)	2/50 (4%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	2/45.07	1/42.54	0/40.08
POLY-3 PERCENT (g)	0%	4.4%	2.4%	0%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	700	563	---

STATISTICAL TESTS

LIFE TABLE	P=0.423N	P=0.282	P=0.509	(e)
POLY 3	P=0.393N	P=0.253	P=0.502	(e)
POLY 1.5	P=0.390N	P=0.247	P=0.501	(e)
POLY 6	P=0.396N	P=0.261	P=0.502	(e)
LOGISTIC REGRESSION	P=0.366N	P=0.261	P=0.530	(e)
COCH-ARM / FISHERS	P=0.383N	P=0.247	P=0.500	(e)
ORDER RESTRICTED	P=0.339	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Lung: Alveolus  
 Infiltration Cellular Histiocyte**

**LESION RATES**

OVERALL (a)	11/50 (22%)	12/50 (24%)	10/50 (20%)	4/50 (8%)
POLY-3 RATE (b)	11/42.70	12/46.81	10/42.81	4/40.08
POLY-3 PERCENT (g)	25.8%	25.6%	23.4%	10%
TERMINAL (d)	7/27 (26%)	5/32 (16%)	5/23 (22%)	4/22 (18%)
FIRST INCIDENCE	666	529	618	729 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.071N	P=0.523N	P=0.572	P=0.095N
POLY 3	P=0.033N*	P=0.590N	P=0.497N	P=0.054N
POLY 1.5	P=0.028N*	P=0.560	P=0.499N	P=0.051N
POLY 6	P=0.043N*	P=0.540N	P=0.505N	P=0.059N
LOGISTIC REGRESSION	P=0.030N*	P=0.540	P=0.513N	P=0.059N
COCH-ARM / FISHERS	P=0.020N*	P=0.500	P=0.500N	P=0.045N*
ORDER RESTRICTED	P=0.061N	(e)	(e)	(e)

---



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lung: Interstitium  
Fibrosis

LESION RATES

OVERALL (a)	3/50 (6%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	3/42.06	0/44.96	2/42.39	1/40.20
POLY-3 PERCENT (g)	7.1%	0%	4.7%	2.5%
TERMINAL (d)	2/27 (7%)	0/32 (0%)	1/23 (4%)	0/22 (0%)
FIRST INCIDENCE	718	---	618	701

STATISTICAL TESTS

LIFE TABLE	P=0.521N	P=0.093N	P=0.557N	P=0.366N
POLY 3	P=0.475N	P=0.107N	P=0.496N	P=0.321N
POLY 1.5	P=0.461N	P=0.112N	P=0.498N	P=0.317N
POLY 6	P=0.490N	P=0.101N	P=0.498N	P=0.326N
LOGISTIC REGRESSION	P=0.469N	P=0.090N	P=0.503N	P=0.335N
COCH-ARM / FISHERS	P=0.437N	P=0.121N	P=0.500N	P=0.309N
ORDER RESTRICTED	P=0.193N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lymph Node, Mediastinal  
Hyperplasia Lymphoid

LESION RATES

OVERALL (a)	0/17 (0%)	2/25 (8%)	0/20 (0%)	1/18 (6%)
POLY-3 RATE (b)	0/13.85	2/23.25	0/15.67	1/13.90
POLY-3 PERCENT (g)	0%	8.6%	0%	7.2%
TERMINAL (d)	0/7 (0%)	0/16 (0%)	0/8 (0%)	1/8 (13%)
FIRST INCIDENCE	---	624	---	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.574	P=0.271	(e)	P=0.527
POLY 3	P=0.572	P=0.359	(e)	P=0.501
POLY 1.5	P=0.578	P=0.343	(e)	P=0.504
POLY 6	P=0.567	P=0.384	(e)	P=0.500
LOGISTIC REGRESSION	P=0.579	P=0.248	(e)	P=0.527
COCH-ARM / FISHERS	P=0.589	P=0.348	(e)	P=0.514
ORDER RESTRICTED	P=0.322	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Mammary Gland  
Galactocele

LESION RATES

OVERALL (a)	2/48 (4%)	1/49 (2%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	2/40.01	1/44.13	3/42.27	2/40.08
POLY-3 PERCENT (g)	5%	2.3%	7.1%	5%
TERMINAL (d)	2/25 (8%)	0/31 (0%)	2/23 (9%)	2/22 (9%)
FIRST INCIDENCE	729 (T)	684	657	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.470	P=0.428N	P=0.469	P=0.650
POLY 3	P=0.525	P=0.466N	P=0.525	P=0.694N
POLY 1.5	P=0.540	P=0.477N	P=0.522	P=0.690N
POLY 6	P=0.506	P=0.451N	P=0.526	P=0.692
LOGISTIC REGRESSION	P=0.518	P=0.450N	P=0.514	P=0.650
COCH-ARM / FISHERS	P=0.569	P=0.492N	P=0.520	P=0.676N
ORDER RESTRICTED	P=0.480	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Mesentery  
Necrosis

LESION RATES

OVERALL (a)	15/15 (100%)	14/15 (93%)	8/8 (100%)	5/5 (100%)
POLY-3 RATE (b)	15/15.00	14/14.70	8/8.00	5/5.00
POLY-3 PERCENT (g)	100%	95.3%	100%	100%
TERMINAL (d)	7/7 (100%)	10/10 (100%)	4/4 (100%)	2/2 (100%)
FIRST INCIDENCE	548	603	680	579

STATISTICAL TESTS

LIFE TABLE	P=0.218N	P=0.141N	(e)	(e)
POLY 3	P=0.898	P=0.664N	(e)	(e)
POLY 1.5	P=0.842	P=0.576N	(e)	(e)
POLY 6	P=0.975	P=0.848N	(e)	(e)
LOGISTIC REGRESSION	P=0.732	P=0.366N	(e)	(e)
COCH-ARM / FISHERS	P=0.789	P=0.500N	(e)	(e)
ORDER RESTRICTED	P=0.575N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

Nose  
 Foreign Body

**LESION RATES**

OVERALL (a)	6/50 (12%)	4/50 (8%)	3/50 (6%)	2/49 (4%)
POLY-3 RATE (b)	6/43.44	4/45.39	3/42.69	2/39.39
POLY-3 PERCENT (g)	13.8%	8.8%	7%	5.1%
TERMINAL (d)	2/27 (7%)	2/32 (6%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	548	660	565	669

**STATISTICAL TESTS**

LIFE TABLE	P=0.205N	P=0.305N	P=0.273N	P=0.185N
POLY 3	P=0.174N	P=0.342N	P=0.249N	P=0.165N
POLY 1.5	P=0.163N	P=0.352N	P=0.246N	P=0.156N
POLY 6	P=0.189N	P=0.330N	P=0.259N	P=0.177N
LOGISTIC REGRESSION	P=0.133N	P=0.408N	P=0.239N	P=0.137N
COCH-ARM / FISHERS	P=0.142N	P=0.370N	P=0.243N	P=0.141N
ORDER RESTRICTED	P=0.130N	(e)	(e)	(e)

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TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose  
Inflammation

LESION RATES

OVERALL (a)	10/50 (20%)	8/50 (16%)	7/50 (14%)	5/49 (10%)
POLY-3 RATE (b)	10/44.53	8/45.64	7/44.27	5/39.73
POLY-3 PERCENT (g)	22.5%	17.5%	15.8%	12.6%
TERMINAL (d)	3/27 (11%)	5/32 (16%)	2/23 (9%)	1/21 (5%)
FIRST INCIDENCE	548	660	210	653

STATISTICAL TESTS

LIFE TABLE	P=0.241N	P=0.303N	P=0.338N	P=0.206N
POLY 3	P=0.191N	P=0.374N	P=0.299N	P=0.184N
POLY 1.5	P=0.171N	P=0.381N	P=0.294N	P=0.167N
POLY 6	P=0.217N	P=0.368N	P=0.317N	P=0.208N
LOGISTIC REGRESSION	P=0.103N	P=0.446N	P=0.292N	P=0.137N
COCH-ARM / FISHERS	P=0.136N	P=0.398N	P=0.298N	P=0.140N
ORDER RESTRICTED	P=0.186N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose  
 Inflammation Chronic**

**LESION RATES**

OVERALL (a)	0/50 (0%)	1/50 (2%)	2/50 (4%)	0/49 (0%)
POLY-3 RATE (b)	0/42.01	1/44.96	2/42.45	0/39.08
POLY-3 PERCENT (g)	0%	2.2%	4.7%	0%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	---	729 (T)	596	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.570N	P=0.534	P=0.227	(e)
POLY 3	P=0.531N	P=0.514	P=0.239	(e)
POLY 1.5	P=0.523N	P=0.508	P=0.238	(e)
POLY 6	P=0.542N	P=0.520	P=0.238	(e)
LOGISTIC REGRESSION	P=0.511N	P=0.534	P=0.239	(e)
COCH-ARM / FISHERS	P=0.506N	P=0.500	P=0.247	(e)
ORDER RESTRICTED	P=0.328	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Nose: Glands  
 Dilatation**

**LESION RATES**

OVERALL (a)	3/50 (6%)	7/50 (14%)	6/50 (12%)	0/49 (0%)
POLY-3 RATE (b)	3/42.66	7/44.98	6/42.66	0/39.08
POLY-3 PERCENT (g)	7%	15.6%	14.1%	0%
TERMINAL (d)	1/27 (4%)	6/32 (19%)	4/23 (17%)	0/21 (0%)
FIRST INCIDENCE	590	723	596	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.071N	P=0.237	P=0.210	P=0.147N
POLY 3	P=0.045N*	P=0.178	P=0.240	P=0.134N
POLY 1.5	P=0.041N*	P=0.171	P=0.241	P=0.130N
POLY 6	P=0.052N	P=0.187	P=0.234	P=0.140N
LOGISTIC REGRESSION	P=0.045N*	P=0.194	P=0.242	P=0.121N
COCH-ARM / FISHERS	P=0.035N*	P=0.159	P=0.243	P=0.125N
ORDER RESTRICTED	P=0.041N*	(e)	(e)	(e)

---



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Goblet Cell  
Hyperplasia

LESION RATES

OVERALL (a)	5/50 (10%)	5/50 (10%)	5/50 (10%)	5/49 (10%)
POLY-3 RATE (b)	5/42.80	5/45.33	5/43.72	5/39.85
POLY-3 PERCENT (g)	11.7%	11%	11.4%	12.6%
TERMINAL (d)	2/27 (7%)	3/32 (9%)	0/23 (0%)	3/21 (14%)
FIRST INCIDENCE	618	660	565	562

STATISTICAL TESTS

LIFE TABLE	P=0.446	P=0.535N	P=0.606	P=0.528
POLY 3	P=0.510	P=0.594N	P=0.618N	P=0.586
POLY 1.5	P=0.530	P=0.608N	P=0.623N	P=0.596
POLY 6	P=0.485	P=0.578N	P=0.615N	P=0.572
LOGISTIC REGRESSION	P=0.578	P=0.610N	P=0.627N	P=0.600
COCH-ARM / FISHERS	P=0.569	P=0.630N	P=0.630N	P=0.617
ORDER RESTRICTED	P=0.667	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Nasolacrimal Duct  
 Inflammation**

**LESION RATES**

OVERALL (a)	2/50 (4%)	1/50 (2%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	2/42.38	1/45.04	1/42.10	0/39.08
POLY-3 PERCENT (g)	4.7%	2.2%	2.4%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	624	708	705	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.239N	P=0.444N	P=0.523N	P=0.273N
POLY 3	P=0.223N	P=0.479N	P=0.502N	P=0.255N
POLY 1.5	P=0.217N	P=0.487N	P=0.501N	P=0.251N
POLY 6	P=0.232N	P=0.469N	P=0.507N	P=0.261N
LOGISTIC REGRESSION	P=0.211N	P=0.505N	P=0.500N	P=0.244N
COCH-ARM / FISHERS	P=0.204N	P=0.500N	P=0.500N	P=0.253N
ORDER RESTRICTED	P=0.133N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Olfactory Epithelium  
Degeneration

LESION RATES

OVERALL (a)	1/50 (2%)	3/50 (6%)	3/50 (6%)	16/49 (33%)
POLY-3 RATE (b)	1/42.19	3/45.43	3/42.84	16/41.72
POLY-3 PERCENT (g)	2.4%	6.6%	7%	38.4%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	1/23 (4%)	8/21 (38%)
FIRST INCIDENCE	682	637	596	519

STATISTICAL TESTS

LIFE TABLE	P<0.001**	P=0.370	P=0.297	P<0.001**
POLY 3	P<0.001**	P=0.332	P=0.310	P<0.001**
POLY 1.5	P<0.001**	P=0.321	P=0.308	P<0.001**
POLY 6	P<0.001**	P=0.346	P=0.310	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P=0.295	P=0.308	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.309	P=0.309	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Olfactory Epithelium  
 Degeneration Hyaline**

**LESION RATES**

OVERALL (a)	1/50 (2%)	1/50 (2%)	1/50 (2%)	0/49 (0%)
POLY-3 RATE (b)	1/42.01	1/44.98	1/42.00	0/39.08
POLY-3 PERCENT (g)	2.4%	2.2%	2.4%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	729 (T)	723	729 (T)	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.402N	P=0.715N	P=0.726	P=0.550N
POLY 3	P=0.351N	P=0.745N	P=0.761	P=0.514N
POLY 1.5	P=0.345N	P=0.751N	P=0.761	P=0.511N
POLY 6	P=0.359N	P=0.738N	P=0.759	P=0.518N
LOGISTIC REGRESSION	P=0.386N	P=0.724N	P=0.726	(e)
COCH-ARM / FISHERS	P=0.332N	P=0.753N	P=0.753N	P=0.505N
ORDER RESTRICTED	P=0.341N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Olfactory Epithelium  
 Hyperplasia Basal Cell**

**LESION RATES**

OVERALL (a)	0/50 (0%)	17/50 (34%)	18/50 (36%)	43/49 (88%)
POLY-3 RATE (b)	0/42.01	17/46.79	18/44.41	43/46.72
POLY-3 PERCENT (g)	0%	36.3%	40.5%	92%
TERMINAL (d)	0/27 (0%)	11/32 (34%)	8/23 (35%)	19/21 (91%)
FIRST INCIDENCE	---	529	563	367

**STATISTICAL TESTS**

LIFE TABLE	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 3	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 6	P<0.001**	P<0.001**	P<0.001**	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P<0.001**	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Olfactory Epithelium  
Metaplasia

