

Experiment Number: 20320 - 04

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS
ABRIDGED) (a)**

Date Report Requested: 01/22/2013

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

F1_M3

NTP Study Number: C20320
Lock Date: 01/12/2010
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 3.0.1.0_004
PWG Approval Date: NONE

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
------------------	---------	-----------	-----------	------------

Disposition Summary

Animals Initially In Study	50	50	50	50
Early Deaths				
Dosing Accident				1
Moribund Sacrifice	9	10	6	12
Natural Death	8	14	5	25
Survivors				
Moribund Sacrifice	1	1		
Terminal Sacrifice	32	25	39	12
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(49)	(46)	(50)	(49)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Intestine Large, Cecum	(47)	(44)	(47)	(38)
Carcinoma			1 (2%)	
Carcinoma, Metastatic, Pancreas		1 (2%)		
Intestine Large, Colon	(47)	(46)	(50)	(40)
Adenoma			1 (2%)	
Carcinoma			1 (2%)	
Carcinoma, Metastatic, Pancreas		1 (2%)		
Intestine Large, Rectum	(47)	(46)	(50)	(41)
Intestine Small, Duodenum	(47)	(41)	(48)	(31)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Intestine Small, Ileum	(47)	(43)	(50)	(40)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Intestine Small, Jejunum	(47)	(44)	(49)	(38)
Adenoma				1 (3%)
Adenoma, Multiple	1 (2%)			
Carcinoma	1 (2%)	1 (2%)	2 (4%)	1 (3%)
Liver	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		2 (4%)		
Hemangioma	2 (4%)			1 (2%)

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Hemangiosarcoma		4 (8%)	3 (6%)	2 (4%)
Hepatoblastoma	2 (4%)	11 (22%)	8 (16%)	3 (6%)
Hepatocellular Adenoma	20 (40%)	13 (26%)	10 (20%)	9 (18%)
Hepatocellular Adenoma, Multiple	12 (24%)	20 (40%)	28 (56%)	12 (24%)
Hepatocellular Carcinoma	9 (18%)	11 (22%)	12 (24%)	7 (14%)
Hepatocellular Carcinoma, Multiple	2 (4%)	4 (8%)	5 (10%)	2 (4%)
Osteosarcoma, Metastatic, Skin		1 (2%)		
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Sarcoma		1 (2%)		
Mesentery	(3)	(3)	(4)	(2)
Carcinoma, Metastatic, Pancreas		1 (33%)		
Hemangiosarcoma				1 (50%)
Fat, Hepatocellular Carcinoma, Metastatic, Liver			1 (25%)	
Pancreas	(50)	(50)	(50)	(50)
Acinus, Carcinoma		2 (4%)		
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(49)	(50)	(49)
Squamous Cell Papilloma	5 (10%)		1 (2%)	
Stomach, Glandular	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Tooth	(14)	(9)	(9)	(2)
Odontoma	2 (14%)	1 (11%)		

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(50)	(50)
Heart	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		1 (2%)		

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma	1 (2%)			

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Carcinoma, Metastatic, Pancreas		1 (2%)		
Adrenal Medulla	(50)	(50)	(50)	(50)
Pheochromocytoma Complex		1 (2%)		
Islets, Pancreatic	(50)	(50)	(50)	(50)
Parathyroid Gland	(45)	(43)	(48)	(42)
Pituitary Gland	(50)	(48)	(48)	(50)
Thyroid Gland	(50)	(50)	(50)	(50)
Follicular Cell, Adenoma		1 (2%)		
GENERAL BODY SYSTEM				
Peritoneum	(0)	(2)	(0)	(0)
Carcinoma, Metastatic, Pancreas		1 (50%)		
GENITAL SYSTEM				
Coagulating Gland	(3)	(4)	(1)	(0)
Adenoma		1 (25%)		
Carcinoma, Metastatic, Pancreas		2 (50%)		
Granular Cell Tumor	1 (33%)			
Sarcoma, Metastatic, Skin	1 (33%)			
Epididymis	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		2 (4%)		
Preputial Gland	(50)	(50)	(50)	(50)
Prostate	(50)	(50)	(50)	(50)
Seminal Vesicle	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Testes	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		1 (2%)		
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Hemangiosarcoma		2 (4%)	1 (2%)	

