Experiment Number: 07062 - 02	P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]	Date Report Requested: 04/17/2013
Test Type: 30-day	1020 Long Multiwalled Carbon Nanotube	Time Report Requested: 07:42:27
Route: RESPIRATORY EXPOSURE WHOLE BODY	CAS Number: L-MWNT-1020	First Dose M/F: 05/30/11 / 05/30/11
Species/Strain: MICE/B6C3F1		Lab: BNW

F1_M3

NTP Study Number:	C07062
Lock Date:	03/30/2012
Cage Range:	ALL
Date Range:	ALL
Reasons For Removal:	ALL
Removal Date Range:	ALL
Treatment Groups:	Include ALL
Study Gender:	Both
TDMSE Version:	3.0.1.1_001
PWG Approval Date:	NONE

Experiment Number: 07062 - 02	P18: INCIDENCE RAT	ES OF NON-NEOPLAS AVERAGE SEVE	TIC LESIONS BY ANA RITY GRADES[b]	TOMIC SITE (a) WITH	Date Report Requested: 04/17/2013			
Test Type: 30-day		1020 Long Multiwall		Time Report Requested: 07:42:27				
Route: RESPIRATORY EXPOSURE WHOLE BODY Species/Strain: MICE/B6C3F1		CAS Number:		First Dose M/F: 05/30/11 / 05/30/17 Lab: BNW				
B6C3F1 MICE MALE	Control	0.1 mg/m3	0.3 mg/m3	1 mg/m3	3 mg/m3	10 mg/m3		
Disposition Summary								
Animals Initially In Study Early Deaths	35	35	35	35	35	35		
Survivors Terminal Sacrifice	10	10	10	10	10	10		
SSAC w/o Nec	25	25	25	25	25	25		
Animals Examined Microscopically	10	10	10	10	10	10		
ALIMENTARY SYSTEM								
Pharynx	(10)	(10)	(10)	(10)	(10)	(10)		
CARDIOVASCULAR SYSTEM								
None								
ENDOCRINE SYSTEM								
None								
GENERAL BODY SYSTEM								
None								
GENITAL SYSTEM								
None								
HEMATOPOIETIC SYSTEM				· · · · · · · · · · · · · · · · · · ·				
Lymph Node Lumbar, Hyperplasia, Lymphoid	(0)	(1) 1 [2.0]	(0)	(0)	(0)	(0)		

Experiment Number: 07062 - 02	P18: INCIDENCE RAT	ES OF NON-NEOPLAS AVERAGE SEVE	STIC LESIONS BY ANA RITY GRADES[b]	ATOMIC SITE (a) WITH	Date Report Requested: 04/17/2013			
Test Type: 30-day Route: RESPIRATORY EXPOSURE WHOLE BODY Species/Strain: MICE/B6C3F1		1020 Long Multiwall CAS Number:	Time Report Requested: 07:42:27 First Dose M/F: 05/30/11 / 05/30/11 Lab: BNW					
B6C3F1 MICE MALE	Control	0.1 mg/m3	0.3 mg/m3	1 mg/m3	3 mg/m3	10 mg/m3		
Lumbar, Pigmentation		1 [2.0]						
Lymph Node, Bronchial Foreign Body Hyperplasia, Lymphoid	(6)	(9)	(7)	(7) 5 [1.0] 2 [1.0]	(9) 9 [1.0] 5 [1.8]	(7) 6 [1.2] 3 [1.7]		
Lymph Node, Mediastinal Foreign Body Hyperplasia, Lymphoid	(9)	(7)	(8) 1 [1.0]	(10) 2 [1.0] 1 [2.0]	(9) 1 [1.0] 1 [3.0]	(9) 3 [1.0] 3 [2.7]		
INTEGUMENTARY SYSTEM								
None								
MUSCULOSKELETAL SYSTEM				· · · · · · · · · · · · · · · · · · ·				
None								
NERVOUS SYSTEM								
None								
RESPIRATORY SYSTEM								
Larynx Epiglottis, Metaplasia, Squamous Lung Foreign Body Inflammation, Chronic Alveolus, Proteinosis Bronchiole, Epithelium, Hyperplasia	(9) 1 [1.0] (10)	(10) 2 [1.0] (10) 9 [1.0]	(10) 3 [1.0] (10) 10 [1.0]	(10) 6 [1.0] (10) 10 [1.4] 8 [1.0]	(10) 9 [1.1] (10) 10 [2.0] 10 [1.2] 3 [1.0] 7 [1.0]	(10) 10 [1.4] (10) 10 [2.9] 10 [2.6] 10 [1.9] 10 [1.6]		
Nose Inflammation, Suppurative Olfactory Epithelium, Accumulation, Hyaline Droplet	(10) 1 [1.0]	(10)	(10)	(10)	(10) 2 [1.0]	(10) 9 [1.2]		

a - Number of animals examined microscopically at site and number of animals with lesion

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

		RITY GRADES[b]		Date Report Requested: 04/17/2013		
	1020 Long Multiwali	ed Carbon Nanotube		Time Report Requ	ested: 07:42:27	
	CAS Number:	First Dose M/F: 05/30/11 / 05/30/11				
				Lab: BNW		
Control	0.1 mg/m3	0.3 mg/m3	1 mg/m3	3 mg/m3	10 mg/m3	
			3 [1.0]	9 [1.0]	10 [1.6]	
(10)	(10)	(10)	(8)	(10)	(10)	
				3 [1.0]	Control 0.1 mg/m3 0.3 mg/m3 1 mg/m3 3 mg/m3 3 [1.0] 9 [1.0] 9 [1.0] 1 mg/m3 1 mg/m3	

