

Experiment Number: 20213 - 02
Test Type: 39-WEEK
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Abrasive blasting agents (blasting sand)
CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
Time Report Requested: 13:33:37
First Dose M/F: 04/20/09 / NA
Lab: BNW

F1_39 Wk. Core

NTP Study Number: C20213
Lock Date: 08/17/2010
Cage Range: ALL
Date Range: ALL
Reasons For Removal: 25021 TSAC
Removal Date Range: 01-Jan-2007 - 31-Dec-2011
Treatment Groups: Include ALL
Study Gender: Male
TDMSE Version: 2.6.0.0_007
PWG Approval Date: NONE

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SUMMARY OF STATISTICALLY SIGNIFICANT ($P \leq .05$) RESULTS IN THE ANALYSIS OF ABRASIVE BLASTING AGENTS (BLASTING SAND)

MALE RATS

Organ

Lung

Lung: Alveolar Epithelium

Lung: Interstitium

Lymph Node, Bronchial

Lymph Node, Mediastinal

Nose: Respiratory Epithelium

Morphology

Foreign Body

Infiltration Cellular Histiocyte

Inflammation Chronic

Proteinosis

Hyperplasia

Fibrosis

Foreign Body

Infiltration Cellular Histiocyte

Foreign Body

Infiltration Cellular Histiocyte

Accumulation, Hyaline Droplet

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Larynx: Epiglottis Metaplasia				
LESION RATES				
OVERALL (a)	0/8 (0%)	1/8 (13%)	1/8 (13%)	1/8 (13%)
POLY-3 RATE (b)	0/8.00	1/8.00	1/8.00	1/8.00
POLY-3 PERCENT (g)	0%	12.5%	12.5%	12.5%
TERMINAL (d)	0/8 (0%)	1/8 (13%)	1/8 (13%)	1/8 (13%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.381	P=0.500	P=0.500	P=0.500
POLY 1.5	P=0.381	P=0.500	P=0.500	P=0.500
POLY 6	P=0.381	P=0.500	P=0.500	P=0.500
COCH-ARM / FISHERS	P=0.376	P=0.500	P=0.500	P=0.500
MAX-ISO-POLY-3	P=0.335	P=0.159	P=0.159	P=0.159

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Liver				
Hepatodiaphragmatic Nodule				
LESION RATES				
OVERALL (a)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
POLY-3 RATE (b)	1/1.00	0/0.00	0/0.00	0/0.00
POLY-3 PERCENT (g)	100%	0%	0%	0%
TERMINAL (d)	1/1 (100%)	0/0 (0%)	0/0 (0%)	0/0 (0%)
FIRST INCIDENCE	271 (T)	---	---	---
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung				
Foreign Body				
LESION RATES				
OVERALL (a)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	0/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	0%	100%	100%	100%
TERMINAL (d)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung				
Infiltration Cellular Histiocyte				
LESION RATES				
OVERALL (a)	4/8 (50%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	4/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	50%	100%	100%	100%
TERMINAL (d)	4/8 (50%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	271 (T)	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.004**	P=0.024*	P=0.024*	P=0.024*
POLY 1.5	P=0.004**	P=0.024*	P=0.024*	P=0.024*
POLY 6	P=0.004**	P=0.024*	P=0.024*	P=0.024*
COCH-ARM / FISHERS	P=0.015*	P=0.038*	P=0.038*	P=0.038*
MAX-ISO-POLY-3	P<0.001**	P=0.004**	P=0.004**	P=0.004**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung Inflammation Chronic				
LESION RATES				
OVERALL (a)	2/8 (25%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	2/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	25%	100%	100%	100%
TERMINAL (d)	2/8 (25%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	271 (T)	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P=0.002**	P=0.003**	P=0.003**	P=0.003**
MAX-ISO-POLY-3	P<0.001**	P<0.001**	P<0.001**	P<0.001**

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 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung				
Metaplasia Osseous				
LESION RATES				
OVERALL (a)	0/8 (0%)	2/8 (25%)	0/8 (0%)	0/8 (0%)
POLY-3 RATE (b)	0/8.00	2/8.00	0/8.00	0/8.00
POLY-3 PERCENT (g)	0%	25%	0%	0%
TERMINAL (d)	0/8 (0%)	2/8 (25%)	0/8 (0%)	0/8 (0%)
FIRST INCIDENCE	---	2/1 (T)	---	---
STATISTICAL TESTS				
POLY 3	P=0.384N	P=0.223	(e)	(e)
POLY 1.5	P=0.384N	P=0.223	(e)	(e)
POLY 6	P=0.384N	P=0.223	(e)	(e)
COCH-ARM / FISHERS	P=0.389N	P=0.233	(e)	(e)
MAX-ISO-POLY-3	P=0.225N	P=0.063	(e)	(e)

