

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Disposition Summary				
Animals Initially in Study	66	66	66	66
Early Deaths				
Moribund Sacrifice	15	17	17	17
Natural Death	4	7	8	4
Survivors				
Terminal Sacrifice	31	26	25	29
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Esophagus	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(48)	(48)	(47)	(49)
Intestine Large, Colon	(50)	(49)	(50)	(48)
Adenoma		1 (2%)		3 (6%)
Intestine Large, Rectum	(50)	(50)	(50)	(49)
Adenoma		1 (2%)		1 (2%)
Intestine Small, Duodenum	(50)	(49)	(50)	(49)
Intestine Small, Ileum	(49)	(46)	(47)	(49)
Intestine Small, Jejunum	(47)	(46)	(46)	(48)
Liver	(50)	(50)	(50)	(50)
Fibrosarcoma, Metastatic, Spleen		1 (2%)		
Hepatocellular Adenoma	2 (4%)		3 (6%)	3 (6%)
Hepatocellular Adenoma, Multiple				1 (2%)
Mesentery	(6)	(16)	(15)	(15)
Fibrosarcoma		2 (13%)		
Fibrosarcoma, Metastatic, Spleen		1 (6%)		
Oral Mucosa	(0)	(0)	(1)	(1)
Squamous Cell Papilloma				1 (100%)
Pharyngeal, Squamous Cell Papilloma			1 (100%)	
Pancreas	(50)	(50)	(50)	(50)
Fibrosarcoma, Metastatic, Mesentery		2 (4%)		
Fibrosarcoma, Metastatic, Spleen		1 (2%)		
Acinus, Adenoma	2 (4%)		1 (2%)	1 (2%)
Salivary Glands	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Stomach, Glandular	(50)	(50)	(50)	(50)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Tongue	(0)	(1)	(0)	(1)
Squamous Cell Papilloma		1 (100%)		
Tooth	(0)	(0)	(0)	(2)
CARDIOVASCULAR SYSTEM				
Heart	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (2%)
Schwannoma Benign				1 (2%)
ENDOCRINE SYSTEM				
Adrenal Cortex	(50)	(50)	(50)	(50)
Adenoma			1 (2%)	
Adrenal Medulla	(50)	(50)	(50)	(50)
Pheochromocytoma Benign	8 (16%)	13 (26%)	7 (14%)	11 (22%)
Pheochromocytoma Malignant	1 (2%)	2 (4%)	1 (2%)	1 (2%)
Bilateral, Pheochromocytoma Benign	1 (2%)		1 (2%)	1 (2%)
Islets, Pancreatic	(50)	(50)	(50)	(50)
Adenoma	3 (6%)	4 (8%)	9 (18%)	3 (6%)
Carcinoma	2 (4%)	2 (4%)	1 (2%)	1 (2%)
Pituitary Gland	(48)	(50)	(50)	(50)
Pars Distalis, Adenoma	23 (48%)	30 (60%)	23 (46%)	21 (42%)
Pars Distalis, Carcinoma			1 (2%)	
Thyroid Gland	(50)	(50)	(50)	(50)
C-cell, Adenoma	3 (6%)	7 (14%)	7 (14%)	8 (16%)
C-cell, Carcinoma	1 (2%)	1 (2%)		
Follicular Cell, Adenoma	2 (4%)	2 (4%)	1 (2%)	2 (4%)
Follicular Cell, Carcinoma	1 (2%)		1 (2%)	
GENERAL BODY SYSTEM				
Peritoneum	(0)	(4)	(2)	(3)
GENITAL SYSTEM				
Epididymis	(50)	(50)	(50)	(50)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Fibrosarcoma, Metastatic, Mesentery		1 (2%)		
Preputial Gland	(50)	(49)	(50)	(49)
Adenoma	4 (8%)	7 (14%)	7 (14%)	8 (16%)