LESION RATES

OVERALL (a)	2/50 (4%)	1/50 (2%)	3/50 (6%)	2/49 (4%)
POLY-3 RATE (b)	2/42.51	1/44.96	3/42.00	2/39.08
POLY-3 PERCENT (g)	4.7%	2.2%	7.1%	5.1%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	3/23 (13%)	2/21 (10%)
FIRST INCIDENCE	642	729 (T)	729 (T)	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.437	P=0.456N	P=0.453	P=0.640
POLY 3	P=0.495	P=0.480N	P=0.494	P=0.664
POLY 1.5	P=0.513	P=0.488N	P=0.497	P=0.672
POLY 6	P=0.472	P=0.472N	P=0.485	P=0.653
LOGISTIC REGRESSION	P=0.489	P=0.509N	P=0.498	P=0.671
COCH-ARM / FISHERS	P=0.546	P=0.500N	P=0.500	P=0.684
ORDER RESTRICTED	P=0.450	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Respiratory Epithelium  
 Degeneration Hyaline**

**LESION RATES**

OVERALL (a)	2/50 (4%)	0/50 (0%)	2/50 (4%)	0/49 (0%)
POLY-3 RATE (b)	2/42.59	0/44.96	2/42.08	0/39.08
POLY-3 PERCENT (g)	4.7%	0%	4.8%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	1/23 (4%)	0/21 (0%)
FIRST INCIDENCE	548	---	708	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.334N	P=0.217N	P=0.661	P=0.270N
POLY 3	P=0.317N	P=0.225N	P=0.690	P=0.256N
POLY 1.5	P=0.305N	P=0.230N	P=0.691	P=0.251N
POLY 6	P=0.331N	P=0.219N	P=0.685	P=0.262N
LOGISTIC REGRESSION	P=0.282N	P=0.287N	P=0.695N	P=0.223N
COCH-ARM / FISHERS	P=0.285N	P=0.247N	P=0.691N	P=0.253N
ORDER RESTRICTED	P=0.131N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Respiratory Epithelium  
Hyperplasia

LESION RATES

OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	2/49 (4%)
POLY-3 RATE (b)	0/42.01	1/44.96	0/42.00	2/39.63
POLY-3 PERCENT (g)	0%	2.2%	0%	5.1%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	1/21 (5%)
FIRST INCIDENCE	---	729 (T)	---	562

STATISTICAL TESTS

LIFE TABLE	P=0.107	P=0.534	(e)	P=0.212
POLY 3	P=0.136	P=0.514	(e)	P=0.224
POLY 1.5	P=0.139	P=0.508	(e)	P=0.226
POLY 6	P=0.134	P=0.520	(e)	P=0.221
LOGISTIC REGRESSION	P=0.147	P=0.534	(e)	P=0.243
COCH-ARM / FISHERS	P=0.144	P=0.500	(e)	P=0.242
ORDER RESTRICTED	P=0.066	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Respiratory Epithelium  
Metaplasia

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/49 (2%)
POLY-3 RATE (b)	0/42.01	0/44.96	0/42.00	1/39.14
POLY-3 PERCENT (g)	0%	0%	0%	2.6%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	---	---	---	714

STATISTICAL TESTS

LIFE TABLE	P=0.185	(e)	(e)	P=0.469
POLY 3	P=0.205	(e)	(e)	P=0.486
POLY 1.5	P=0.209	(e)	(e)	P=0.489
POLY 6	P=0.200	(e)	(e)	P=0.482
LOGISTIC REGRESSION	P=0.195	(e)	(e)	P=0.479
COCH-ARM / FISHERS	P=0.217	(e)	(e)	P=0.495
ORDER RESTRICTED	P=0.108	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Pancreas: Acinus Atrophy

LESION RATES

OVERALL (a)	2/50 (4%)	2/50 (4%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/42.32	2/44.96	1/42.00	0/40.08
POLY-3 PERCENT (g)	4.7%	4.5%	2.4%	0%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	1/23 (4%)	0/22 (0%)
FIRST INCIDENCE	646	729 (T)	729 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.191N	P=0.641N	P=0.531N	P=0.265N
POLY 3	P=0.162N	P=0.672N	P=0.503N	P=0.249N
POLY 1.5	P=0.158N	P=0.680N	P=0.501N	P=0.245N
POLY 6	P=0.168N	P=0.662N	P=0.508N	P=0.254N
LOGISTIC REGRESSION	P=0.167N	P=0.667N	P=0.501N	P=0.244N
COCH-ARM / FISHERS	P=0.148N	P=0.691N	P=0.500N	P=0.247N
ORDER RESTRICTED	P=0.165N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pituitary Gland  
 Cyst**

**LESION RATES**

OVERALL (a)	0/49 (0%)	1/49 (2%)	1/49 (2%)	1/49 (2%)
POLY-3 RATE (b)	0/41.32	1/44.95	1/41.75	1/39.24
POLY-3 PERCENT (g)	0%	2.2%	2.4%	2.6%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	---	624	674	688

**STATISTICAL TESTS**

LIFE TABLE	P=0.472	P=0.519	P=0.517	P=0.494
POLY 3	P=0.473	P=0.517	P=0.502	P=0.490
POLY 1.5	P=0.482	P=0.510	P=0.501	P=0.493
POLY 6	P=0.463	P=0.525	P=0.502	P=0.486
LOGISTIC REGRESSION	P=0.523	P=0.412	P=0.500	P=0.493
COCH-ARM / FISHERS	P=0.500	P=0.500	P=0.500	P=0.500
ORDER RESTRICTED	P=0.318	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Pituitary Gland Hemorrhage

LESION RATES

OVERALL (a)	0/49 (0%)	1/49 (2%)	0/49 (0%)	0/49 (0%)
POLY-3 RATE (b)	0/41.32	1/44.91	0/41.54	0/39.08
POLY-3 PERCENT (g)	0%	2.2%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/21 (0%)
FIRST INCIDENCE	---	637	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.616N	P=0.514	(e)	(e)
POLY 3	P=0.594N	P=0.517	(e)	(e)
POLY 1.5	P=0.597N	P=0.510	(e)	(e)
POLY 6	P=0.591N	P=0.525	(e)	(e)
LOGISTIC REGRESSION	P=0.571N	P=0.431	(e)	(e)
COCH-ARM / FISHERS	P=0.601N	P=0.500	(e)	(e)
ORDER RESTRICTED	P=0.403N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Pituitary Gland  
Hyperplasia

LESION RATES

OVERALL (a)	9/49 (18%)	8/49 (16%)	6/49 (12%)	14/49 (29%)
POLY-3 RATE (b)	9/43.62	8/45.17	6/42.52	14/41.70
POLY-3 PERCENT (g)	20.6%	17.7%	14.1%	33.6%
TERMINAL (d)	5/27 (19%)	6/32 (19%)	2/23 (9%)	4/21 (19%)
FIRST INCIDENCE	345	579	618	519

STATISTICAL TESTS

LIFE TABLE	P=0.021*	P=0.381N	P=0.345N	P=0.113
POLY 3	P=0.041*	P=0.468N	P=0.304N	P=0.132
POLY 1.5	P=0.046*	P=0.482N	P=0.300N	P=0.141
POLY 6	P=0.037*	P=0.450N	P=0.310N	P=0.128
LOGISTIC REGRESSION	P=0.071	P=0.605	P=0.286N	P=0.185
COCH-ARM / FISHERS	P=0.061	P=0.500N	P=0.288N	P=0.170
ORDER RESTRICTED	P=0.049*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pleura  
 Inflammation Chronic**

**LESION RATES**

OVERALL (a)	5/6 (83%)	5/5 (100%)	6/6 (100%)	5/5 (100%)
POLY-3 RATE (b)	5/5.11	5/5.00	6/6.00	5/5.00
POLY-3 PERCENT (g)	97.9%	100%	100%	100%
TERMINAL (d)	3/3 (100%)	3/3 (100%)	3/3 (100%)	4/4 (100%)
FIRST INCIDENCE	671	637	563	565

**STATISTICAL TESTS**

LIFE TABLE	P=0.449N	P=0.644N	P=0.470	P=0.520N
POLY 3	P=1.000	P=1.000	P=1.000	P=1.000
POLY 1.5	P=0.976	P=0.975	P=0.971	P=0.975
POLY 6	P=1.000	P=1.000	P=1.000	P=1.000
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.520	P=0.545	P=0.500	P=0.545
ORDER RESTRICTED	P=0.139	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Preputial Gland  
Cyst

LESION RATES

OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/42.32	2/45.50	2/42.68	1/40.96
POLY-3 PERCENT (g)	2.4%	4.4%	4.7%	2.4%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	646	562	618	367

STATISTICAL TESTS

LIFE TABLE	P=0.557N	P=0.538	P=0.520	P=0.757
POLY 3	P=0.543N	P=0.525	P=0.503	P=0.754
POLY 1.5	P=0.535N	P=0.515	P=0.501	P=0.756
POLY 6	P=0.554N	P=0.537	P=0.502	P=0.750
LOGISTIC REGRESSION	P=0.389N	P=0.420	P=0.508	P=0.672N
COCH-ARM / FISHERS	P=0.521N	P=0.500	P=0.500	P=0.753N
ORDER RESTRICTED	P=0.560	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Preputial Gland  
Hyperplasia

LESION RATES

OVERALL (a)	2/50 (4%)	4/50 (8%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	2/42.01	4/45.50	1/42.39	2/40.96
POLY-3 PERCENT (g)	4.8%	8.8%	2.4%	4.9%
TERMINAL (d)	2/27 (7%)	3/32 (9%)	0/23 (0%)	1/22 (5%)
FIRST INCIDENCE	729 (T)	562	618	367

STATISTICAL TESTS

LIFE TABLE	P=0.561N	P=0.411	P=0.532N	P=0.638
POLY 3	P=0.481N	P=0.374	P=0.497N	P=0.685
POLY 1.5	P=0.476N	P=0.360	P=0.498N	P=0.687
POLY 6	P=0.489N	P=0.394	P=0.497N	P=0.682
LOGISTIC REGRESSION	P=0.424N	P=0.359	P=0.500N	P=0.672N
COCH-ARM / FISHERS	P=0.465N	P=0.339	P=0.500N	P=0.691N
ORDER RESTRICTED	P=0.406N	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Prostate  
Hyperplasia

LESION RATES

OVERALL (a)	6/50 (12%)	0/50 (0%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	6/42.01	0/44.96	1/42.00	2/40.08
POLY-3 PERCENT (g)	14.3%	0%	2.4%	5%
TERMINAL (d)	6/27 (22%)	0/32 (0%)	1/23 (4%)	2/22 (9%)
FIRST INCIDENCE	729 (T)	---	729 (T)	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.453N	P=0.009N**	P=0.082N	P=0.201N
POLY 3	P=0.368N	P=0.012N*	P=0.055N	P=0.146N
POLY 1.5	P=0.354N	P=0.013N*	P=0.056N	P=0.143N
POLY 6	P=0.386N	P=0.010N**	P=0.055N	P=0.150N
LOGISTIC REGRESSION	P=0.453N	(e)	P=0.082N	P=0.201N
COCH-ARM / FISHERS	P=0.331N	P=0.013N*	P=0.056N	P=0.134N
ORDER RESTRICTED	P=0.010N**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Prostate  
 Inflammation**

**LESION RATES**

OVERALL (a)	34/50 (68%)	35/50 (70%)	31/50 (62%)	24/50 (48%)
POLY-3 RATE (b)	34/46.96	35/47.87	31/46.83	24/44.68
POLY-3 PERCENT (g)	72.4%	73.1%	66.2%	53.7%
TERMINAL (d)	19/27 (70%)	23/32 (72%)	14/23 (61%)	9/22 (41%)
FIRST INCIDENCE	495	603	558	367

**STATISTICAL TESTS**

LIFE TABLE	P=0.227N	P=0.312N	P=0.534N	P=0.205N
POLY 3	P=0.017N*	P=0.562	P=0.330N	P=0.044N*
POLY 1.5	P=0.014N*	P=0.542	P=0.337N	P=0.039N*
POLY 6	P=0.022N*	P=0.585	P=0.334N	P=0.051N
LOGISTIC REGRESSION	P=0.016N*	P=0.586N	P=0.338N	P=0.040N*
COCH-ARM / FISHERS	P=0.010N**	P=0.500	P=0.338N	P=0.034N*
ORDER RESTRICTED	P=0.032N*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Skin**  
**Cyst Epithelial Inclusion**

**LESION RATES**

OVERALL (a)	2/50 (4%)	3/50 (6%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/42.49	3/45.26	0/42.00	0/40.08
POLY-3 PERCENT (g)	4.7%	6.6%	0%	0%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	587	646	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.129N	P=0.556	P=0.257N	P=0.276N
POLY 3	P=0.106N	P=0.529	P=0.239N	P=0.250N
POLY 1.5	P=0.104N	P=0.518	P=0.239N	P=0.246N
POLY 6	P=0.108N	P=0.543	P=0.243N	P=0.255N
LOGISTIC REGRESSION	P=0.101N	P=0.487	P=0.235N	P=0.230N
COCH-ARM / FISHERS	P=0.101N	P=0.500	P=0.247N	P=0.247N
ORDER RESTRICTED	P=0.099N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Skin  
Hyperkeratosis

LESION RATES

OVERALL (a)	0/50 (0%)	2/50 (4%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	0/42.01	2/44.96	1/42.00	2/40.08
POLY-3 PERCENT (g)	0%	4.5%	2.4%	5%
TERMINAL (d)	0/27 (0%)	2/32 (6%)	1/23 (4%)	2/22 (9%)
FIRST INCIDENCE	---	729 (T)	729 (T)	729 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.229	P=0.276	P=0.468	P=0.194
POLY 3	P=0.301	P=0.252	P=0.500	P=0.226
POLY 1.5	P=0.308	P=0.246	P=0.500	P=0.230
POLY 6	P=0.293	P=0.260	P=0.498	P=0.223
LOGISTIC REGRESSION (e)	P=0.276	P=0.276	P=0.468	P=0.194
COCH-ARM / FISHERS	P=0.321	P=0.247	P=0.500	P=0.247
ORDER RESTRICTED	P=0.147	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Skin  
Ulcer

LESION RATES

OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	1/42.49	2/44.96	2/42.00	3/40.36
POLY-3 PERCENT (g)	2.4%	4.5%	4.8%	7.4%
TERMINAL (d)	0/27 (0%)	2/32 (6%)	2/23 (9%)	2/22 (9%)
FIRST INCIDENCE	587	729 (T)	729 (T)	656

STATISTICAL TESTS

LIFE TABLE	P=0.185	P=0.544	P=0.463	P=0.258
POLY 3	P=0.245	P=0.520	P=0.496	P=0.286
POLY 1.5	P=0.255	P=0.512	P=0.498	P=0.292
POLY 6	P=0.234	P=0.529	P=0.490	P=0.280
LOGISTIC REGRESSION	P=0.241	P=0.486	P=0.500	P=0.302
COCH-ARM / FISHERS	P=0.274	P=0.500	P=0.500	P=0.309
ORDER RESTRICTED	P=0.223	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Spleen  
Fibrosis