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Lymph Node	(3)	(0)	(2)	(0)
Hepatocellular Carcinoma, Metastatic, Liver			1 (50%)	
Renal, Sarcoma, Metastatic, Skin	1 (33%)			
Lymph Node, Mandibular	(50)	(50)	(50)	(49)
Lymph Node, Mesenteric	(50)	(49)	(50)	(49)
Carcinoma, Metastatic, Pancreas		2 (4%)		
Hemangiosarcoma, Metastatic, Spleen			1 (2%)	
Spleen	(50)	(48)	(50)	(49)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Carcinoma, Metastatic, Pancreas		2 (4%)		
Hemangioma			1 (2%)	
Hemangiosarcoma	1 (2%)	3 (6%)	4 (8%)	3 (6%)
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Thymus	(47)	(45)	(41)	(48)
Carcinoma, Metastatic, Pancreas		1 (2%)		
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		

INTEGUMENTARY SYSTEM

Skin	(50)	(50)	(50)	(50)
Fibrous Histiocytoma		1 (2%)		1 (2%)
Hemangiosarcoma			2 (4%)	
Keratoacanthoma	1 (2%)			
Melanoma Benign			1 (2%)	
Osteosarcoma		1 (2%)		
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Sarcoma	1 (2%)			
Pinna, Fibrous Histiocytoma		1 (2%)		
Subcutaneous Tissue, Lipoma				1 (2%)

MUSCULOSKELETAL SYSTEM

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Bone	(50)	(50)	(50)	(50)
Vertebra, Hemangiosarcoma			1 (2%)	
Skeletal Muscle	(0)	(1)	(1)	(0)
Rhabdomyosarcoma		1 (100%)		

NERVOUS SYSTEM

Brain	(50)	(50)	(50)	(50)
Peripheral Nerve	(0)	(0)	(0)	(2)
Spinal Cord	(0)	(0)	(0)	(2)

RESPIRATORY SYSTEM

Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	4 (8%)	5 (10%)	2 (4%)	3 (6%)
Alveolar/Bronchiolar Adenoma, Multiple	2 (4%)			
Alveolar/Bronchiolar Carcinoma	4 (8%)	4 (8%)	7 (14%)	2 (4%)
Carcinoma, Metastatic, Harderian Gland	1 (2%)			
Carcinoma, Metastatic, Pancreas		2 (4%)		
Hepatoblastoma, Metastatic, Liver	1 (2%)	2 (4%)	1 (2%)	
Hepatocellular Carcinoma, Metastatic, Liver	5 (10%)	5 (10%)	4 (8%)	2 (4%)
Osteosarcoma, Metastatic, Skin		1 (2%)		
Rhabdomyosarcoma, Metastatic, Skeletal Muscle		1 (2%)		
Sarcoma, Metastatic, Skin	1 (2%)			
Serosa, Hemangiosarcoma			1 (2%)	
Nose	(50)	(50)	(50)	(50)
Trachea	(50)	(50)	(50)	(50)

SPECIAL SENSES SYSTEM

Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Adenoma	7 (14%)	3 (6%)	7 (14%)	9 (18%)

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Carcinoma	1 (2%)	1 (2%)	2 (4%)	
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(48)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung	1 (2%)			
Hemangiosarcoma				1 (2%)
Sarcoma, Metastatic, Skin	1 (2%)			
Renal Tubule, Adenoma		1 (2%)	1 (2%)	2 (4%)
Urinary Bladder	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pancreas		1 (2%)		
SYSTEMIC LESIONS				
Multiple Organ	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma			2 (4%)	
Leukemia Granulocytic				1 (2%)
Lymphoma Malignant	3 (6%)	1 (2%)	2 (4%)	

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

* Number of animals with any tissue examined microscopically

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE MALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
------------------	---------	-----------	-----------	------------