Carcinoma	2 (4%)	1 (2%)		
Prostate	(50)	(50)	(50)	(50)
Seminal Vesicle	(50)	(50)	(50)	(50)
Fibrosarcoma, Metastatic, Spleen		1 (2%)		
Testes	(50)	(50)	(50)	(50)
Bilateral, Interstitial Cell, Adenoma	38 (76%)	39 (78%)	39 (78%)	43 (86%)
Interstitial Cell, Adenoma	8 (16%)	7 (14%)	5 (10%)	3 (6%)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(14)	(31)	(19)	(25)
Mediastinal, Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (4%)
Lymph Node, Mandibular	(1)	(3)	(0)	(0)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Fibrosarcoma, Metastatic, Spleen		1 (2%)		
Spleen	(50)	(50)	(50)	(50)
Fibrosarcoma		3 (6%)		
Hemangiosarcoma				1 (2%)
Thymus	(49)	(50)	(50)	(48)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (2%)
Thymoma Malignant				1 (2%)
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Fibroadenoma	3 (6%)	4 (8%)	3 (6%)	4 (8%)
Skin	(50)	(50)	(50)	(50)
Basal Cell Adenoma		1 (2%)	2 (4%)	1 (2%)
Keratoacanthoma	1 (2%)		2 (4%)	1 (2%)
Squamous Cell Papilloma	3 (6%)	4 (8%)	4 (8%)	2 (4%)
Squamous Cell Papilloma, Multiple		1 (2%)		
Trichoepithelioma	3 (6%)			
Sebaceous Gland, Adenoma				1 (2%)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Subcutaneous Tissue, Fibroma	7 (14%)	7 (14%)	2 (4%)	4 (8%)
Subcutaneous Tissue, Fibrosarcoma	1 (2%)	3 (6%)		
Subcutaneous Tissue, Lipoma		1 (2%)		
Subcutaneous Tissue, Liposarcoma	1 (2%)			
Subcutaneous Tissue, Neural Crest Tumor	1 (2%)		1 (2%)	1 (2%)
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma			1 (2%)	
Thymoma Malignant, Metastatic, Thymus				1 (2%)
Skeletal Muscle	(1)	(4)	(0)	(1)
Alveolar/Bronchiolar Carcinoma, Metastatic, Lung				1 (100%)
Fibrosarcoma, Metastatic, Mesentery		2 (50%)		
Fibrosarcoma, Metastatic, Spleen		1 (25%)		
Hemangioma		1 (25%)		
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Astrocytoma Malignant			1 (2%)	
Oligodendroglioma Malignant			1 (2%)	1 (2%)
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	2 (4%)	1 (2%)		1 (2%)
Alveolar/Bronchiolar Carcinoma	1 (2%)			2 (4%)
Carcinoma, Metastatic, Thyroid Gland	1 (2%)			
Thymoma Malignant, Metastatic, Thymus				1 (2%)
Nose	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Zymbal's Gland	(1)	(1)	(1)	(0)
Adenoma			1 (100%)	
Carcinoma	1 (100%)	1 (100%)		
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Renal Tubule, Adenoma				1 (2%)
Urinary Bladder	(50)	(50)	(50)	(49)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Leukemia Mononuclear	21 (42%)	23 (46%)	19 (38%)	21 (42%)
Lymphoma Malignant				1 (2%)
Mesothelioma Malignant	1 (2%)	5 (10%)	10 (20%)	6 (12%)