LESION RATES

OVERALL (a)	2/50 (4%)	1/50 (2%)	1/49 (2%)	1/50 (2%)
POLY-3 RATE (b)	2/42.70	1/45.13	1/41.27	1/40.58
POLY-3 PERCENT (g)	4.7%	2.2%	2.4%	2.5%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	1/23 (4%)	0/22 (0%)
FIRST INCIDENCE	495	684	729 (T)	579

STATISTICAL TESTS

LIFE TABLE	P=0.555N	P=0.455N	P=0.537N	P=0.536N
POLY 3	P=0.524N	P=0.481N	P=0.512N	P=0.518N
POLY 1.5	P=0.516N	P=0.488N	P=0.510N	P=0.513N
POLY 6	P=0.533N	P=0.470N	P=0.517N	P=0.523N
LOGISTIC REGRESSION	P=0.448N	P=0.599N	P=0.503N	P=0.441N
COCH-ARM / FISHERS	P=0.499N	P=0.500N	P=0.508N	P=0.500N
ORDER RESTRICTED	P=0.426N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Spleen  
 Hematopoietic Cell Proliferation**

**LESION RATES**

OVERALL (a)	1/50 (2%)	1/50 (2%)	0/49 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/42.64	1/45.04	0/41.27	0/40.08
POLY-3 PERCENT (g)	2.4%	2.2%	0%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	522	708	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.346N	P=0.731N	P=0.496N	P=0.508N
POLY 3	P=0.332N	P=0.748N	P=0.507N	P=0.512N
POLY 1.5	P=0.330N	P=0.753N	P=0.506N	P=0.508N
POLY 6	P=0.335N	P=0.742N	P=0.509N	P=0.517N
LOGISTIC REGRESSION	P=0.275N	P=0.685	P=0.454N	P=0.414N
COCH-ARM / FISHERS	P=0.325N	P=0.753N	P=0.505N	P=0.500N
ORDER RESTRICTED	P=0.263N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Spleen Hemorrhage

LESION RATES

OVERALL (a)	0/50 (0%)	1/50 (2%)	0/49 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/42.01	1/44.96	0/41.27	2/40.80
POLY-3 PERCENT (g)	0%	2.2%	0%	4.9%
TERMINAL (d)	0/27 (0%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	729 (T)	---	558

STATISTICAL TESTS

LIFE TABLE	P=0.126	P=0.534	(e)	P=0.239
POLY 3	P=0.143	P=0.514	(e)	P=0.230
POLY 1.5	P=0.144	P=0.508	(e)	P=0.232
POLY 6	P=0.141	P=0.520	(e)	P=0.229
LOGISTIC REGRESSION	P=0.163	P=0.534	(e)	P=0.258
COCH-ARM / FISHERS	P=0.149	P=0.500	(e)	P=0.247
ORDER RESTRICTED	P=0.070	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Spleen  
 Necrosis**

**LESION RATES**

OVERALL (a)	3/50 (6%)	3/50 (6%)	5/49 (10%)	8/50 (16%)
POLY-3 RATE (b)	3/42.30	3/45.06	5/41.89	8/41.87
POLY-3 PERCENT (g)	7.1%	6.7%	11.9%	19.1%
TERMINAL (d)	1/27 (4%)	2/32 (6%)	1/23 (4%)	1/22 (5%)
FIRST INCIDENCE	682	705	657	562

**STATISTICAL TESTS**

LIFE TABLE	P=0.022*	P=0.573N	P=0.323	P=0.087
POLY 3	P=0.034*	P=0.633N	P=0.350	P=0.093
POLY 1.5	P=0.036*	P=0.644N	P=0.348	P=0.093
POLY 6	P=0.033*	P=0.620N	P=0.350	P=0.094
LOGISTIC REGRESSION	P=0.036*	P=0.617N	P=0.345	P=0.097
COCH-ARM / FISHERS	P=0.043*	P=0.661N	P=0.346	P=0.100
ORDER RESTRICTED	P=0.053	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Stomach, Forestomach  
Hyperplasia

LESION RATES

OVERALL (a)	1/50 (2%)	0/50 (0%)	1/49 (2%)	1/50 (2%)
POLY-3 RATE (b)	1/42.01	0/44.96	1/41.57	1/40.92
POLY-3 PERCENT (g)	2.4%	0%	2.4%	2.4%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	729 (T)	---	649	401

STATISTICAL TESTS

LIFE TABLE	P=0.527	P=0.466N	P=0.751	P=0.735
POLY 3	P=0.535	P=0.486N	P=0.759	P=0.755
POLY 1.5	P=0.543	P=0.492N	P=0.757	P=0.756
POLY 6	P=0.523	P=0.480N	P=0.759	P=0.753
LOGISTIC REGRESSION	P=0.651	(e)	P=0.758	P=0.710N
COCH-ARM / FISHERS	P=0.560	P=0.500N	P=0.747	P=0.753N
ORDER RESTRICTED	P=0.520	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Stomach, Forestomach  
 Ulcer

**LESION RATES**

OVERALL (a)	4/50 (8%)	1/50 (2%)	2/49 (4%)	0/50 (0%)
POLY-3 RATE (b)	4/43.58	1/44.97	2/41.72	0/40.08
POLY-3 PERCENT (g)	9.2%	2.2%	4.8%	0%
TERMINAL (d)	1/27 (4%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	522	726	657	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.107N	P=0.153N	P=0.352N	P=0.077N
POLY 3	P=0.099N	P=0.169N	P=0.357N	P=0.071N
POLY 1.5	P=0.093N	P=0.172N	P=0.353N	P=0.067N
POLY 6	P=0.107N	P=0.164N	P=0.364N	P=0.076N
LOGISTIC REGRESSION	P=0.062N	P=0.267N	P=0.332N	P=0.042N*
COCH-ARM / FISHERS	P=0.084N	P=0.181N	P=0.349N	P=0.059N
ORDER RESTRICTED	P=0.024N*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Stomach, Glandular  
 Erosion**

**LESION RATES**

OVERALL (a)	2/50 (4%)	0/50 (0%)	2/49 (4%)	3/50 (6%)
POLY-3 RATE (b)	2/42.48	0/44.96	2/42.36	3/40.59
POLY-3 PERCENT (g)	4.7%	0%	4.7%	7.4%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	660	---	558	669

**STATISTICAL TESTS**

LIFE TABLE	P=0.185	P=0.220N	P=0.678N	P=0.471
POLY 3	P=0.188	P=0.225N	P=0.693	P=0.479
POLY 1.5	P=0.197	P=0.229N	P=0.690	P=0.485
POLY 6	P=0.178	P=0.219N	P=0.694	P=0.473
LOGISTIC REGRESSION	P=0.263	P=0.257N	P=0.690N	P=0.494
COCH-ARM / FISHERS	P=0.216	P=0.247N	P=0.684	P=0.500
ORDER RESTRICTED	P=0.193	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Testes: Germinal Epithelium  
 Atrophy

**LESION RATES**

OVERALL (a)	5/50 (10%)	5/50 (10%)	8/50 (16%)	6/50 (12%)
POLY-3 RATE (b)	5/43.26	5/45.47	8/42.67	6/40.88
POLY-3 PERCENT (g)	11.6%	11%	18.8%	14.7%
TERMINAL (d)	2/27 (7%)	2/32 (6%)	3/23 (13%)	3/22 (14%)
FIRST INCIDENCE	495	624	674	558

**STATISTICAL TESTS**

LIFE TABLE	P=0.322	P=0.540N	P=0.243	P=0.423
POLY 3	P=0.394	P=0.599N	P=0.264	P=0.460
POLY 1.5	P=0.418	P=0.611N	P=0.269	P=0.473
POLY 6	P=0.365	P=0.584N	P=0.254	P=0.446
LOGISTIC REGRESSION	P=0.436	P=0.592	P=0.276	P=0.498
COCH-ARM / FISHERS	P=0.467	P=0.630N	P=0.277	P=0.500
ORDER RESTRICTED	P=0.375	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Testes: Interstitial Cell  
Hyperplasia

LESION RATES

OVERALL (a)	6/50 (12%)	7/50 (14%)	10/50 (20%)	7/50 (14%)
POLY-3 RATE (b)	6/43.44	7/46.00	10/44.11	7/43.09
POLY-3 PERCENT (g)	13.8%	15.2%	22.7%	16.2%
TERMINAL (d)	3/27 (11%)	3/32 (9%)	3/23 (13%)	1/22 (5%)
FIRST INCIDENCE	495	579	558	367

STATISTICAL TESTS

LIFE TABLE	P=0.387	P=0.601	P=0.193	P=0.436
POLY 3	P=0.497	P=0.544	P=0.212	P=0.494
POLY 1.5	P=0.508	P=0.527	P=0.209	P=0.495
POLY 6	P=0.480	P=0.567	P=0.214	P=0.492
LOGISTIC REGRESSION	P=0.493N	P=0.432	P=0.208	P=0.599
COCH-ARM / FISHERS	P=0.530	P=0.500	P=0.207	P=0.500
ORDER RESTRICTED	P=0.386	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Thyroid Gland: C-Cell  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	8/49 (16%)	9/50 (18%)	9/50 (18%)	6/50 (12%)
POLY-3 RATE (b)	8/41.40	9/45.29	9/42.41	6/40.16
POLY-3 PERCENT (g)	19.3%	19.9%	21.2%	14.9%
TERMINAL (d)	7/26 (27%)	8/32 (25%)	6/23 (26%)	5/22 (23%)
FIRST INCIDENCE	618	637	688	709

**STATISTICAL TESTS**

LIFE TABLE	P=0.470N	P=0.541N	P=0.409	P=0.509N
POLY 3	P=0.325N	P=0.582	P=0.522	P=0.408N
POLY 1.5	P=0.302N	P=0.556	P=0.520	P=0.397N
POLY 6	P=0.354N	P=0.601N	P=0.520	P=0.422N
LOGISTIC REGRESSION	P=0.368N	P=0.579N	P=0.497	P=0.427N
COCH-ARM / FISHERS	P=0.259N	P=0.518	P=0.518	P=0.371N
ORDER RESTRICTED	P=0.440N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Thyroid Gland: Follicular Cell  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	0/49 (0%)	3/50 (6%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	0/41.01	3/44.96	1/42.21	2/40.35
POLY-3 PERCENT (g)	0%	6.7%	2.4%	5%
TERMINAL (d)	0/26 (0%)	3/32 (9%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	729 (T)	674	688

**STATISTICAL TESTS**

LIFE TABLE	P=0.364	P=0.159	P=0.517	P=0.229
POLY 3	P=0.424	P=0.136	P=0.506	P=0.233
POLY 1.5	P=0.429	P=0.130	P=0.505	P=0.235
POLY 6	P=0.420	P=0.143	P=0.505	P=0.231
LOGISTIC REGRESSION	P=0.401	P=0.159	P=0.504	P=0.233
COCH-ARM / FISHERS	P=0.441	P=0.125	P=0.505	P=0.253
ORDER RESTRICTED	P=0.183	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Urinary Bladder  
Calculus Micro Observation Only

LESION RATES

OVERALL (a)	2/50 (4%)	1/50 (2%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	2/42.45	1/44.96	1/42.28	1/40.56
POLY-3 PERCENT (g)	4.7%	2.2%	2.4%	2.5%
TERMINAL (d)	1/27 (4%)	1/32 (3%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	603	729 (T)	652	586

STATISTICAL TESTS

LIFE TABLE	P=0.562N	P=0.450N	P=0.510N	P=0.545N
POLY 3	P=0.523N	P=0.480N	P=0.501N	P=0.516N
POLY 1.5	P=0.516N	P=0.488N	P=0.501N	P=0.511N
POLY 6	P=0.532N	P=0.471N	P=0.505N	P=0.521N
LOGISTIC REGRESSION	P=0.472N	P=0.505N	P=0.498N	P=0.476N
COCH-ARM / FISHERS	P=0.500N	P=0.500N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.421N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Urinary Bladder  
Hemorrhage

LESION RATES

OVERALL (a)	1/50 (2%)	2/50 (4%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/42.38	2/45.06	2/42.48	1/40.96
POLY-3 PERCENT (g)	2.4%	4.4%	4.7%	2.4%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	624	708	649	367

STATISTICAL TESTS

LIFE TABLE	P=0.569N	P=0.559	P=0.505	P=0.755
POLY 3	P=0.542N	P=0.521	P=0.501	P=0.753
POLY 1.5	P=0.535N	P=0.513	P=0.500	P=0.756
POLY 6	P=0.553N	P=0.532	P=0.499	P=0.750
LOGISTIC REGRESSION	P=0.437N	P=0.494	P=0.504	P=0.665N
COCH-ARM / FISHERS	P=0.521N	P=0.500	P=0.500	P=0.753N
ORDER RESTRICTED	P=0.556	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

Urinary Bladder  
Necrosis

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/42.01	0/44.96	2/42.48	0/40.08
POLY-3 PERCENT (g)	0%	0%	4.7%	0%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	---	---	649	---

STATISTICAL TESTS

LIFE TABLE	P=0.696N	(e)	P=0.245	(e)
POLY 3	P=0.701N	(e)	P=0.239	(e)
POLY 1.5	P=0.693N	(e)	P=0.238	(e)
POLY 6	P=0.711N	(e)	P=0.239	(e)
LOGISTIC REGRESSION	P=0.663N	(e)	P=0.238	(e)
COCH-ARM / FISHERS	P=0.675N	(e)	P=0.247	(e)
ORDER RESTRICTED	P=0.249	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Males			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Urinary Bladder: Transitional Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	1/50 (2%)	2/50 (4%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	1/42.40	2/46.01	1/42.39	2/41.04
POLY-3 PERCENT (g)	2.4%	4.4%	2.4%	4.9%
TERMINAL (d)	0/27 (0%)	0/32 (0%)	0/23 (0%)	0/22 (0%)
FIRST INCIDENCE	618	529	618	367

**STATISTICAL TESTS**

LIFE TABLE	P=0.442	P=0.525	P=0.751N	P=0.483
POLY 3	P=0.456	P=0.528	P=0.761	P=0.489
POLY 1.5	P=0.464	P=0.517	P=0.761	P=0.492
POLY 6	P=0.445	P=0.542	P=0.759	P=0.483
LOGISTIC REGRESSION	P=0.645	P=0.288	P=0.754N	P=0.596
COCH-ARM / FISHERS	P=0.479	P=0.500	P=0.753N	P=0.500
ORDER RESTRICTED	P=0.427	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Adrenal Cortex  
 Angiectasis**

**LESION RATES**

OVERALL (a)	3/50 (6%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	3/40.71	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	7.4%	0%	0%	0%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	508	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.142N	P=0.134N	P=0.089N	P=0.121N
POLY 3	P=0.150N	P=0.114N	P=0.101N	P=0.111N
POLY 1.5	P=0.152N	P=0.111N	P=0.104N	P=0.110N
POLY 6	P=0.147N	P=0.119N	P=0.097N	P=0.114N
LOGISTIC REGRESSION	P=0.155N	P=0.121N	P=0.124N	P=0.122N
COCH-ARM / FISHERS	P=0.149N	P=0.121N	P=0.121N	P=0.121N
ORDER RESTRICTED	P=0.006N**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Adrenal Cortex  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	7/50 (14%)	5/50 (10%)	10/50 (20%)	8/50 (16%)
POLY-3 RATE (b)	7/40.60	5/42.71	10/45.83	8/43.31
POLY-3 PERCENT (g)	17.2%	11.7%	21.8%	18.5%
TERMINAL (d)	4/27 (15%)	2/24 (8%)	8/36 (22%)	5/26 (19%)
FIRST INCIDENCE	607	561	614	534