Tumor Summary for Males

Total Animals with Primary Neoplasms (b)	47	48	48	33
Total Primary Neoplasms	82	95	106	62
Total Animals with Benign Neoplasms	38	35	41	28
Total Benign Neoplasms	58	45	52	38
Total Animals with Malignant Neoplasms	21	33	34	18
Total Malignant Neoplasms	24	50	54	24
Total Animals with Metastatic Neoplasms	9	10	7	2
Total Metastatic Neoplasms	13	40	8	2
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain- Benign or Malignant				
Total Uncertain Neoplasms				

*** END OF MALE ***

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

b - Primary tumors: all tumors except metastatic tumors

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
--------------------	---------	-----------	-----------	------------

Disposition Summary

Animals Initially In Study	50	50	50	50
Early Deaths				
Dosing Accident				1
Moribund Sacrifice	6	8	3	7
Natural Death	4	11	11	38
Survivors				
Terminal Sacrifice	40	31	36	4
Animals Examined Microscopically	50	50	50	50

ALIMENTARY SYSTEM

Esophagus	(50)	(50)	(50)	(50)
Gallbladder	(47)	(49)	(50)	(50)
Intestine Large, Cecum	(48)	(46)	(45)	(21)
Leiomyoma		1 (2%)		
Intestine Large, Colon	(50)	(48)	(50)	(43)
Intestine Large, Rectum	(50)	(50)	(50)	(41)
Adenoma			1 (2%)	
Intestine Small, Duodenum	(47)	(46)	(42)	(18)
Adenoma	1 (2%)			
Carcinoma		1 (2%)		
Intestine Small, Ileum	(48)	(46)	(45)	(19)
Intestine Small, Jejunum	(48)	(47)	(43)	(18)
Liver	(50)	(50)	(49)	(49)
Hemangioma			2 (4%)	
Hemangiosarcoma		1 (2%)		
Hepatocellular Adenoma	12 (24%)	9 (18%)	11 (22%)	1 (2%)
Hepatocellular Adenoma, Multiple	1 (2%)	4 (8%)	4 (8%)	
Hepatocellular Carcinoma	2 (4%)	3 (6%)	5 (10%)	1 (2%)
Hepatocellular Carcinoma, Multiple		1 (2%)		
Squamous Cell Carcinoma, Metastatic, Stomach, Forestomach		1 (2%)		
Mesentery	(3)	(8)	(7)	(0)
Oral Mucosa	(1)	(0)	(0)	(0)

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Squamous Cell Carcinoma	1 (100%)			
Pancreas	(50)	(49)	(50)	(50)
Salivary Glands	(50)	(48)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(48)
Squamous Cell Carcinoma		1 (2%)		
Squamous Cell Carcinoma, Multiple		1 (2%)		
Stomach, Glandular	(50)	(50)	(50)	(50)
Tongue	(1)	(0)	(0)	(0)
Squamous Cell Papilloma	1 (100%)			
Tooth	(1)	(1)	(1)	(0)

CARDIOVASCULAR SYSTEM

Blood Vessel	(50)	(50)	(49)	(50)
Heart	(50)	(50)	(50)	(50)

ENDOCRINE SYSTEM

Adrenal Cortex	(50)	(50)	(49)	(50)
Adrenal Medulla	(50)	(50)	(49)	(50)
Pheochromocytoma Benign	1 (2%)			
Islets, Pancreatic	(50)	(49)	(50)	(50)
Parathyroid Gland	(34)	(41)	(42)	(43)
Pituitary Gland	(50)	(50)	(50)	(49)
Pars Distalis, Adenoma	1 (2%)			
Pars Intermedia, Adenoma			1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Carcinoma			1 (2%)	
Follicular Cell, Adenoma			1 (2%)	