*** END OF MALE ***

a - Number of animals examined microscopically at site and number of animals with lesion b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

Experiment Number: 07062 - 02	P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH AVERAGE SEVERITY GRADES[b]			Date Report Requested: 04/17/2013		
Test Type: 30-day Route: RESPIRATORY EXPOSURE WHOLE BODY Species/Strain: MICE/B6C3F1		1020 Long Multiwall CAS Number:	Time Report Requested: 07:42:27 First Dose M/F: 05/30/11 / 05/30/11 Lab: BNW			
B6C3F1 MICE FEMALE	Control	0.1 mg/m3	0.3 mg/m3	1 mg/m3	3 mg/m3	10 mg/m3
Disposition Summary						
Animals Initially In Study Early Deaths Survivors	35	35	35	35	35	35
Terminal Sacrifice	10	10	10	10	10	10
SSAC w/o Nec	25	25	25	25	25	25
Animals Examined Microscopically	10	10	10	10	10	10
ALIMENTARY SYSTEM						
Liver	(2)	(0)	(0)	(0)	(0)	(0)
Necrosis, Focal	1 [1.0]					
Pharynx	(10)	(10)	(10)	(10)	(10)	(10)
CARDIOVASCULAR SYSTEM						
None						
ENDOCRINE SYSTEM						
None						
GENERAL BODY SYSTEM						
None						
GENITAL SYSTEM						
None						
HEMATOPOIETIC SYSTEM						

a - Number of animals examined microscopically at site and number of animals with lesion b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

Experiment Number: 07062 - 02	P18: INCIDENCE RAT	ES OF NON-NEOPLAS AVERAGE SEVE	STIC LESIONS BY ANA RITY GRADES[b]	TOMIC SITE (a) WITH	E (a) WITH Date Report Requested			
Test Type: 30-day		1020 Long Multiwall	ed Carbon Nanotube		Time Report Requ	lested: 07:42:27		
Route: RESPIRATORY EXPOSURE WHOLE BODY		CAS Number:	L-MWNT-1020		First Dose M/F: 05	5/30/11 / 05/30/11		
Species/Strain: MICE/B6C3F1					Lab: BNW			
B6C3F1 MICE FEMALE	Control	0.1 mg/m3	0.3 mg/m3	1 mg/m3	3 mg/m3	10 mg/m3		
Lymph Node	(1)	(1)	(2)	(0)	(1)	(1)		
Lumbar, Pigmentation	1 [2.0]	1 [2.0]	2 [2.0]		1 [2.0]	1 [1.0]		
Lymph Node, Bronchial	(9)	(3)	(8)	(9)	(6)	(6)		
Foreign Body	(-)	(-)	(-)	3 [1.0]	5 [1.0]	5 [1.0]		
Hyperplasia, Lymphoid	1 [1.0]			2 [1.0]	3 [1.3]	5 [1.8]		
Lymph Node, Mediastinal	(7)	(8)	(8)		(10)	(9)		
	(7)	(0)	(0)	(7)				
Foreign Body				4 [0 0]	4 [1.0]	7 [1.0]		
Hyperplasia, Lymphoid				1 [2.0]	1 [2.0]	5 [1.4]		
INTEGUMENTARY SYSTEM								
None								
MUSCULOSKELETAL SYSTEM								
None								
NERVOUS SYSTEM								
None								
RESPIRATORY SYSTEM								
Larynx	(10)	(10)	(10)	(10)	(10)	(10)		
Epiglottis, Metaplasia, Squamous	1 [1.0]	1 [1.0]	1 [1.0]	4 [1.0]	6 [1.0]	10 [1.9]		
Lung	(10)	(10)	(10)	(10)	(10)	(10)		
Foreign Body	. ,	9 [1.0]	10 [1.0]	10 [2.0]	10 [2.0]	10 [3.0]		
Inflammation, Chronic				4 [1.0]	10 [1.3]	10 [2.8]		
Metaplasia, Osseous		1 [1.0]		. [•]		[=]		
Alveolus, Proteinosis		. []			9 [1.0]	10 [1.6]		
Bronchiole, Epithelium, Hyperplasia					6 [1.0]	10 [1.3]		
Nose	(10)	(10)	(10)	(10)	(10)	(10)		
Olfactory Epithelium, Accumulation, Hyaline	(10)	(10)						
Droplet			1 [1.0]	3 [1.0]	8 [1.0]	10 [1.8]		

a - Number of animals examined microscopically at site and number of animals with lesion

b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)

Control	1020 Long Multiwall	RITY GRADES[b] ed Carbon Nanotube L-MWNT-1020 0.3 mg/m3	4	First Dose M/F: 05 Lab: BNW			
Control			4	Lab: BNW	me Report Requested: 07:42:27 rst Dose M/F: 05/30/11 / 05/30/11 ab: BNW 3 mg/m3 10 mg/m3 10 [1.1] 10 [2.0] (9) (10)		
Control	0.1 mg/m3	0.3 mg/m3	4				
Control	0.1 mg/m3	0.3 mg/m3	4				
		5	1 mg/m3	3 mg/m3	10 mg/m3		
			8 [1.0]	10 [1.1]	10 [2.0]		
(10)	(9)	(10)	(10)	(9)	(10)		
	(10)	(10) (9)	(10) (9) (10)				

*** END OF REPORT ***

a - Number of animals examined microscopically at site and number of animals with lesion b-Average severity grade(1-minimal;2-mild;3-moderate;4-marked)