**STATISTICAL TESTS**

LIFE TABLE	P=0.367	P=0.430N	P=0.513	P=0.488
POLY 3	P=0.405	P=0.342N	P=0.397	P=0.555
POLY 1.5	P=0.404	P=0.340N	P=0.374	P=0.554
POLY 6	P=0.399	P=0.353N	P=0.423	P=0.546
LOGISTIC REGRESSION	P=0.399	P=0.352N	P=0.395	P=0.547
COCH-ARM / FISHERS	P=0.371	P=0.380N	P=0.298	P=0.500
ORDER RESTRICTED	P=0.390	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Hypertrophy

LESION RATES

OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/40.02	1/41.68	0/45.12	2/42.87
POLY-3 PERCENT (g)	0%	2.4%	0%	4.7%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	730 (T)	---	662

STATISTICAL TESTS

LIFE TABLE	P=0.146	P=0.477	(e)	P=0.244
POLY 3	P=0.157	P=0.508	(e)	P=0.252
POLY 1.5	P=0.157	P=0.510	(e)	P=0.252
POLY 6	P=0.155	P=0.503	(e)	P=0.251
LOGISTIC REGRESSION	P=0.153	P=0.477	(e)	P=0.244
COCH-ARM / FISHERS	P=0.149	P=0.500	(e)	P=0.247
ORDER RESTRICTED	P=0.084	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Adrenal Cortex  
Vacuolization Cytoplasmic

LESION RATES

OVERALL (a)	18/50 (36%)	18/50 (36%)	18/50 (36%)	12/50 (24%)
POLY-3 RATE (b)	18/41.99	18/44.45	18/46.32	12/43.35
POLY-3 PERCENT (g)	42.9%	40.5%	38.9%	27.7%
TERMINAL (d)	12/27 (44%)	8/24 (33%)	13/36 (36%)	8/26 (31%)
FIRST INCIDENCE	460	561	614	534

STATISTICAL TESTS

LIFE TABLE	P=0.098N	P=0.489	P=0.246N	P=0.160N
POLY 3	P=0.075N	P=0.498N	P=0.434N	P=0.102N
POLY 1.5	P=0.070N	P=0.500N	P=0.464N	P=0.100N
POLY 6	P=0.087N	P=0.497N	P=0.395N	P=0.112N
LOGISTIC REGRESSION	P=0.064N	P=0.521N	P=0.435N	P=0.096N
COCH-ARM / FISHERS	P=0.086N	P=0.582N	P=0.582N	P=0.138N
ORDER RESTRICTED	P=0.112N	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Adrenal Medulla  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	0/49 (0%)	0/50 (0%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	0/39.50	0/41.68	2/45.63	3/42.50
POLY-3 PERCENT (g)	0%	0%	4.4%	7.1%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	3/26 (12%)
FIRST INCIDENCE	---	---	646	730 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.038*	(e)	P=0.281	P=0.113
POLY 3	P=0.045*	(e)	P=0.271	P=0.132
POLY 1.5	P=0.045*	(e)	P=0.264	P=0.133
POLY 6	P=0.044*	(e)	P=0.279	P=0.128
LOGISTIC REGRESSION	P=0.043*	(e)	P=0.226	P=0.113
COCH-ARM / FISHERS	P=0.042*	(e)	P=0.253	P=0.125
ORDER RESTRICTED	P=0.044*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Brain  
 Compression**

**LESION RATES**

OVERALL (a)	7/50 (14%)	7/50 (14%)	11/50 (22%)	8/50 (16%)
POLY-3 RATE (b)	7/40.27	7/42.67	11/46.86	8/44.15
POLY-3 PERCENT (g)	17.4%	16.4%	23.5%	18.1%
TERMINAL (d)	4/27 (15%)	4/24 (17%)	7/36 (19%)	3/26 (12%)
FIRST INCIDENCE	687	561	477	581

**STATISTICAL TESTS**

LIFE TABLE	P=0.487	P=0.544	P=0.421	P=0.506
POLY 3	P=0.549	P=0.569N	P=0.333	P=0.578
POLY 1.5	P=0.535	P=0.567N	P=0.301	P=0.565
POLY 6	P=0.563	P=0.580N	P=0.372	P=0.587
LOGISTIC REGRESSION	P=0.501	P=0.591N	P=0.271	P=0.544
COCH-ARM / FISHERS	P=0.481	P=0.613N	P=0.218	P=0.500
ORDER RESTRICTED	P=0.507	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Brain  
 Hemorrhage**

**LESION RATES**

OVERALL (a)	6/50 (12%)	4/50 (8%)	5/50 (10%)	1/50 (2%)
POLY-3 RATE (b)	6/42.96	4/42.29	5/46.60	1/42.61
POLY-3 PERCENT (g)	14%	9.5%	10.7%	2.4%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	176	660	495	701

**STATISTICAL TESTS**

LIFE TABLE	P=0.060N	P=0.375N	P=0.400N	P=0.059N
POLY 3	P=0.058N	P=0.378N	P=0.443N	P=0.056N
POLY 1.5	P=0.056N	P=0.363N	P=0.454N	P=0.053N
POLY 6	P=0.062N	P=0.404N	P=0.429N	P=0.062N
LOGISTIC REGRESSION	P=0.089N	P=0.470N	P=0.553	P=0.102N
COCH-ARM / FISHERS	P=0.058N	P=0.370N	P=0.500N	P=0.056N
ORDER RESTRICTED	P=0.045N*	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Clitoral Gland  
Cyst

LESION RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	5%	0%	0%	0%
TERMINAL (d)	2/27 (7%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	---	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.257N	P=0.264N	P=0.177N	P=0.246N
POLY 3	P=0.271N	P=0.228N	P=0.211N	P=0.224N
POLY 1.5	P=0.271N	P=0.226N	P=0.217N	P=0.224N
POLY 6	P=0.269N	P=0.233N	P=0.205N	P=0.226N
LOGISTIC REGRESSION	P=0.257N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.262N	P=0.247N	P=0.247N	P=0.247N
ORDER RESTRICTED	P=0.025N*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Clitoral Gland  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	7/50 (14%)	6/50 (12%)	3/50 (6%)	4/50 (8%)
POLY-3 RATE (b)	7/40.68	6/41.97	3/45.14	4/42.50
POLY-3 PERCENT (g)	17.2%	14.3%	6.7%	9.4%
TERMINAL (d)	6/27 (22%)	4/24 (17%)	2/36 (6%)	4/26 (15%)
FIRST INCIDENCE	508	662	726	730 (T)

**STATISTICAL TESTS**

LIFE TABLE	P=0.241N	P=0.571N	P=0.074N	P=0.271N
POLY 3	P=0.234N	P=0.476N	P=0.117N	P=0.234N
POLY 1.5	P=0.232N	P=0.466N	P=0.125N	P=0.231N
POLY 6	P=0.239N	P=0.495N	P=0.108N	P=0.243N
LOGISTIC REGRESSION	P=0.223N	P=0.479N	P=0.114N	P=0.231N
COCH-ARM / FISHERS	P=0.244N	P=0.500N	P=0.159N	P=0.262N
ORDER RESTRICTED	P=0.151N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Clitoral Gland  
Inflammation Chronic

LESION RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/40.02	0/41.68	1/45.12	0/42.50
POLY-3 PERCENT (g)	5%	0%	2.2%	0%
TERMINAL (d)	2/27 (7%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	---	730 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.272N	P=0.264N	P=0.400N	P=0.246N
POLY 3	P=0.277N	P=0.228N	P=0.458N	P=0.224N
POLY 1.5	P=0.278N	P=0.226N	P=0.467N	P=0.224N
POLY 6	P=0.275N	P=0.233N	P=0.448N	P=0.226N
LOGISTIC REGRESSION	P=0.272N	(e)	P=0.400N	(e)
COCH-ARM / FISHERS	P=0.276N	P=0.247N	P=0.500N	P=0.247N
ORDER RESTRICTED	P=0.066N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye  
Atrophy

LESION RATES

OVERALL (a)	0/48 (0%)	0/49 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/38.67	0/40.86	0/45.12	2/43.00
POLY-3 PERCENT (g)	0%	0%	0%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	660

STATISTICAL TESTS

LIFE TABLE	P=0.047*	(e)	(e)	P=0.261
POLY 3	P=0.045*	(e)	(e)	P=0.261
POLY 1.5	P=0.045*	(e)	(e)	P=0.261
POLY 6	P=0.045*	(e)	(e)	P=0.259
LOGISTIC REGRESSION	P=0.041*	(e)	(e)	P=0.243
COCH-ARM / FISHERS	P=0.044*	(e)	(e)	P=0.258
ORDER RESTRICTED	P=0.038*	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Lens  
Cataract

LESION RATES

OVERALL (a)	5/48 (10%)	1/49 (2%)	4/50 (8%)	5/50 (10%)
POLY-3 RATE (b)	5/39.20	1/40.86	4/45.12	5/43.01
POLY-3 PERCENT (g)	12.8%	2.5%	8.9%	11.6%
TERMINAL (d)	3/27 (11%)	1/24 (4%)	4/36 (11%)	3/26 (12%)
FIRST INCIDENCE	579	730 (T)	730 (T)	660

STATISTICAL TESTS

LIFE TABLE	P=0.311	P=0.127N	P=0.338N	P=0.624N
POLY 3	P=0.351	P=0.090N	P=0.412N	P=0.572N
POLY 1.5	P=0.347	P=0.087N	P=0.422N	P=0.568N
POLY 6	P=0.353	P=0.098N	P=0.403N	P=0.584N
LOGISTIC REGRESSION	P=0.346	P=0.092N	P=0.399N	P=0.573N
COCH-ARM / FISHERS	P=0.333	P=0.097N	P=0.474N	P=0.603N
ORDER RESTRICTED	P=0.343N	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Lens  
Mineralization

LESION RATES

OVERALL (a)	0/48 (0%)	0/49 (0%)	3/50 (6%)	0/50 (0%)
POLY-3 RATE (b)	0/38.67	0/40.86	3/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	6.7%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	3/36 (8%)	0/26 (0%)
FIRST INCIDENCE	---	---	730 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.627N	(e)	P=0.176	(e)
POLY 3	P=0.589N	(e)	P=0.148	(e)
POLY 1.5	P=0.590N	(e)	P=0.144	(e)
POLY 6	P=0.591N	(e)	P=0.153	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.176	(e)
COCH-ARM / FISHERS	P=0.609N	(e)	P=0.129	(e)
ORDER RESTRICTED	P=0.193	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Retina  
 Atrophy

**LESION RATES**

OVERALL (a)	2/48 (4%)	0/49 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	2/38.70	0/40.86	0/45.12	2/42.75
POLY-3 PERCENT (g)	5.2%	0%	0%	4.7%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	722	---	---	663

**STATISTICAL TESTS**

LIFE TABLE	P=0.376	P=0.265N	P=0.180N	P=0.689N
POLY 3	P=0.383	P=0.225N	P=0.204N	P=0.658N
POLY 1.5	P=0.382	P=0.222N	P=0.209N	P=0.657N
POLY 6	P=0.386	P=0.231N	P=0.200N	P=0.664N
LOGISTIC REGRESSION	P=0.389	P=0.249N	P=0.192N	P=0.668N
COCH-ARM / FISHERS	P=0.383	P=0.242N	P=0.237N	P=0.676N
ORDER RESTRICTED	P=0.232N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Eye: Sclera  
Metaplasia Osseous

LESION RATES

OVERALL (a)	0/48 (0%)	1/49 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/38.67	1/40.86	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	2.5%	0%	0%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	730 (T)	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.608N	P=0.477	(e)	(e)
POLY 3	P=0.595N	P=0.511	(e)	(e)
POLY 1.5	P=0.591N	P=0.514	(e)	(e)
POLY 6	P=0.602N	P=0.505	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.477	(e)	(e)
COCH-ARM / FISHERS	P=0.596N	P=0.505	(e)	(e)
ORDER RESTRICTED	P=0.374N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Harderian Gland  
Inflammation Chronic

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Heart  
Cardiomyopathy

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	1/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	2.2%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	---	---	730 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.791N	(e)	P=0.557	(e)
POLY 3	P=0.772N	(e)	P=0.524	(e)
POLY 1.5	P=0.773N	(e)	P=0.519	(e)
POLY 6	P=0.772N	(e)	P=0.530	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.557	(e)
COCH-ARM / FISHERS	P=0.779N	(e)	P=0.500	(e)
ORDER RESTRICTED	P=0.401	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Heart: Atrium  
 Thrombosis

**LESION RATES**

OVERALL (a)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/40.08	1/41.86	0/45.12	0/42.50
POLY-3 PERCENT (g)	2.5%	2.4%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	714	684	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.322N	P=0.742	P=0.458N	P=0.507N
POLY 3	P=0.327N	P=0.751N	P=0.476N	P=0.488N
POLY 1.5	P=0.326N	P=0.749N	P=0.482N	P=0.488N
POLY 6	P=0.330N	P=0.757N	P=0.471N	P=0.491N
LOGISTIC REGRESSION	P=0.318N	P=0.755N	P=0.472N	P=0.491N
COCH-ARM / FISHERS	P=0.325N	P=0.753N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.240N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Intestine Small, Jejunum  
Diverticulum

LESION RATES

OVERALL (a)	0/45 (0%)	2/46 (4%)	0/48 (0%)	0/48 (0%)
POLY-3 RATE (b)	0/36.84	2/40.13	0/44.00	0/41.02
POLY-3 PERCENT (g)	0%	5%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	495	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.384N	P=0.261	(e)	(e)
POLY 3	P=0.371N	P=0.256	(e)	(e)
POLY 1.5	P=0.367N	P=0.257	(e)	(e)
POLY 6	P=0.380N	P=0.251	(e)	(e)
LOGISTIC REGRESSION	P=0.493N	P=0.127	(e)	(e)
COCH-ARM / FISHERS	P=0.381N	P=0.253	(e)	(e)
ORDER RESTRICTED	P=0.243N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Islets, Pancreatic  
Hyperplasia

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney  
Cyst

LESION RATES

OVERALL (a)	0/49 (0%)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	0/39.50	0/41.68	1/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	2.2%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	---	---	730 (T)	---