GENERAL BODY SYSTEM

Peritoneum	(0)	(1)	(0)	(0)
------------	-----	-----	-----	-----

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
GENITAL SYSTEM				
Clitoral Gland	(50)	(50)	(49)	(48)
Ovary	(50)	(50)	(50)	(47)
Cystadenoma	2 (4%)		1 (2%)	2 (4%)
Granulosa Cell Tumor Malignant			1 (2%)	
Luteoma		1 (2%)		
Oviduct	(1)	(0)	(1)	(0)
Uterus	(50)	(50)	(50)	(50)
Polyp Stromal		1 (2%)	1 (2%)	
Sarcoma Stromal	1 (2%)		1 (2%)	
Cervix, Sarcoma Stromal	1 (2%)			
Vagina	(0)	(1)	(0)	(0)

HEMATOPOIETIC SYSTEM

Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(1)	(5)	(3)	(1)
Pancreatic, Granulosa Cell Tumor Malignant, Metastatic, Ovary			1 (33%)	
Lymph Node, Mandibular	(50)	(48)	(48)	(46)
Lymph Node, Mesenteric	(50)	(50)	(50)	(47)
Spleen	(50)	(50)	(50)	(50)
Hemangiosarcoma	1 (2%)			
Thymus	(50)	(50)	(48)	(50)

INTEGUMENTARY SYSTEM

Mammary Gland	(50)	(50)	(50)	(50)
Fibroadenoma			1 (2%)	
Skin	(50)	(50)	(50)	(50)
Basal Cell Carcinoma	1 (2%)			
Fibrosarcoma	1 (2%)			
Fibrous Histiocytoma		1 (2%)		
Hemangioma	1 (2%)			

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

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
Schwannoma Malignant			1 (2%)	
Squamous Cell Papilloma				1 (2%)
Subcutaneous Tissue, Hemangiosarcoma	1 (2%)			
Subcutaneous Tissue, Sarcoma				1 (2%)
Subcutaneous Tissue, Schwannoma Malignant	1 (2%)			
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Fibroma	1 (2%)			
Osteosarcoma		1 (2%)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	5 (10%)	2 (4%)	1 (2%)	
Alveolar/Bronchiolar Carcinoma	1 (2%)			
Schwannoma Malignant, Metastatic, Skin			1 (2%)	
Nose	(50)	(50)	(50)	(50)
Trachea	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(49)	(50)	(50)
Adenoma	2 (4%)	6 (12%)	3 (6%)	1 (2%)
Carcinoma	1 (2%)	1 (2%)	2 (4%)	

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

Experiment Number: 20320 - 04

**P05: INCIDENCE RATES OF NEOPLASMS BY ANATOMIC SITE (SYSTEMIC LESIONS
ABRIDGED) (a)**

Date Report Requested: 01/22/2013

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
<hr/>				
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(47)
Urinary Bladder	(50)	(50)	(50)	(50)
<hr/>				
SYSTEMIC LESIONS				
Multiple Organ	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	1 (2%)	2 (4%)		
Leukemia Mononuclear		1 (2%)		
Lymphoma Malignant	9 (18%)	4 (8%)	4 (8%)	1 (2%)

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

* Number of animals with any tissue examined microscopically

Test Type: CHRONIC

Tetrabromobisphenol A

Time Report Requested: 10:11:10

Route: GAVAGE

CAS Number: 79-94-7

First Dose M/F: 08/07/07 / 08/06/07

Species/Strain: MICE/B6C3F1

Lab: BAT

B6C3F1 MICE FEMALE	0 mg/kg	250 mg/kg	500 mg/kg	1000 mg/kg
--------------------	---------	-----------	-----------	------------

Tumor Summary for Females

Total Animals with Primary Neoplasms (b)	32	32	28	6
Total Primary Neoplasms	50	42	42	8
Total Animals with Benign Neoplasms	22	23	21	5
Total Benign Neoplasms	28	24	27	5
Total Animals with Malignant Neoplasms	18	17	15	2
Total Malignant Neoplasms	22	18	15	3
Total Animals with Metastatic Neoplasms		2	2	
Total Metastatic Neoplasms		2	2	
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain- Benign or Malignant				
Total Uncertain Neoplasms				

*** END OF REPORT ***

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

b - Primary tumors: all tumors except metastatic tumors