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 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung Proteinosis				
LESION RATES				
OVERALL (a)	0/8 (0%)	0/8 (0%)	0/8 (0%)	6/8 (75%)
POLY-3 RATE (b)	0/8.00	0/8.00	0/8.00	6/8.00
POLY-3 PERCENT (g)	0%	0%	0%	75%
TERMINAL (d)	0/8 (0%)	0/8 (0%)	0/8 (0%)	6/8 (75%)
FIRST INCIDENCE	---	---	---	271 (T)
STATISTICAL TESTS				
POLY 3	P<0.001**	(e)	(e)	P<0.001**
POLY 1.5	P<0.001**	(e)	(e)	P<0.001**
POLY 6	P<0.001**	(e)	(e)	P<0.001**
COCH-ARM / FISHERS	P<0.001**	(e)	(e)	P=0.003**
MAX-ISO-POLY-3	P<0.001**	(e)	(e)	P<0.001**

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung: Alveolar Epithelium Hyperplasia				
LESION RATES				
OVERALL (a)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	0/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	0%	100%	100%	100%
TERMINAL (d)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung: Alveolar Epithelium Hyperplasia Focal				
LESION RATES				
OVERALL (a)	0/8 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
POLY-3 RATE (b)	0/8.00	0/8.00	0/8.00	1/8.00
POLY-3 PERCENT (g)	0%	0%	0%	12.5%
TERMINAL (d)	0/8 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
FIRST INCIDENCE	---	---	---	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.197	(e)	(e)	P=0.500
POLY 1.5	P=0.197	(e)	(e)	P=0.500
POLY 6	P=0.197	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.193	(e)	(e)	P=0.500
MAX-ISO-POLY-3	P=0.124	(e)	(e)	P=0.159

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lung: Interstitium Fibrosis				
LESION RATES				
OVERALL (a)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	0/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	0%	100%	100%	100%
TERMINAL (d)	0/8 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

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**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Bronchial Fibrosis				
LESION RATES				
OVERALL (a)	0/7 (0%)	0/5 (0%)	0/7 (0%)	2/8 (25%)
POLY-3 RATE (b)	0/7.00	0/5.00	0/7.00	2/8.00
POLY-3 PERCENT (g)	0%	0%	0%	25%
TERMINAL (d)	0/7 (0%)	0/5 (0%)	0/7 (0%)	2/8 (25%)
FIRST INCIDENCE	---	---	---	2/1 (T)
STATISTICAL TESTS				
POLY 3	P=0.058	(e)	(e)	P=0.255
POLY 1.5	P=0.058	(e)	(e)	P=0.255
POLY 6	P=0.058	(e)	(e)	P=0.255
COCH-ARM / FISHERS	P=0.063	(e)	(e)	P=0.267
MAX-ISO-POLY-3	P=0.052	(e)	(e)	P=0.084

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 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Bronchial Foreign Body				
LESION RATES				
OVERALL (a)	0/7 (0%)	3/5 (60%)	6/7 (86%)	7/8 (88%)
POLY-3 RATE (b)	0/7.00	3/5.00	6/7.00	7/8.00
POLY-3 PERCENT (g)	0%	60%	85.7%	87.5%
TERMINAL (d)	0/7 (0%)	3/5 (60%)	6/7 (86%)	7/8 (88%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P<0.001**	P=0.017*	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P=0.017*	P<0.001**	P<0.001**
POLY 6	P<0.001**	P=0.017*	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.045*	P=0.002**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P=0.003**	P<0.001**	P<0.001**

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 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Bronchial Infiltration Cellular Histiocyte				
LESION RATES				
OVERALL (a)	0/7 (0%)	3/5 (60%)	6/7 (86%)	7/8 (88%)
POLY-3 RATE (b)	0/7.00	3/5.00	6/7.00	7/8.00
POLY-3 PERCENT (g)	0%	60%	85.7%	87.5%
TERMINAL (d)	0/7 (0%)	3/5 (60%)	6/7 (86%)	7/8 (88%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P<0.001**	P=0.017*	P<0.001**	P<0.001**
POLY 1.5	P<0.001**	P=0.017*	P<0.001**	P<0.001**
POLY 6	P<0.001**	P=0.017*	P<0.001**	P<0.001**
COCH-ARM / FISHERS	P<0.001**	P=0.045*	P=0.002**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P=0.003**	P<0.001**	P<0.001**