STATISTICAL TESTS

LIFE TABLE	P=0.791N	(e)	P=0.557	(e)
POLY 3	P=0.771N	(e)	P=0.526	(e)
POLY 1.5	P=0.772N	(e)	P=0.522	(e)
POLY 6	P=0.772N	(e)	P=0.531	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.557	(e)
COCH-ARM / FISHERS	P=0.778N	(e)	P=0.505	(e)
ORDER RESTRICTED	P=0.402	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM
<b>Kidney Infarct</b>				
<b>LESION RATES</b>				
OVERALL (a)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.50	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---
<b>STATISTICAL TESTS</b>				
LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney  
 Nephropathy**

**LESION RATES**

OVERALL (a)	34/49 (69%)	27/50 (54%)	35/50 (70%)	31/50 (62%)
POLY-3 RATE (b)	34/40.73	27/43.70	35/47.08	31/44.60
POLY-3 PERCENT (g)	83.5%	61.8%	74.3%	69.5%
TERMINAL (d)	27/27 (100%)	19/24 (79%)	29/36 (81%)	22/26 (85%)
FIRST INCIDENCE	618	561	477	581

**STATISTICAL TESTS**

LIFE TABLE	P=0.542N	P=0.237N	P=0.049N*	P=0.381N
POLY 3	P=0.342N	P=0.013N*	P=0.199N	P=0.081N
POLY 1.5	P=0.364N	P=0.020N*	P=0.295N	P=0.110N
POLY 6	P=0.323N	P=0.009N**	P=0.112N	P=0.057N
LOGISTIC REGRESSION	P=0.379N	P=0.036N*	P=0.200N	P=0.130N
COCH-ARM / FISHERS	P=0.481N	P=0.086N	P=0.560	P=0.287N
ORDER RESTRICTED	P=0.078N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Bilateral Infarct

LESION RATES

OVERALL (a)	0/49 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.50	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Papilla  
Mineralization

LESION RATES

OVERALL (a)	1/49 (2%)	6/50 (12%)	8/50 (16%)	7/50 (14%)
POLY-3 RATE (b)	1/40.49	6/42.43	8/45.98	7/43.55
POLY-3 PERCENT (g)	2.5%	14.1%	17.4%	16.1%
TERMINAL (d)	0/27 (0%)	3/24 (13%)	5/36 (14%)	3/26 (12%)
FIRST INCIDENCE	176	642	603	619

STATISTICAL TESTS

LIFE TABLE	P=0.138	P=0.058	P=0.045*	P=0.041*
POLY 3	P=0.154	P=0.062	P=0.026*	P=0.038*
POLY 1.5	P=0.153	P=0.065	P=0.023*	P=0.038*
POLY 6	P=0.154	P=0.059	P=0.029*	P=0.037*
LOGISTIC REGRESSION	P=0.127	P=0.042*	P=0.010**	P=0.021*
COCH-ARM / FISHERS	P=0.134	P=0.059	P=0.017*	P=0.032*
ORDER RESTRICTED	P=0.035*	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Pelvis  
Dilatation

LESION RATES

OVERALL (a)	0/49 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/39.50	1/41.71	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	2.4%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	721	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.604N	P=0.485	(e)	(e)
POLY 3	P=0.598N	P=0.511	(e)	(e)
POLY 1.5	P=0.594N	P=0.513	(e)	(e)
POLY 6	P=0.605N	P=0.505	(e)	(e)
LOGISTIC REGRESSION	P=0.600N	P=0.495	(e)	(e)
COCH-ARM / FISHERS	P=0.600N	P=0.505	(e)	(e)
ORDER RESTRICTED	P=0.378N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Kidney: Pelvis, Transitional Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	5/49 (10%)	3/50 (6%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	5/40.08	3/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	12.5%	7.2%	0%	0%
TERMINAL (d)	3/27 (11%)	3/24 (13%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	640	730 (T)	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.020N*	P=0.398N	P=0.019N*	P=0.033N*
POLY 3	P=0.021N*	P=0.334N	P=0.021N*	P=0.025N*
POLY 1.5	P=0.021N*	P=0.324N	P=0.023N*	P=0.025N*
POLY 6	P=0.021N*	P=0.356N	P=0.020N*	P=0.027N*
LOGISTIC REGRESSION	P=0.020N*	P=0.339N	P=0.025N*	P=0.028N*
COCH-ARM / FISHERS	P=0.023N*	P=0.346N	P=0.027N*	P=0.027N*
ORDER RESTRICTED	P=0.004N**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Pelvis, Transitional Epithelium  
Mineralization

LESION RATES

OVERALL (a)	31/49 (63%)	26/50 (52%)	31/50 (62%)	16/50 (32%)
POLY-3 RATE (b)	31/42.00	26/44.02	31/47.28	16/43.94
POLY-3 PERCENT (g)	73.8%	59.1%	65.6%	36.4%
TERMINAL (d)	23/27 (85%)	16/24 (67%)	25/36 (69%)	12/26 (46%)
FIRST INCIDENCE	460	561	495	509

STATISTICAL TESTS

LIFE TABLE	P=0.002N**	P=0.382N	P=0.084N	P=0.003N**
POLY 3	P<0.001N**	P=0.098N	P=0.263N	P<0.001N**
POLY 1.5	P<0.001N**	P=0.097N	P=0.314N	P<0.001N**
POLY 6	P<0.001N**	P=0.105N	P=0.204N	P<0.001N**
LOGISTIC REGRESSION	P<0.001N**	P=0.108N	P=0.265N	P<0.001N**
COCH-ARM / FISHERS	P<0.001N**	P=0.176N	P=0.531N	P=0.002N**
ORDER RESTRICTED	P<0.001N**	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Kidney: Renal Tubule  
Pigmentation

LESION RATES

OVERALL (a)	0/49 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/39.50	0/41.68	0/45.12	2/42.90
POLY-3 PERCENT (g)	0%	0%	0%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	668

STATISTICAL TESTS

LIFE TABLE	P=0.043*	(e)	(e)	P=0.249
POLY 3	P=0.044*	(e)	(e)	P=0.256
POLY 1.5	P=0.044*	(e)	(e)	P=0.256
POLY 6	P=0.044*	(e)	(e)	P=0.253
LOGISTIC REGRESSION	P=0.042*	(e)	(e)	P=0.246
COCH-ARM / FISHERS	P=0.043*	(e)	(e)	P=0.253
ORDER RESTRICTED	P=0.036*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

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Larynx  
 Foreign Body

**LESION RATES**

OVERALL (a)	1/50 (2%)	1/50 (2%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	1/40.28	1/42.23	2/45.43	3/42.53
POLY-3 PERCENT (g)	2.5%	2.4%	4.4%	7.1%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	2/26 (8%)
FIRST INCIDENCE	660	557	646	722

**STATISTICAL TESTS**

LIFE TABLE	P=0.193	P=0.750N	P=0.568	P=0.310
POLY 3	P=0.198	P=0.750N	P=0.542	P=0.325
POLY 1.5	P=0.199	P=0.749N	P=0.533	P=0.326
POLY 6	P=0.194	P=0.756N	P=0.552	P=0.318
LOGISTIC REGRESSION	P=0.189	P=0.740	P=0.506	P=0.322
COCH-ARM / FISHERS	P=0.188	P=0.753N	P=0.500	P=0.309
ORDER RESTRICTED	P=0.236	(e)	(e)	(e)

---

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Larynx  
Inflammation

LESION RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	2/40.28	0/41.68	1/45.43	0/42.50
POLY-3 PERCENT (g)	5%	0%	2.2%	0%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	660	---	646	---

STATISTICAL TESTS

LIFE TABLE	P=0.263N	P=0.250N	P=0.432N	P=0.232N
POLY 3	P=0.276N	P=0.229N	P=0.458N	P=0.225N
POLY 1.5	P=0.277N	P=0.227N	P=0.467N	P=0.224N
POLY 6	P=0.274N	P=0.235N	P=0.448N	P=0.229N
LOGISTIC REGRESSION	P=0.275N	P=0.229N	P=0.494N	P=0.226N
COCH-ARM / FISHERS	P=0.276N	P=0.247N	P=0.500N	P=0.247N
ORDER RESTRICTED	P=0.067N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Larynx  
Inflammation Chronic

LESION RATES

OVERALL (a)	1/50 (2%)	1/50 (2%)	0/50 (0%)	4/50 (8%)
POLY-3 RATE (b)	1/40.02	1/41.68	0/45.12	4/42.64
POLY-3 PERCENT (g)	2.5%	2.4%	0%	9.4%
TERMINAL (d)	1/27 (4%)	1/24 (4%)	0/36 (0%)	2/26 (8%)
FIRST INCIDENCE	730 (T)	730 (T)	---	702

STATISTICAL TESTS

LIFE TABLE	P=0.034*	P=0.736	P=0.443N	P=0.172
POLY 3	P=0.040*	P=0.752N	P=0.476N	P=0.198
POLY 1.5	P=0.041*	P=0.750N	P=0.481N	P=0.198
POLY 6	P=0.040*	P=0.758N	P=0.470N	P=0.194
LOGISTIC REGRESSION	P=0.037*	P=0.736	(e)	P=0.181
COCH-ARM / FISHERS	P=0.040*	P=0.753N	P=0.500N	P=0.181
ORDER RESTRICTED	P=0.038*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Larynx: Respiratory Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	1/50 (2%)	1/50 (2%)	2/50 (4%)	2/50 (4%)
POLY-3 RATE (b)	1/40.28	1/42.23	2/45.12	2/42.61
POLY-3 PERCENT (g)	2.5%	2.4%	4.4%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	2/36 (6%)	1/26 (4%)
FIRST INCIDENCE	660	557	730 (T)	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.395	P=0.750N	P=0.581	P=0.500
POLY 3	P=0.411	P=0.750N	P=0.539	P=0.520
POLY 1.5	P=0.412	P=0.749N	P=0.531	P=0.521
POLY 6	P=0.408	P=0.756N	P=0.548	P=0.514
LOGISTIC REGRESSION	P=0.400	P=0.740	P=0.540	P=0.519
COCH-ARM / FISHERS	P=0.395	P=0.753N	P=0.500	P=0.500
ORDER RESTRICTED	P=0.460	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
Angiectasis

LESION RATES

OVERALL (a)	3/50 (6%)	1/50 (2%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	3/40.77	1/42.28	2/45.49	1/42.50
POLY-3 PERCENT (g)	7.4%	2.4%	4.4%	2.4%
TERMINAL (d)	2/27 (7%)	0/24 (0%)	1/36 (3%)	1/26 (4%)
FIRST INCIDENCE	460	537	626	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.343N	P=0.313N	P=0.402N	P=0.310N
POLY 3	P=0.345N	P=0.292N	P=0.450N	P=0.290N
POLY 1.5	P=0.344N	P=0.289N	P=0.461N	P=0.288N
POLY 6	P=0.348N	P=0.299N	P=0.437N	P=0.296N
LOGISTIC REGRESSION	P=0.375N	P=0.343N	P=0.529N	P=0.306N
COCH-ARM / FISHERS	P=0.347N	P=0.309N	P=0.500N	P=0.309N
ORDER RESTRICTED	P=0.202N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Basophilic Focus

**LESION RATES**

OVERALL (a)	26/50 (52%)	28/50 (56%)	31/50 (62%)	29/50 (58%)
POLY-3 RATE (b)	26/43.41	28/44.27	31/45.43	29/44.09
POLY-3 PERCENT (g)	59.9%	63.3%	68.2%	65.8%
TERMINAL (d)	20/27 (74%)	21/24 (88%)	30/36 (83%)	24/26 (92%)
FIRST INCIDENCE	439	537	647	509

**STATISTICAL TESTS**

LIFE TABLE	P=0.324	P=0.245	P=0.360N	P=0.280
POLY 3	P=0.374	P=0.457	P=0.266	P=0.357
POLY 1.5	P=0.414	P=0.492	P=0.282	P=0.404
POLY 6	P=0.307	P=0.403	P=0.250	P=0.283
LOGISTIC REGRESSION	P=0.470	P=0.523	P=0.443	P=0.477
COCH-ARM / FISHERS	P=0.378	P=0.421	P=0.210	P=0.344
ORDER RESTRICTED	P=0.370	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
Clear Cell Focus

LESION RATES

OVERALL (a)	9/50 (18%)	6/50 (12%)	7/50 (14%)	2/50 (4%)
POLY-3 RATE (b)	9/40.94	6/41.71	7/45.12	2/42.50
POLY-3 PERCENT (g)	22%	14.4%	15.5%	4.7%
TERMINAL (d)	6/27 (22%)	5/24 (21%)	7/36 (19%)	2/26 (8%)
FIRST INCIDENCE	579	721	730 (T)	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.026N*	P=0.357N	P=0.200N	P=0.030N*
POLY 3	P=0.026N*	P=0.270N	P=0.311N	P=0.020N*
POLY 1.5	P=0.026N*	P=0.258N	P=0.325N	P=0.019N*
POLY 6	P=0.026N*	P=0.297N	P=0.299N	P=0.022N*
LOGISTIC REGRESSION	P=0.024N*	P=0.273N	P=0.280N	P=0.021N*
COCH-ARM / FISHERS	P=0.031N*	P=0.288N	P=0.393N	P=0.026N*
ORDER RESTRICTED	P=0.015N*	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Degeneration Cystic

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Eosinophilic Focus

**LESION RATES**

OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/40.02	0/41.68	2/45.49	1/43.25
POLY-3 PERCENT (g)	2.5%	0%	4.4%	2.3%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	---	626	458

**STATISTICAL TESTS**

LIFE TABLE	P=0.583	P=0.523N	P=0.583	P=0.755N
POLY 3	P=0.602	P=0.492N	P=0.545	P=0.743N
POLY 1.5	P=0.596	P=0.490N	P=0.534	P=0.744N
POLY 6	P=0.606	P=0.497N	P=0.557	P=0.745N
LOGISTIC REGRESSION	P=0.542	(e)	P=0.526	P=0.729
COCH-ARM / FISHERS	P=0.577	P=0.500N	P=0.500	P=0.753N
ORDER RESTRICTED	P=0.414	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Hepatodiaphragmatic Nodule

**LESION RATES**

OVERALL (a)	2/50 (4%)	6/50 (12%)	6/50 (12%)	7/50 (14%)
POLY-3 RATE (b)	2/40.09	6/43.67	6/45.72	7/44.07
POLY-3 PERCENT (g)	5%	13.7%	13.1%	15.9%
TERMINAL (d)	1/27 (4%)	2/24 (8%)	4/36 (11%)	2/26 (8%)
FIRST INCIDENCE	712	557	603	543

**STATISTICAL TESTS**

LIFE TABLE	P=0.170	P=0.136	P=0.230	P=0.098
POLY 3	P=0.191	P=0.161	P=0.179	P=0.102
POLY 1.5	P=0.187	P=0.158	P=0.168	P=0.099
POLY 6	P=0.196	P=0.161	P=0.194	P=0.105
LOGISTIC REGRESSION	P=0.149	P=0.124	P=0.171	P=0.086
COCH-ARM / FISHERS	P=0.158	P=0.134	P=0.134	P=0.080
ORDER RESTRICTED	P=0.100	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
 Necrosis