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

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS MALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Tumor Summary for Males				
Total Animals with Primary Neoplasms (b)	50	50	50	50
Total Primary Neoplasms	147	175	156	162
Total Animals with Benign Neoplasms	50	50	49	48
Total Benign Neoplasms	113	132	119	126
Total Animals with Malignant Neoplasms	27	33	33	31
Total Malignant Neoplasms	33	43	36	35
Total Animals with Metastatic Neoplasms	1	3		2
Total Metastatic Neoplasms	1	11		6
Total Animals with Malignant Neoplasms Uncertain Primary Site				
Total Animals with Neoplasms Uncertain-Benign or Malignant	1		1	1
Total Uncertain Neoplasms	1		1	1

*** 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

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Disposition Summary				
Animals Initially in Study	66	66	66	66
Early Deaths				
Moribund Sacrifice	12	14	9	13
Natural Death	4	5	4	2
Survivors				
Natural Death			1	
Terminal Sacrifice	34	31	36	35
Animals Examined Microscopically	50	50	50	50
ALIMENTARY SYSTEM				
Intestine Large, Cecum	(48)	(47)	(48)	(49)
Leiomyosarcoma				1 (2%)
Intestine Large, Colon	(50)	(49)	(50)	(50)
Adenoma			2 (4%)	5 (10%)
Adenoma, Multiple				1 (2%)
Intestine Large, Rectum	(50)	(50)	(50)	(50)
Adenoma			1 (2%)	2 (4%)
Intestine Small, Duodenum	(49)	(48)	(49)	(49)
Intestine Small, Ileum	(47)	(47)	(48)	(48)
Intestine Small, Jejunum	(47)	(47)	(48)	(48)
Leiomyosarcoma	1 (2%)			
Liver	(50)	(50)	(50)	(50)
Hepatocellular Adenoma				3 (6%)
Leiomyosarcoma, Metastatic, Uncertain Primary Site				1 (2%)
Mesentery	(9)	(9)	(9)	(6)
Leiomyosarcoma				1 (17%)
Oral Mucosa	(2)	(0)	(0)	(1)
Carcinoma, Metastatic, Thyroid Gland	1 (50%)			
Squamous Cell Carcinoma				1 (100%)
Pharyngeal, Squamous Cell Papilloma	1 (50%)			
Pancreas	(50)	(50)	(50)	(50)
Stomach, Forestomach	(50)	(50)	(50)	(50)
Stomach, Glandular	(50)	(50)	(50)	(50)
Leiomyosarcoma				1 (2%)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Tongue Carcinoma, Metastatic, Thyroid Gland Squamous Cell Papilloma	(1) 1 (100%)	(0)	(1) 1 (100%)	(0)
CARDIOVASCULAR SYSTEM				
Heart Schwannoma Benign	(50) 1 (2%)	(50)	(50)	(50)
ENDOCRINE SYSTEM				
Adrenal Cortex Adenoma	(50) 1 (2%)	(50)	(50)	(50) 1 (2%)
Adrenal Medulla Pheochromocytoma Benign Pheochromocytoma Complex Pheochromocytoma Malignant Bilateral, Pheochromocytoma Benign	(49) 2 (4%) 2 (4%) 2 (4%) 1 (2%)	(47) 1 (2%) 1 (2%) 1 (2%) 1 (2%)	(50) 4 (8%) 4 (8%) 4 (8%) 1 (2%)	(50) 4 (8%) 1 (2%) 1 (2%) 1 (2%)
Islets, Pancreatic Adenoma Carcinoma Carcinoma, Metastatic, Thyroid Gland	(49) 3 (6%) 1 (2%) 1 (2%)	(50) 1 (2%) 1 (2%) 1 (2%)	(50) 1 (2%) 1 (2%) 1 (2%)	(50) 2 (4%) 1 (2%) 1 (2%)
Pituitary Gland Pars Distalis, Adenoma Pars Distalis, Carcinoma	(50) 28 (56%) 1 (2%)	(50) 33 (66%) 1 (2%)	(50) 30 (60%) 1 (2%)	(50) 26 (52%) 1 (2%)
Thyroid Gland Bilateral, C-cell, Adenoma C-cell, Adenoma C-cell, Carcinoma Follicular Cell, Adenoma	(49) 6 (12%) 1 (2%) 1 (2%)	(50) 1 (2%) 6 (12%) 1 (2%)	(50) 2 (4%) 8 (16%) 2 (4%)	(50) 1 (2%) 7 (14%) 1 (2%)
GENERAL BODY SYSTEM				
None				
GENITAL SYSTEM				
Clitoral Gland	(50)	(49)	(50)	(47)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Adenoma	16 (32%)	10 (20%)	8 (16%)	9 (19%)
Carcinoma		2 (4%)		1 (2%)
Bilateral, Adenoma	1 (2%)	1 (2%)		3 (6%)
Ovary	(50)	(50)	(50)	(50)
Bilateral, Carcinoma, Metastatic, Thyroid Gland	1 (2%)			
Uterus	(50)	(50)	(50)	(50)
Adenocarcinoma		1 (2%)		
Adenoma		1 (2%)		
Polyp Stromal	9 (18%)	6 (12%)	13 (26%)	11 (22%)
Vagina	(0)	(1)	(0)	(1)
HEMATOPOIETIC SYSTEM				
Bone Marrow	(50)	(50)	(50)	(50)
Lymph Node	(15)	(20)	(11)	(16)
Deep Cervical, Carcinoma, Metastatic, Thyroid Gland	1 (7%)			
Mediastinal, Carcinoma, Metastatic, Thyroid Gland	1 (7%)			
Lymph Node, Mandibular	(0)	(2)	(1)	(1)
Lymph Node, Mesenteric	(50)	(50)	(50)	(50)
Spleen	(50)	(50)	(50)	(50)
Hemangiosarcoma				1 (2%)
Thymus	(50)	(50)	(50)	(50)
Thymoma Benign				1 (2%)
INTEGUMENTARY SYSTEM				
Mammary Gland	(50)	(50)	(50)	(50)
Carcinoma	1 (2%)	1 (2%)		3 (6%)
Fibroadenoma	21 (42%)	19 (38%)	4 (8%)	8 (16%)
Fibroadenoma, Multiple	22 (44%)	24 (48%)	43 (86%)	38 (76%)
Skin	(50)	(50)	(50)	(50)
Basal Cell Adenoma		1 (2%)		
Keratoacanthoma		1 (2%)	1 (2%)	
Trichoepithelioma		1 (2%)		
Pinna, Neural Crest Tumor			1 (2%)	
Sebaceous Gland, Carcinoma				1 (2%)