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 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Mediastinal Fibrosis				
LESION RATES				
OVERALL (a)	0/7 (0%)	1/8 (13%)	1/8 (13%)	2/8 (25%)
POLY-3 RATE (b)	0/7.00	1/8.00	1/8.00	2/8.00
POLY-3 PERCENT (g)	0%	12.5%	12.5%	25%
TERMINAL (d)	0/7 (0%)	1/8 (13%)	1/8 (13%)	2/8 (25%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.163	P=0.527	P=0.527	P=0.255
POLY 1.5	P=0.163	P=0.527	P=0.527	P=0.255
POLY 6	P=0.163	P=0.527	P=0.527	P=0.255
COCH-ARM / FISHERS	P=0.155	P=0.533	P=0.533	P=0.267
MAX-ISO-POLY-3	P=0.140	P=0.184	P=0.184	P=0.084

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Mediastinal Foreign Body				
LESION RATES				
OVERALL (a)	0/7 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	0/7.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	0%	100%	100%	100%
TERMINAL (d)	0/7 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P<0.001**	P<0.001**	P<0.001**

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
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 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Mediastinal Infiltration Cellular Histiocyte				
LESION RATES				
OVERALL (a)	0/7 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	0/7.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	0%	100%	100%	100%
TERMINAL (d)	0/7 (0%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	---	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
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**
COCH-ARM / FISHERS	P<0.001**	P<0.001**	P<0.001**	P<0.001**
MAX-ISO-POLY-3	P<0.001**	P<0.001**	P<0.001**	P<0.001**

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Mediastinal Necrosis				
LESION RATES				
OVERALL (a)	0/7 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
POLY-3 RATE (b)	0/7.00	0/8.00	0/8.00	1/8.00
POLY-3 PERCENT (g)	0%	0%	0%	12.5%
TERMINAL (d)	0/7 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
FIRST INCIDENCE	---	---	---	2/1 (T)
STATISTICAL TESTS				
POLY 3	P=0.206	(e)	(e)	P=0.527
POLY 1.5	P=0.206	(e)	(e)	P=0.527
POLY 6	P=0.206	(e)	(e)	P=0.527
COCH-ARM / FISHERS	P=0.202	(e)	(e)	P=0.533
MAX-ISO-POLY-3	P=0.154	(e)	(e)	P=0.184

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node, Mediastinal Pigmentation				
LESION RATES				
OVERALL (a)	1/7 (14%)	0/8 (0%)	0/8 (0%)	0/8 (0%)
POLY-3 RATE (b)	1/7.00	0/8.00	0/8.00	0/8.00
POLY-3 PERCENT (g)	14.3%	0%	0%	0%
TERMINAL (d)	1/7 (14%)	0/8 (0%)	0/8 (0%)	0/8 (0%)
FIRST INCIDENCE	271 (T)	---	---	---
STATISTICAL TESTS				
POLY 3	P=0.284N	P=0.473N	P=0.473N	P=0.473N
POLY 1.5	P=0.284N	P=0.473N	P=0.473N	P=0.473N
POLY 6	P=0.284N	P=0.473N	P=0.473N	P=0.473N
COCH-ARM / FISHERS	P=0.283N	P=0.467N	P=0.467N	P=0.467N
MAX-ISO-POLY-3	P=0.105N	P=0.148N	P=0.148N	P=0.148N

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Lymph Node: Lumbar Infiltration Cellular Histiocyte				
LESION RATES				
OVERALL (a)	0/0 (0%)	0/1 (0%)	0/0 (0%)	1/1 (100%)
POLY-3 RATE (b)	0/0.00	0/1.00	0/0.00	1/1.00
POLY-3 PERCENT (g)	0%	0%	0%	100%
TERMINAL (d)	0/0 (0%)	0/1 (0%)	0/0 (0%)	1/1 (100%)
FIRST INCIDENCE	---	---	---	271 (T)
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.310	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

Experiment Number: 20213 - 02
Test Type: 39-WEEK
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Abrasive blasting agents (blasting sand)
CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
Time Report Requested: 13:33:37
First Dose M/F: 04/20/09 / NA
Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3

Lymph Node: Lumbar
Pigmentation

LESION RATES

OVERALL (a)	0/0 (0%)	0/1 (0%)	0/0 (0%)	1/1 (100%)
POLY-3 RATE (b)	0/0.00	0/1.00	0/0.00	1/1.00
POLY-3 PERCENT (g)	0%	0%	0%	100%
TERMINAL (d)	0/0 (0%)	0/1 (0%)	0/0 (0%)	1/1 (100%)
FIRST INCIDENCE	---	---	---	271 (T)

STATISTICAL TESTS

POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	P=0.310	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

Experiment Number: 20213 - 02
Test Type: 39-WEEK
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Abrasive blasting agents (blasting sand)
CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
Time Report Requested: 13:33:37
First Dose M/F: 04/20/09 / NA
Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3