**LESION RATES**

OVERALL (a)	2/50 (4%)	1/50 (2%)	3/50 (6%)	1/50 (2%)
POLY-3 RATE (b)	2/40.41	1/41.93	3/45.49	1/42.73
POLY-3 PERCENT (g)	5%	2.4%	6.6%	2.3%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	2/36 (6%)	0/26 (0%)
FIRST INCIDENCE	640	663	626	668

**STATISTICAL TESTS**

LIFE TABLE	P=0.448N	P=0.500N	P=0.596	P=0.482N
POLY 3	P=0.446N	P=0.487N	P=0.554	P=0.480N
POLY 1.5	P=0.447N	P=0.483N	P=0.542	P=0.480N
POLY 6	P=0.448N	P=0.497N	P=0.567	P=0.486N
LOGISTIC REGRESSION	P=0.458N	P=0.494N	P=0.522	P=0.494N
COCH-ARM / FISHERS	P=0.461N	P=0.500N	P=0.500	P=0.500N
ORDER RESTRICTED	P=0.441N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver  
Vacuolization Cytoplasmic

LESION RATES

OVERALL (a)	8/50 (16%)	5/50 (10%)	1/50 (2%)	0/50 (0%)
POLY-3 RATE (b)	8/42.66	5/42.76	1/45.33	0/42.50
POLY-3 PERCENT (g)	18.8%	11.7%	2.2%	0%
TERMINAL (d)	2/27 (7%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	439	537	677	---

STATISTICAL TESTS

LIFE TABLE	P=0.004N**	P=0.297N	P=0.012N*	P=0.005N**
POLY 3	P=0.003N**	P=0.272N	P=0.012N*	P=0.003N**
POLY 1.5	P=0.003N**	P=0.257N	P=0.012N*	P=0.003N**
POLY 6	P=0.003N**	P=0.299N	P=0.012N*	P=0.004N**
LOGISTIC REGRESSION	P=0.005N**	P=0.304N	P=0.024N*	P=0.006N**
COCH-ARM / FISHERS	P=0.004N**	P=0.277N	P=0.015N*	P=0.003N**
ORDER RESTRICTED	P<0.001N**	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver: Bile Duct  
 Dilatation

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Liver: Bile Duct  
Hyperplasia

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	2/45.43	0/42.50
POLY-3 PERCENT (g)	0%	0%	4.4%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	---	---	646	---

STATISTICAL TESTS

LIFE TABLE	P=0.671N	(e)	P=0.292	(e)
POLY 3	P=0.660N	(e)	P=0.266	(e)
POLY 1.5	P=0.662N	(e)	P=0.259	(e)
POLY 6	P=0.660N	(e)	P=0.275	(e)
LOGISTIC REGRESSION	P=0.672N	(e)	P=0.245	(e)
COCH-ARM / FISHERS	P=0.675N	(e)	P=0.247	(e)
ORDER RESTRICTED	P=0.273	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lung  
 Hemorrhage

**LESION RATES**

OVERALL (a)	1/50 (2%)	0/50 (0%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	1/41.00	0/41.68	1/45.12	1/42.92
POLY-3 PERCENT (g)	2.4%	0%	2.2%	2.3%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	176	---	730 (T)	610

**STATISTICAL TESTS**

LIFE TABLE	P=0.565	P=0.492N	P=0.724N	P=0.745N
POLY 3	P=0.570	P=0.497N	P=0.739N	P=0.751N
POLY 1.5	P=0.568	P=0.494N	P=0.744N	P=0.750N
POLY 6	P=0.574	P=0.502N	P=0.733N	P=0.753N
LOGISTIC REGRESSION	P=0.400	P=0.933N	P=0.602	P=0.565
COCH-ARM / FISHERS	P=0.559	P=0.500N	P=0.753N	P=0.753N
ORDER RESTRICTED	P=0.549	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Lung  
 Inflammation Chronic**

**LESION RATES**

OVERALL (a)	5/50 (10%)	1/50 (2%)	6/50 (12%)	5/50 (10%)
POLY-3 RATE (b)	5/40.68	1/41.68	6/45.57	5/42.61
POLY-3 PERCENT (g)	12.3%	2.4%	13.2%	11.7%
TERMINAL (d)	4/27 (15%)	1/24 (4%)	5/36 (14%)	4/26 (15%)
FIRST INCIDENCE	508	730 (T)	600	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.334	P=0.123N	P=0.577N	P=0.613
POLY 3	P=0.366	P=0.094N	P=0.579	P=0.602N
POLY 1.5	P=0.365	P=0.092N	P=0.562	P=0.597N
POLY 6	P=0.366	P=0.100N	P=0.600	P=0.613N
LOGISTIC REGRESSION	P=0.368	P=0.094N	P=0.558	P=0.596N
COCH-ARM / FISHERS	P=0.348	P=0.102N	P=0.500	P=0.630N
ORDER RESTRICTED	P=0.344	(e)	(e)	(e)

---

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Lung: Alveolar Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	3/50 (6%)	6/50 (12%)	2/50 (4%)	5/50 (10%)
POLY-3 RATE (b)	3/40.05	6/42.13	2/45.12	5/43.52
POLY-3 PERCENT (g)	7.5%	14.2%	4.4%	11.5%
TERMINAL (d)	2/27 (7%)	4/24 (17%)	2/36 (6%)	2/26 (8%)
FIRST INCIDENCE	722	610	730 (T)	458

**STATISTICAL TESTS**

LIFE TABLE	P=0.434	P=0.203	P=0.372N	P=0.361
POLY 3	P=0.470	P=0.266	P=0.446N	P=0.402
POLY 1.5	P=0.466	P=0.269	P=0.458N	P=0.398
POLY 6	P=0.468	P=0.255	P=0.432N	P=0.401
LOGISTIC REGRESSION	P=0.454	P=0.241	P=0.397N	P=0.379
COCH-ARM / FISHERS	P=0.434	P=0.243	P=0.500N	P=0.357
ORDER RESTRICTED	P=0.424	(e)	(e)	(e)

---

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Lung: Alveolus  
Emphysema

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Lung: Alveolus  
 Infiltration Cellular Histiocyte**

**LESION RATES**

OVERALL (a)	20/50 (40%)	19/50 (38%)	22/50 (44%)	30/50 (60%)
POLY-3 RATE (b)	20/43.01	19/44.02	22/46.31	30/46.17
POLY-3 PERCENT (g)	46.5%	43.2%	47.5%	65%
TERMINAL (d)	12/27 (44%)	12/24 (50%)	19/36 (53%)	18/26 (69%)
FIRST INCIDENCE	460	561	477	509

**STATISTICAL TESTS**

LIFE TABLE	P=0.015*	P=0.556	P=0.331N	P=0.058
POLY 3	P=0.015*	P=0.461N	P=0.547	P=0.055
POLY 1.5	P=0.015*	P=0.439N	P=0.534	P=0.056
POLY 6	P=0.016*	P=0.499N	P=0.554	P=0.054
LOGISTIC REGRESSION	P=0.016*	P=0.435N	P=0.558	P=0.057
COCH-ARM / FISHERS	P=0.011*	P=0.500N	P=0.420	P=0.036*
ORDER RESTRICTED	P=0.035*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Lung: Interstitium  
 Fibrosis**

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	1/42.73
POLY-3 PERCENT (g)	0%	0%	0%	2.3%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	668

**STATISTICAL TESTS**

LIFE TABLE	P=0.228	(e)	(e)	P=0.517
POLY 3	P=0.229	(e)	(e)	P=0.513
POLY 1.5	P=0.228	(e)	(e)	P=0.513
POLY 6	P=0.229	(e)	(e)	P=0.512
LOGISTIC REGRESSION	P=0.216	(e)	(e)	P=0.501
COCH-ARM / FISHERS	P=0.221	(e)	(e)	P=0.500
ORDER RESTRICTED	P=0.132	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Lymph Node, Mediastinal  
 Hyperplasia Lymphoid**

**LESION RATES**

OVERALL (a)	0/26 (0%)	0/25 (0%)	1/21 (5%)	0/28 (0%)
POLY-3 RATE (b)	0/20.22	0/20.94	1/17.68	0/24.93
POLY-3 PERCENT (g)	0%	0%	5.7%	0%
TERMINAL (d)	0/11 (0%)	0/11 (0%)	1/12 (8%)	0/14 (0%)
FIRST INCIDENCE	---	---	730 (T)	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.739N	(e)	P=0.517	(e)
POLY 3	P=0.738N	(e)	P=0.473	(e)
POLY 1.5	P=0.743N	(e)	P=0.471	(e)
POLY 6	P=0.732N	(e)	P=0.476	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.517	(e)
COCH-ARM / FISHERS	P=0.757N	(e)	P=0.447	(e)
ORDER RESTRICTED	P=0.364	(e)	(e)	(e)

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TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Mammary Gland  
Galactocele

LESION RATES

OVERALL (a)	2/50 (4%)	3/50 (6%)	4/50 (8%)	1/50 (2%)
POLY-3 RATE (b)	2/40.13	3/42.42	4/45.68	1/42.50
POLY-3 PERCENT (g)	5%	7.1%	8.8%	2.4%
TERMINAL (d)	1/27 (4%)	1/24 (4%)	2/36 (6%)	1/26 (4%)
FIRST INCIDENCE	702	557	562	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.296N	P=0.473	P=0.455	P=0.516N
POLY 3	P=0.278N	P=0.525	P=0.399	P=0.480N
POLY 1.5	P=0.276N	P=0.526	P=0.384	P=0.479N
POLY 6	P=0.283N	P=0.519	P=0.415	P=0.485N
LOGISTIC REGRESSION	P=0.286N	P=0.513	P=0.372	P=0.492N
COCH-ARM / FISHERS	P=0.295N	P=0.500	P=0.339	P=0.500N
ORDER RESTRICTED	P=0.297N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Mesentery  
Necrosis

LESION RATES

OVERALL (a)	14/14 (100%)	17/17 (100%)	12/12 (100%)	10/10 (100%)
POLY-3 RATE (b)	14/14.00	17/17.00	12/12.00	10/10.00
POLY-3 PERCENT (g)	100%	100%	100%	100%
TERMINAL (d)	8/8 (100%)	10/10 (100%)	9/9 (100%)	5/5 (100%)
FIRST INCIDENCE	508	561	562	581

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

Nose  
 Foreign Body

**LESION RATES**

OVERALL (a)	1/49 (2%)	2/49 (4%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	1/39.67	2/41.46	3/46.25	2/42.66
POLY-3 PERCENT (g)	2.5%	4.8%	6.5%	4.7%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	688	537	495	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.523	P=0.492	P=0.370	P=0.493
POLY 3	P=0.547	P=0.515	P=0.362	P=0.525
POLY 1.5	P=0.549	P=0.518	P=0.351	P=0.527
POLY 6	P=0.541	P=0.507	P=0.375	P=0.519
LOGISTIC REGRESSION	P=0.495	P=0.491	P=0.250	P=0.524
COCH-ARM / FISHERS	P=0.527	P=0.500	P=0.316	P=0.508
ORDER RESTRICTED	P=0.409	(e)	(e)	(e)

---

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose  
Inflammation

LESION RATES

OVERALL (a)	2/49 (4%)	5/49 (10%)	6/50 (12%)	6/50 (12%)
POLY-3 RATE (b)	2/40.00	5/41.77	6/46.32	6/42.64
POLY-3 PERCENT (g)	5%	12%	13%	14.1%
TERMINAL (d)	0/27 (0%)	2/24 (8%)	3/36 (8%)	4/26 (15%)
FIRST INCIDENCE	638	557	495	702

STATISTICAL TESTS

LIFE TABLE	P=0.212	P=0.211	P=0.215	P=0.135
POLY 3	P=0.236	P=0.233	P=0.185	P=0.153
POLY 1.5	P=0.242	P=0.237	P=0.175	P=0.157
POLY 6	P=0.221	P=0.222	P=0.196	P=0.143
LOGISTIC REGRESSION	P=0.230	P=0.221	P=0.126	P=0.153
COCH-ARM / FISHERS	P=0.222	P=0.218	P=0.141	P=0.141
ORDER RESTRICTED	P=0.152	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose  
Inflammation Chronic

LESION RATES

OVERALL (a)	0/49 (0%)	0/49 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	0/39.50	0/40.86	0/45.12	1/42.50
POLY-3 PERCENT (g)	0%	0%	0%	2.4%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	---	---	---	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.209	(e)	(e)	P=0.492
POLY 3	P=0.230	(e)	(e)	P=0.515
POLY 1.5	P=0.230	(e)	(e)	P=0.516
POLY 6	P=0.229	(e)	(e)	P=0.511
LOGISTIC REGRESSION	(e)	(e)	(e)	P=0.492
COCH-ARM / FISHERS	P=0.223	(e)	(e)	P=0.505
ORDER RESTRICTED	P=0.134	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Glands  
 Dilatation**

**LESION RATES**

OVERALL (a)	0/49 (0%)	0/49 (0%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	0/39.50	0/40.86	2/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	4.4%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	2/36 (6%)	0/26 (0%)
FIRST INCIDENCE	---	---	730 (T)	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.686N	(e)	P=0.303	(e)
POLY 3	P=0.657N	(e)	P=0.268	(e)
POLY 1.5	P=0.658N	(e)	P=0.263	(e)
POLY 6	P=0.659N	(e)	P=0.274	(e)
LOGISTIC REGRESSION	(e)	(e)	P=0.303	(e)
COCH-ARM / FISHERS	P=0.671N	(e)	P=0.253	(e)
ORDER RESTRICTED	P=0.274	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Goblet Cell  
Hyperplasia

LESION RATES

OVERALL (a)	1/49 (2%)	1/49 (2%)	3/50 (6%)	3/50 (6%)
POLY-3 RATE (b)	1/39.84	1/41.14	3/45.53	3/43.03
POLY-3 PERCENT (g)	2.5%	2.4%	6.6%	7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	2/36 (6%)	1/26 (4%)
FIRST INCIDENCE	638	652	614	610

STATISTICAL TESTS

LIFE TABLE	P=0.222	P=0.749N	P=0.385	P=0.315
POLY 3	P=0.241	P=0.754N	P=0.354	P=0.333
POLY 1.5	P=0.240	P=0.751N	P=0.346	P=0.334
POLY 6	P=0.239	P=0.761N	P=0.364	P=0.327
LOGISTIC REGRESSION	P=0.220	P=0.757	P=0.313	P=0.313
COCH-ARM / FISHERS	P=0.223	P=0.753N	P=0.316	P=0.316
ORDER RESTRICTED	P=0.272	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Nose: Nasolacrimal Duct  
 Inflammation**