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Subcutaneous Tissue, Fibroma	1 (2%)	1 (2%)	1 (2%)	4 (8%)
Subcutaneous Tissue, Fibroma, Multiple			1 (2%)	
Subcutaneous Tissue, Fibrosarcoma				2 (4%)
Subcutaneous Tissue, Schwannoma Nos		1 (2%)		
MUSCULOSKELETAL SYSTEM				
Bone	(50)	(50)	(50)	(50)
Osteosarcoma		1 (2%)		
Mandible, Squamous Cell Carcinoma, Metastatic, Oral Mucosa				1 (2%)
Vertebra, Osteosarcoma	1 (2%)			
NERVOUS SYSTEM				
Brain	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Pituitary Gland			1 (2%)	
Granular Cell Tumor Benign			1 (2%)	
RESPIRATORY SYSTEM				
Lung	(50)	(50)	(50)	(50)
Alveolar/Bronchiolar Adenoma	1 (2%)		2 (4%)	2 (4%)
Alveolar/Bronchiolar Carcinoma		1 (2%)		
Carcinoma, Metastatic, Mammary Gland				1 (2%)
Carcinoma, Metastatic, Skin				1 (2%)
Carcinoma, Metastatic, Thyroid Gland	1 (2%)			
Osteosarcoma, Metastatic, Bone		1 (2%)		
Squamous Cell Carcinoma				1 (2%)
Nose	(50)	(50)	(50)	(50)
SPECIAL SENSES SYSTEM				
Eye	(50)	(50)	(50)	(50)
Harderian Gland	(50)	(50)	(50)	(50)
Zymbal's Gland	(0)	(2)	(0)	(0)
Adenoma		1 (50%)		
Carcinoma		1 (50%)		

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

Test Type: CHRONIC

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
URINARY SYSTEM				
Kidney	(50)	(50)	(50)	(50)
Carcinoma, Metastatic, Thyroid Gland	1 (2%)			
Lipoma		1 (2%)		
Renal Tubule, Adenoma	1 (2%)			
Urinary Bladder	(50)	(50)	(50)	(50)
SYSTEMIC LESIONS				
Multiple Organs	*(50)	*(50)	*(50)	*(50)
Histiocytic Sarcoma	1 (2%)			
Leukemia Mononuclear	15 (30%)	12 (24%)	12 (24%)	12 (24%)

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

Water disinfection byproducts (Bromochloroacetic acid)

Time Report Requested: 09:56:07

Route: DOSED WATER

CAS Number: 5589-96-8

First Dose M/F: 09/26/01 / 09/26/01

Species/Strain: RATS/F 344

Lab: SRI

FISCHER 344 RATS FEMALE	0 MG/L	250 MG/L	500 MG/L	1000 MG/L
Tumor Summary for Females				
Total Animals with Primary Neoplasms (b)	49	49	49	50
Total Primary Neoplasms	135	131	139	157
Total Animals with Benign Neoplasms	49	48	48	47
Total Benign Neoplasms	113	110	125	130
Total Animals with Malignant Neoplasms	18	18	13	23
Total Malignant Neoplasms	22	20	13	27
Total Animals with Metastatic Neoplasms	1	1	1	4
Total Metastatic Neoplasms	8	1	1	4
Total Animals with Malignant Neoplasms Uncertain Primary Site				1
Total Animals with Neoplasms Uncertain-Benign or Malignant		1	1	
Total Uncertain Neoplasms		1	1	

*** 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