Nose: Olfactory Epithelium
Accumulation, Hyaline Droplet

LESION RATES

OVERALL (a)	8/8 (100%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	8/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	100%	100%	100%	100%
TERMINAL (d)	8/8 (100%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	271 (T)	271 (T)	271 (T)	271 (T)

STATISTICAL TESTS

POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Nose: Olfactory Epithelium Metaplasia Respiratory				
LESION RATES				
OVERALL (a)	0/8 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
POLY-3 RATE (b)	0/8.00	0/8.00	0/8.00	1/8.00
POLY-3 PERCENT (g)	0%	0%	0%	12.5%
TERMINAL (d)	0/8 (0%)	0/8 (0%)	0/8 (0%)	1/8 (13%)
FIRST INCIDENCE	---	---	---	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.197	(e)	(e)	P=0.500
POLY 1.5	P=0.197	(e)	(e)	P=0.500
POLY 6	P=0.197	(e)	(e)	P=0.500
COCH-ARM / FISHERS	P=0.193	(e)	(e)	P=0.500
MAX-ISO-POLY-3	P=0.124	(e)	(e)	P=0.159

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
 CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
 Time Report Requested: 13:33:37
 First Dose M/F: 04/20/09 / NA
 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Nose: Respiratory Epithelium Accumulation, Hyaline Droplet				
LESION RATES				
OVERALL (a)	6/8 (75%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
POLY-3 RATE (b)	6/8.00	8/8.00	8/8.00	8/8.00
POLY-3 PERCENT (g)	75%	100%	100%	100%
TERMINAL (d)	6/8 (75%)	8/8 (100%)	8/8 (100%)	8/8 (100%)
FIRST INCIDENCE	271 (T)	271 (T)	271 (T)	271 (T)
STATISTICAL TESTS				
POLY 3	P=0.096	P=0.223	P=0.223	P=0.223
POLY 1.5	P=0.096	P=0.223	P=0.223	P=0.223
POLY 6	P=0.096	P=0.223	P=0.223	P=0.223
COCH-ARM / FISHERS	P=0.106	P=0.233	P=0.233	P=0.233
MAX-ISO-POLY-3	P=0.023*	P=0.063	P=0.063	P=0.063

Experiment Number: 20213 - 02
 Test Type: 39-WEEK
 Route: RESPIRATORY EXPOSURE WHOLE BODY
 Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
 Abrasive blasting agents (blasting sand)
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 Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
 TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3
Testes				
Atrophy				
LESION RATES				
OVERALL (a)	0/0 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)
POLY-3 RATE (b)	0/0.00	0/0.00	1/1.00	0/0.00
POLY-3 PERCENT (g)	0%	0%	100%	0%
TERMINAL (d)	0/0 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)
FIRST INCIDENCE	---	---	271 (T)	---
STATISTICAL TESTS				
POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

Experiment Number: 20213 - 02
Test Type: 39-WEEK
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Abrasive blasting agents (blasting sand)
CAS Number: BLASTINGSAND

Date Report Requested: 03/20/2012
Time Report Requested: 13:33:37
First Dose M/F: 04/20/09 / NA
Lab: BNW

**STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS IN RATS(HSD)
TERMINAL SACRIFICE AT 39 WEEKS**

DOSE	Males			
	Control	15 mg/m3	30 mg/m3	60 mg/m3

Testes: Bilateral
Atrophy

LESION RATES

OVERALL (a)	0/0 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)
POLY-3 RATE (b)	0/0.00	0/0.00	1/1.00	0/0.00
POLY-3 PERCENT (g)	0%	0%	100%	0%
TERMINAL (d)	0/0 (0%)	0/0 (0%)	1/1 (100%)	0/0 (0%)
FIRST INCIDENCE	---	---	271 (T)	---

STATISTICAL TESTS

POLY 3	(e)	(e)	(e)	(e)
POLY 1.5	(e)	(e)	(e)	(e)
POLY 6	(e)	(e)	(e)	(e)
COCH-ARM / FISHERS	(e)	(e)	(e)	(e)
MAX-ISO-POLY-3	(e)	(e)	(e)	(e)

Experiment Number: 20213 - 02
Test Type: 39-WEEK
Route: RESPIRATORY EXPOSURE WHOLE BODY
Species/Strain: RATS/HSD

P10: STATISTICAL ANALYSIS OF NON-NEOPLASTIC LESIONS
Abrasive blasting agents (blasting sand)
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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.
 - (e) Value of statistic cannot be computed.
 - (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.
 - (g) Poly-3 adjusted lifetime tumor incidence.
 - (n) No statistics are calculated if all dose groups have fewer than two tumors.
 - (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
- The Cochran-Armitage and Fishers exact tests compare directly the overall incidence rates.

*** END OF REPORT ***