**LESION RATES**

OVERALL (a)	1/49 (2%)	1/49 (2%)	4/50 (8%)	2/50 (4%)
POLY-3 RATE (b)	1/39.50	1/40.96	4/45.43	2/42.61
POLY-3 PERCENT (g)	2.5%	2.4%	8.8%	4.7%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	3/36 (8%)	1/26 (4%)
FIRST INCIDENCE	730 (T)	704	647	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.437	P=0.740	P=0.267	P=0.484
POLY 3	P=0.480	P=0.753N	P=0.224	P=0.526
POLY 1.5	P=0.479	P=0.750N	P=0.215	P=0.528
POLY 6	P=0.477	P=0.759N	P=0.234	P=0.521
LOGISTIC REGRESSION	P=0.463	P=0.760	P=0.224	P=0.509
COCH-ARM / FISHERS	P=0.454	P=0.753N	P=0.187	P=0.508
ORDER RESTRICTED	P=0.289	(e)	(e)	(e)

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TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Olfactory Epithelium  
 Degeneration**

**LESION RATES**

OVERALL (a)	1/49 (2%)	1/49 (2%)	7/50 (14%)	24/50 (48%)
POLY-3 RATE (b)	1/39.67	1/41.15	7/45.12	24/44.95
POLY-3 PERCENT (g)	2.5%	2.4%	15.5%	53.4%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	7/36 (19%)	13/26 (50%)
FIRST INCIDENCE	688	649	730 (T)	509

**STATISTICAL TESTS**

LIFE TABLE	P<0.001**	P=0.758N	P=0.072	P<0.001**
POLY 3	P<0.001**	P=0.753N	P=0.046*	P<0.001**
POLY 1.5	P<0.001**	P=0.750N	P=0.043*	P<0.001**
POLY 6	P<0.001**	P=0.759N	P=0.048*	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P=0.762N	P=0.055	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.753N	P=0.032*	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Olfactory Epithelium  
Degeneration Hyaline

LESION RATES

OVERALL (a)	4/49 (8%)	8/49 (16%)	6/50 (12%)	4/50 (8%)
POLY-3 RATE (b)	4/40.29	8/41.89	6/45.28	4/43.76
POLY-3 PERCENT (g)	9.9%	19.1%	13.3%	9.1%
TERMINAL (d)	1/27 (4%)	4/24 (17%)	5/36 (14%)	1/26 (4%)
FIRST INCIDENCE	607	610	689	534

STATISTICAL TESTS

LIFE TABLE	P=0.329N	P=0.169	P=0.530	P=0.618N
POLY 3	P=0.283N	P=0.193	P=0.445	P=0.598N
POLY 1.5	P=0.284N	P=0.200	P=0.435	P=0.597N
POLY 6	P=0.290N	P=0.180	P=0.453	P=0.606N
LOGISTIC REGRESSION	P=0.306N	P=0.193	P=0.442	P=0.641
COCH-ARM / FISHERS	P=0.318N	P=0.178	P=0.383	P=0.631N
ORDER RESTRICTED	P=0.364N	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Olfactory Epithelium  
 Hyperplasia Basal Cell**

**LESION RATES**

OVERALL (a)	0/49 (0%)	14/49 (29%)	30/50 (60%)	49/50 (98%)
POLY-3 RATE (b)	0/39.50	14/42.62	30/47.59	49/50.00
POLY-3 PERCENT (g)	0%	32.9%	63%	98%
TERMINAL (d)	0/27 (0%)	8/24 (33%)	23/36 (64%)	25/26 (96%)
FIRST INCIDENCE	---	561	477	458

**STATISTICAL TESTS**

LIFE TABLE	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 3	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P<0.001**	P<0.001**	P<0.001**
POLY 6	P<0.001**	P<0.001**	P<0.001**	P<0.001**
LOGISTIC REGRESSION	P<0.001**	P<0.001**	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
ORDER RESTRICTED	P<0.001**	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Olfactory Epithelium  
Metaplasia

LESION RATES

OVERALL (a)	1/49 (2%)	0/49 (0%)	0/50 (0%)	1/50 (2%)
POLY-3 RATE (b)	1/39.67	0/40.86	0/45.12	1/42.50
POLY-3 PERCENT (g)	2.5%	0%	0%	2.4%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	688	---	---	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.536	P=0.512N	P=0.467N	P=0.756
POLY 3	P=0.543	P=0.494N	P=0.474N	P=0.745N
POLY 1.5	P=0.542	P=0.491N	P=0.478N	P=0.744N
POLY 6	P=0.543	P=0.501N	P=0.470N	P=0.751N
LOGISTIC REGRESSION	P=0.547	P=0.494N	P=0.487N	P=0.749N
COCH-ARM / FISHERS	P=0.541	P=0.500N	P=0.495N	P=0.747N
ORDER RESTRICTED	P=0.376N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
 Time Report Reqsted: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Nose: Respiratory Epithelium  
 Degeneration Hyaline**

**LESION RATES**

OVERALL (a)	1/49 (2%)	3/49 (6%)	2/50 (4%)	0/50 (0%)
POLY-3 RATE (b)	1/40.03	3/41.04	2/45.67	0/42.50
POLY-3 PERCENT (g)	2.5%	7.3%	4.4%	0%
TERMINAL (d)	0/27 (0%)	2/24 (8%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	568	682	562	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.179N	P=0.289	P=0.556	P=0.487N
POLY 3	P=0.171N	P=0.314	P=0.546	P=0.488N
POLY 1.5	P=0.168N	P=0.320	P=0.538	P=0.486N
POLY 6	P=0.177N	P=0.302	P=0.554	P=0.493N
LOGISTIC REGRESSION	P=0.184N	P=0.312	P=0.442	P=0.555N
COCH-ARM / FISHERS	P=0.179N	P=0.309	P=0.508	P=0.495N
ORDER RESTRICTED	P=0.180N	(e)	(e)	(e)

---

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006  
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Nose: Respiratory Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	0/49 (0%)	1/49 (2%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	0/39.50	1/40.86	1/45.12	1/42.61
POLY-3 PERCENT (g)	0%	2.5%	2.2%	2.4%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	---	730 (T)	730 (T)	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.492	P=0.477	P=0.557	P=0.487
POLY 3	P=0.524	P=0.507	P=0.526	P=0.515
POLY 1.5	P=0.524	P=0.509	P=0.522	P=0.516
POLY 6	P=0.520	P=0.501	P=0.531	P=0.512
LOGISTIC REGRESSION	P=0.507	P=0.477	P=0.557	P=0.514
COCH-ARM / FISHERS	P=0.505	P=0.500	P=0.505	P=0.505
ORDER RESTRICTED	P=0.342	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Nose: Respiratory Epithelium  
Metaplasia

LESION RATES

OVERALL (a)	1/49 (2%)	0/49 (0%)	2/50 (4%)	2/50 (4%)
POLY-3 RATE (b)	1/39.84	0/40.86	2/45.53	2/42.50
POLY-3 PERCENT (g)	2.5%	0%	4.4%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	2/26 (8%)
FIRST INCIDENCE	638	---	614	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.279	P=0.490N	P=0.564	P=0.500
POLY 3	P=0.299	P=0.495N	P=0.546	P=0.523
POLY 1.5	P=0.299	P=0.492N	P=0.538	P=0.526
POLY 6	P=0.297	P=0.502N	P=0.555	P=0.514
LOGISTIC REGRESSION	P=0.292	P=0.512N	P=0.491	P=0.524
COCH-ARM / FISHERS	P=0.287	P=0.500N	P=0.508	P=0.508
ORDER RESTRICTED	P=0.287	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Requested: 02/02/2006

Time Report Requested: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Ovary  
Cyst

LESION RATES

OVERALL (a)	9/50 (18%)	2/50 (4%)	9/50 (18%)	8/50 (16%)
POLY-3 RATE (b)	9/41.24	2/41.68	9/46.24	8/43.31
POLY-3 PERCENT (g)	21.8%	4.8%	19.5%	18.5%
TERMINAL (d)	4/27 (15%)	2/24 (8%)	6/36 (17%)	6/26 (23%)
FIRST INCIDENCE	607	730 (T)	603	610

STATISTICAL TESTS

LIFE TABLE	P=0.352	P=0.040N*	P=0.396N	P=0.495N
POLY 3	P=0.378	P=0.022N*	P=0.497N	P=0.455N
POLY 1.5	P=0.372	P=0.021N*	P=0.519N	P=0.450N
POLY 6	P=0.381	P=0.027N*	P=0.475N	P=0.476N
LOGISTIC REGRESSION	P=0.374	P=0.023N*	P=0.542N	P=0.451N
COCH-ARM / FISHERS	P=0.348	P=0.026N*	P=0.602N	P=0.500N
ORDER RESTRICTED	P=0.285N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Pancreas: Acinus Atrophy

LESION RATES

OVERALL (a)	1/50 (2%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	2.5%	0%	0%	0%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	---	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.503N	P=0.523N	P=0.443N	P=0.508N
POLY 3	P=0.513N	P=0.492N	P=0.476N	P=0.488N
POLY 1.5	P=0.512N	P=0.490N	P=0.481N	P=0.488N
POLY 6	P=0.512N	P=0.497N	P=0.470N	P=0.490N
LOGISTIC REGRESSION	P=0.503N	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.500N	P=0.500N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.109N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pituitary Gland  
 Cyst**

**LESION RATES**

OVERALL (a)	4/50 (8%)	5/49 (10%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	4/40.84	5/41.95	3/45.12	2/43.34
POLY-3 PERCENT (g)	9.8%	11.9%	6.7%	4.6%
TERMINAL (d)	2/27 (7%)	2/24 (8%)	3/36 (8%)	0/26 (0%)
FIRST INCIDENCE	508	537	730 (T)	534

**STATISTICAL TESTS**

LIFE TABLE	P=0.201N	P=0.483	P=0.373N	P=0.326N
POLY 3	P=0.189N	P=0.517	P=0.446N	P=0.309N
POLY 1.5	P=0.190N	P=0.520	P=0.456N	P=0.310N
POLY 6	P=0.192N	P=0.507	P=0.435N	P=0.314N
LOGISTIC REGRESSION	P=0.214N	P=0.483	P=0.466N	P=0.361N
COCH-ARM / FISHERS	P=0.204N	P=0.487	P=0.500N	P=0.339N
ORDER RESTRICTED	P=0.238N	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pituitary Gland  
 Hemorrhage**

**LESION RATES**

OVERALL (a)	2/50 (4%)	0/49 (0%)	1/50 (2%)	1/50 (2%)
POLY-3 RATE (b)	2/40.69	0/40.71	1/45.53	1/42.66
POLY-3 PERCENT (g)	4.9%	0%	2.2%	2.3%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	579	---	614	690

**STATISTICAL TESTS**

LIFE TABLE	P=0.617N	P=0.245N	P=0.455N	P=0.492N
POLY 3	P=0.622N	P=0.237N	P=0.461N	P=0.483N
POLY 1.5	P=0.624N	P=0.233N	P=0.469N	P=0.481N
POLY 6	P=0.620N	P=0.245N	P=0.452N	P=0.491N
LOGISTIC REGRESSION	P=0.655N	P=0.252N	P=0.557N	P=0.512N
COCH-ARM / FISHERS	P=0.624N	P=0.253N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.252N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pituitary Gland  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	7/50 (14%)	8/49 (16%)	8/50 (16%)	14/50 (28%)
POLY-3 RATE (b)	7/41.36	8/40.99	8/45.81	14/44.15
POLY-3 PERCENT (g)	16.9%	19.5%	17.5%	31.7%
TERMINAL (d)	4/27 (15%)	5/24 (21%)	7/36 (19%)	6/26 (23%)
FIRST INCIDENCE	460	694	495	610

**STATISTICAL TESTS**

LIFE TABLE	P=0.037*	P=0.433	P=0.522N	P=0.090
POLY 3	P=0.044*	P=0.492	P=0.586	P=0.088
POLY 1.5	P=0.044*	P=0.510	P=0.570	P=0.089
POLY 6	P=0.046*	P=0.461	P=0.602	P=0.087
LOGISTIC REGRESSION	P=0.043*	P=0.514	P=0.533	P=0.086
COCH-ARM / FISHERS	P=0.036*	P=0.483	P=0.500	P=0.070
ORDER RESTRICTED	P=0.070	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Pleura  
 Inflammation Chronic**

**LESION RATES**

OVERALL (a)	16/16 (100%)	13/13 (100%)	15/15 (100%)	27/30 (90%)
POLY-3 RATE (b)	16/16.00	13/13.00	15/15.00	27/28.37
POLY-3 PERCENT (g)	100%	100%	100%	95.2%
TERMINAL (d)	12/12 (100%)	7/7 (100%)	13/13 (100%)	18/18 (100%)
FIRST INCIDENCE	9	561	477	585

**STATISTICAL TESTS**

LIFE TABLE	P=0.091	(e)	(e)	P=0.147
POLY 3	P=0.140N	(e)	(e)	P=0.507N
POLY 1.5	P=0.080N	(e)	(e)	P=0.346N
POLY 6	P=0.521N	(e)	(e)	P=0.931N
LOGISTIC REGRESSION	P=0.019N*	(e)	(e)	P=0.127N
COCH-ARM / FISHERS	P=0.053N	(e)	(e)	P=0.267N
ORDER RESTRICTED	P=0.065N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Skin  
 Cyst Epithelial Inclusion**

**LESION RATES**

OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	1/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	2.4%	0%	0%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	730 (T)	---	---

**STATISTICAL TESTS**

LIFE TABLE	P=0.608N	P=0.477	(e)	(e)
POLY 3	P=0.599N	P=0.508	(e)	(e)
POLY 1.5	P=0.595N	P=0.510	(e)	(e)
POLY 6	P=0.605N	P=0.503	(e)	(e)
LOGISTIC REGRESSION	(e)	P=0.477	(e)	(e)
COCH-ARM / FISHERS	P=0.601N	P=0.500	(e)	(e)
ORDER RESTRICTED	P=0.377N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Skin  
Hyperkeratosis

LESION RATES

OVERALL (a)	1/50 (2%)	1/50 (2%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	1/40.02	1/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	2.5%	2.4%	0%	0%
TERMINAL (d)	1/27 (4%)	1/24 (4%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	730 (T)	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.322N	P=0.736	P=0.443N	P=0.508N
POLY 3	P=0.327N	P=0.752N	P=0.476N	P=0.488N
POLY 1.5	P=0.325N	P=0.750N	P=0.481N	P=0.488N
POLY 6	P=0.330N	P=0.758N	P=0.470N	P=0.490N
LOGISTIC REGRESSION	P=0.322N	P=0.736	(e)	(e)
COCH-ARM / FISHERS	P=0.325N	P=0.753N	P=0.500N	P=0.500N
ORDER RESTRICTED	P=0.240N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Skin  
Ulcer

LESION RATES

OVERALL (a)	0/50 (0%)	1/50 (2%)	3/50 (6%)	1/50 (2%)
POLY-3 RATE (b)	0/40.02	1/42.47	3/45.44	1/42.50
POLY-3 PERCENT (g)	0%	2.4%	6.6%	2.4%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	1/26 (4%)
FIRST INCIDENCE	---	435	647	730 (T)

STATISTICAL TESTS

LIFE TABLE	P=0.551	P=0.512	P=0.172	P=0.492
POLY 3	P=0.572	P=0.512	P=0.143	P=0.512
POLY 1.5	P=0.571	P=0.512	P=0.137	P=0.512
POLY 6	P=0.569	P=0.508	P=0.151	P=0.510
LOGISTIC REGRESSION	P=0.525	P=0.343	P=0.135	P=0.492
COCH-ARM / FISHERS	P=0.546	P=0.500	P=0.121	P=0.500
ORDER RESTRICTED	P=0.177	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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Date Report Reqsted: 02/02/2006  
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Spleen  
 Fibrosis**

**LESION RATES**

OVERALL (a)	1/50 (2%)	0/50 (0%)	2/50 (4%)	1/50 (2%)
POLY-3 RATE (b)	1/40.02	0/41.68	2/45.12	1/42.61
POLY-3 PERCENT (g)	2.5%	0%	4.4%	2.4%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	2/36 (6%)	0/26 (0%)
FIRST INCIDENCE	730 (T)	---	730 (T)	702

**STATISTICAL TESTS**

LIFE TABLE	P=0.571	P=0.523N	P=0.600	P=0.749
POLY 3	P=0.595	P=0.492N	P=0.542	P=0.747N
POLY 1.5	P=0.592	P=0.490N	P=0.532	P=0.747N
POLY 6	P=0.598	P=0.497N	P=0.552	P=0.749N
LOGISTIC REGRESSION	P=0.583	(e)	P=0.600	P=0.755N
COCH-ARM / FISHERS	P=0.577	P=0.500N	P=0.500	P=0.753N
ORDER RESTRICTED	P=0.411	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Spleen  
 Hematopoietic Cell Proliferation**

**LESION RATES**

OVERALL (a)	2/50 (4%)	2/50 (4%)	2/50 (4%)	3/50 (6%)
POLY-3 RATE (b)	2/41.46	2/43.02	2/45.43	3/43.45
POLY-3 PERCENT (g)	4.8%	4.7%	4.4%	6.9%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	439	435	647	458

**STATISTICAL TESTS**

LIFE TABLE	P=0.415	P=0.671N	P=0.640N	P=0.521
POLY 3	P=0.410	P=0.681N	P=0.661N	P=0.521
POLY 1.5	P=0.411	P=0.677N	P=0.667N	P=0.524
POLY 6	P=0.406	P=0.690N	P=0.652N	P=0.515
LOGISTIC REGRESSION	P=0.254	P=0.502	P=0.588	P=0.360
COCH-ARM / FISHERS	P=0.397	P=0.691N	P=0.691N	P=0.500
ORDER RESTRICTED	P=0.504	(e)	(e)	(e)



TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Spleen  
 Hemorrhage**

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

---

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Spleen  
Necrosis

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

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DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

---

**Stomach, Forestomach  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	0/50 (0%)	4/50 (8%)	2/50 (4%)	2/50 (4%)
POLY-3 RATE (b)	0/40.02	4/43.01	2/45.81	2/43.03
POLY-3 PERCENT (g)	0%	9.3%	4.4%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	1/36 (3%)	1/26 (4%)
FIRST INCIDENCE	---	537	495	569

**STATISTICAL TESTS**

LIFE TABLE	P=0.561	P=0.068	P=0.281	P=0.245
POLY 3	P=0.590	P=0.069	P=0.269	P=0.253
POLY 1.5	P=0.588	P=0.069	P=0.261	P=0.253
POLY 6	P=0.586	P=0.068	P=0.277	P=0.252
LOGISTIC REGRESSION	P=0.494	P=0.047*	P=0.180	P=0.224
COCH-ARM / FISHERS	P=0.555	P=0.059	P=0.247	P=0.247
ORDER RESTRICTED	P=0.152	(e)	(e)	(e)

---

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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Date Report Reqsted: 02/02/2006  
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 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Stomach, Forestomach  
 Ulcer

**LESION RATES**

OVERALL (a)	5/50 (10%)	5/50 (10%)	3/50 (6%)	2/50 (4%)
POLY-3 RATE (b)	5/41.07	5/43.51	3/46.35	2/42.61
POLY-3 PERCENT (g)	12.2%	11.5%	6.5%	4.7%
TERMINAL (d)	1/27 (4%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	618	537	477	701

**STATISTICAL TESTS**

LIFE TABLE	P=0.148N	P=0.618N	P=0.277N	P=0.218N
POLY 3	P=0.150N	P=0.594N	P=0.292N	P=0.200N
POLY 1.5	P=0.146N	P=0.592N	P=0.305N	P=0.196N
POLY 6	P=0.158N	P=0.606N	P=0.279N	P=0.211N
LOGISTIC REGRESSION	P=0.180N	P=0.607	P=0.405N	P=0.200N
COCH-ARM / FISHERS	P=0.151N	P=0.630N	P=0.357N	P=0.218N
ORDER RESTRICTED	P=0.180N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
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Date Report Reqsted: 02/02/2006  
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Stomach, Glandular  
 Erosion**

**LESION RATES**

OVERALL (a)	2/49 (4%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	2/39.88	0/41.68	0/45.12	2/43.02
POLY-3 PERCENT (g)	5%	0%	0%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	521	---	---	652

**STATISTICAL TESTS**

LIFE TABLE	P=0.390	P=0.242N	P=0.208N	P=0.668N
POLY 3	P=0.379	P=0.227N	P=0.211N	P=0.667N
POLY 1.5	P=0.377	P=0.224N	P=0.215N	P=0.666N
POLY 6	P=0.384	P=0.234N	P=0.206N	P=0.672N
LOGISTIC REGRESSION	P=0.342	P=0.251N	P=0.263N	P=0.682
COCH-ARM / FISHERS	P=0.377	P=0.242N	P=0.242N	P=0.684N
ORDER RESTRICTED	P=0.240N	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Thyroid Gland: C-Cell  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	8/50 (16%)	5/50 (10%)	9/50 (18%)	6/50 (12%)
POLY-3 RATE (b)	8/40.13	5/41.68	9/45.77	6/43.02
POLY-3 PERCENT (g)	19.9%	12%	19.7%	14%
TERMINAL (d)	7/27 (26%)	5/24 (21%)	7/36 (19%)	3/26 (12%)
FIRST INCIDENCE	702	730 (T)	600	668

**STATISTICAL TESTS**

LIFE TABLE	P=0.456N	P=0.349N	P=0.472N	P=0.402N
POLY 3	P=0.408N	P=0.248N	P=0.594N	P=0.331N
POLY 1.5	P=0.414N	P=0.243N	P=0.590	P=0.336N
POLY 6	P=0.401N	P=0.262N	P=0.560N	P=0.332N
LOGISTIC REGRESSION	P=0.424N	P=0.326N	P=0.576N	P=0.358N
COCH-ARM / FISHERS	P=0.448N	P=0.277N	P=0.500	P=0.387N
ORDER RESTRICTED	P=0.370N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Thyroid Gland: Follicular Cell  
Hyperplasia

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	2/42.66
POLY-3 PERCENT (g)	0%	0%	0%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	---	---	---	690

STATISTICAL TESTS

LIFE TABLE	P=0.038*	(e)	(e)	P=0.236
POLY 3	P=0.043*	(e)	(e)	P=0.251
POLY 1.5	P=0.043*	(e)	(e)	P=0.251
POLY 6	P=0.043*	(e)	(e)	P=0.249
LOGISTIC REGRESSION	P=0.042*	(e)	(e)	P=0.248
COCH-ARM / FISHERS	P=0.042*	(e)	(e)	P=0.247
ORDER RESTRICTED	P=0.035*	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Urinary Bladder  
Calculus Micro Observation Only

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)



TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

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Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)

TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Urinary Bladder Hemorrhage

LESION RATES

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

STATISTICAL TESTS

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Urinary Bladder  
 Necrosis**

**LESION RATES**

OVERALL (a)	0/50 (0%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	0/40.02	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	0%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	---	---	---	---

**STATISTICAL TESTS**

LIFE TABLE	(e)	(e)	(e)	(e)
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
LOGISTIC REGRESSION	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
ORDER RESTRICTED	(e)	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

Date Report Requested: 02/02/2006  
 Time Report Requested: 13:47:17  
 First Dose M/F: 08/06/01 / 08/06/01  
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

**Urinary Bladder: Transitional Epithelium  
 Hyperplasia**

**LESION RATES**

OVERALL (a)	0/50 (0%)	1/50 (2%)	0/50 (0%)	2/50 (4%)
POLY-3 RATE (b)	0/40.02	1/42.23	0/45.12	2/42.53
POLY-3 PERCENT (g)	0%	2.4%	0%	4.7%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	1/26 (4%)
FIRST INCIDENCE	---	557	---	722

**STATISTICAL TESTS**

LIFE TABLE	P=0.146	P=0.513	(e)	P=0.236
POLY 3	P=0.155	P=0.511	(e)	P=0.251
POLY 1.5	P=0.156	P=0.511	(e)	P=0.251
POLY 6	P=0.152	P=0.508	(e)	P=0.248
LOGISTIC REGRESSION	P=0.144	P=0.439	(e)	P=0.235
COCH-ARM / FISHERS	P=0.149	P=0.500	(e)	P=0.247
ORDER RESTRICTED	P=0.083	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

Date Report Reqsted: 02/02/2006

Time Report Reqsted: 13:47:17

First Dose M/F: 08/06/01 / 08/06/01

Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Uterus  
Hemorrhage

LESION RATES

OVERALL (a)	1/50 (2%)	1/50 (2%)	1/50 (2%)	2/50 (4%)
POLY-3 RATE (b)	1/40.65	1/41.68	1/45.12	2/43.15
POLY-3 PERCENT (g)	2.5%	2.4%	2.2%	4.6%
TERMINAL (d)	0/27 (0%)	1/24 (4%)	1/36 (3%)	0/26 (0%)
FIRST INCIDENCE	521	730 (T)	730 (T)	619

STATISTICAL TESTS

LIFE TABLE	P=0.374	P=0.757	P=0.719N	P=0.534
POLY 3	P=0.380	P=0.755N	P=0.737N	P=0.521
POLY 1.5	P=0.379	P=0.752N	P=0.742N	P=0.521
POLY 6	P=0.381	P=0.760	P=0.732N	P=0.518
LOGISTIC REGRESSION	P=0.340	P=0.749	P=0.738	P=0.434
COCH-ARM / FISHERS	P=0.364	P=0.753N	P=0.753N	P=0.500
ORDER RESTRICTED	P=0.429	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

Pathologist: RENNE, R.

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Lab: BNW

STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
TERMINAL SACRIFICE AT 105 WEEKS

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Uterus: Cervix, Myometrium  
Hyperplasia

LESION RATES

OVERALL (a)	2/50 (4%)	0/50 (0%)	0/50 (0%)	0/50 (0%)
POLY-3 RATE (b)	2/40.55	0/41.68	0/45.12	0/42.50
POLY-3 PERCENT (g)	4.9%	0%	0%	0%
TERMINAL (d)	0/27 (0%)	0/24 (0%)	0/36 (0%)	0/26 (0%)
FIRST INCIDENCE	585	---	---	---

STATISTICAL TESTS

LIFE TABLE	P=0.255N	P=0.244N	P=0.199N	P=0.232N
POLY 3	P=0.269N	P=0.231N	P=0.214N	P=0.226N
POLY 1.5	P=0.270N	P=0.228N	P=0.218N	P=0.225N
POLY 6	P=0.265N	P=0.238N	P=0.209N	P=0.231N
LOGISTIC REGRESSION	P=0.272N	P=0.240N	P=0.246N	P=0.241N
COCH-ARM / FISHERS	P=0.262N	P=0.247N	P=0.247N	P=0.247N
ORDER RESTRICTED	P=0.026N*	(e)	(e)	(e)

TDMS No. 88006-03  
 Test Type: CHRONIC  
 Route: RESPIRATORY EXPOSURE WHOLE BODY  
 Species/Strain: RATS/F 344

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS  
 ALPHA-METHYLSTYRENE  
 CAS Number: 98-83-9  
 Pathologist: RENNE, R.

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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(F 344)  
 TERMINAL SACRIFICE AT 105 WEEKS**

DOSE	Females			
	CONTROL	100 PPM	300 PPM	1000 PPM

Uterus: Endometrium  
 Hyperplasia

**LESION RATES**

OVERALL (a)	6/50 (12%)	3/50 (6%)	4/50 (8%)	5/50 (10%)
POLY-3 RATE (b)	6/40.74	3/42.37	4/45.43	5/42.73
POLY-3 PERCENT (g)	14.7%	7.1%	8.8%	11.7%
TERMINAL (d)	4/27 (15%)	2/24 (8%)	3/36 (8%)	4/26 (15%)
FIRST INCIDENCE	618	495	647	668

**STATISTICAL TESTS**

LIFE TABLE	P=0.541	P=0.272N	P=0.233N	P=0.503N
POLY 3	P=0.549	P=0.221N	P=0.302N	P=0.466N
POLY 1.5	P=0.551	P=0.217N	P=0.316N	P=0.462N
POLY 6	P=0.545	P=0.234N	P=0.289N	P=0.481N
LOGISTIC REGRESSION	P=0.559	P=0.227N	P=0.310N	P=0.462N
COCH-ARM / FISHERS	P=0.538	P=0.243N	P=0.370N	P=0.500N
ORDER RESTRICTED	P=0.330N	(e)	(e)	(e)

TDMS No. 88006-03

Test Type: CHRONIC

Route: RESPIRATORY EXPOSURE WHOLE BODY

Species/Strain: RATS/F 344

**P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS**

ALPHA-METHYLSTYRENE

CAS Number: 98-83-9

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**LEGEND**

- (a) Number of tumor-bearing animals/number of animals examined at site.
  - (b) Number of tumor-bearing animals/Poly-3 number
  - (d) Observed incidence at terminal kill.
  - (f) Beneath the control incidence are the P-values associated with the trend test. Beneath the dosed group incidence are the P-values corresponding to pairwise comparisons between the controls and that dosed group. The life table analysis regards tumors in animals dying prior to terminal kill as being (directly or indirectly) the cause of death.
  - (e) Value of Statistic cannot be computed.
  - (g) Poly-3 adjusted lifetime tumor incidence.
  - (I) Interim sacrifice
  - (T) Terminal sacrifice
  - # Tumor rates based on numbers of animals necropsied.
  - \* To the right of any statistical result, indicates significance at ( $P \leq 0.05$ ).
  - \*\* To the right of any statistical result, indicates significance at ( $P \leq 0.01$ ).
  - N Indicates a negative trend for all tests
- Logistic regression is an alternative method for analyzing the incidence of non-fatal tumors.  
The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

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