Experiment Number: 20712 - 03	P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)	Date Report Requested: 09/18/2020
Test Type: Chronic PN	Tris(Chloropropyl)phosphate	Time Report Requested: 11:04:53
Route: DOSED FEED	CAS Number: 13674-84-5	First Dose M/F: 12/12/11 / 12/13/11
Species/Strain: RATS/HSD		Lab: BAT

Final 3_Rats

NTP Study Number:	C20712
Lock Date:	04/09/2018
Cage Range:	ALL
Date Range:	ALL
Reasons For Removal:	ALL
Removal Date Range:	ALL
Treatment Groups:	Include ALL
Study Gender:	Both
TDMSE Version:	3.0.2.3_002
PWG Approval Date:	NONE

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males
Disposition Summary					
Animals Initially In Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	15	8	8	5	8
Natural Death	10	8	8	8	11
Survivors					
Terminal Sacrifice	25	34	34	37	31
Animals Examined Microscopically	50	50	50	50	50
ALIMENTARY SYSTEM					
Esophagus	(50)	(50)	(50)	(50)	(50)
Intestine Large, Cecum	(49)	(50)	(50)	(48)	(49)
Erosion	1 (2%)		1 (2%)		
Infiltration Cellular, Lymphocyte					1 (2%)
Inflammation, Suppurative	1 (2%)				
Inflammation, Acute		1 (2%)	1 (2%)		
Inflammation, Chronic Active	1 (2%)				
Mineral	1 (2%)	2 (4%)			
Polyarteritis Nodosa		2 (4%)		1 (2%)	
Lymphoid Tissue, Hyperplasia		1 (2%)			
Intestine Large, Colon	(49)	(50)	(50)	(48)	(50)
Diverticulum			1 (2%)		
Parasite Metazoan	3 (6%)	1 (2%)	1 (2%)	2 (4%)	1 (2%)
Lymphoid Tissue, Hyperplasia	2 (4%)	1 (2%)	1 (2%)	1 (2%)	
Intestine Large, Rectum	(50)	(50)	(50)	(50)	(50)
Parasite Metazoan	7 (14%)	5 (10%)	6 (12%)	7 (14%)	2 (4%)
Polyarteritis Nodosa					1 (2%)
Intestine Small, Duodenum	(50)	(49)	(50)	(49)	(50)
Polyarteritis Nodosa	1 (2%)				1 (2%)
Intestine Small, Ileum	(49)	(50)	(50)	(48)	(49)
Intestine Small, Jejunum	(48)	(49)	(49)	(48)	(50)
Hyperplasia	2 (4%)				
Liver	(50)	(50)	(50)	(50)	(49)
Angiectasis					1 (2%)

Species/Strain: RATS/HSD

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Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
Basophilic Focus	1 (2%)	1 (2%)	2 (4%)	9 (18%)	11 (22%)	
Clear Cell Focus	26 (52%)	31 (62%)	33 (66%)	36 (72%)	35 (71%)	
Degeneration, Cystic		1 (2%)		1 (2%)	2 (4%)	
Eosinophilic Focus	3 (6%)	5 (10%)	3 (6%)	5 (10%)	13 (27%)	
Fatty Change	2 (4%)		1 (2%)	1 (2%)		
Hepatodiaphragmatic Nodule			1 (2%)	2 (4%)	1 (2%)	
Inclusion Body Intracytoplasmic					1 (2%)	
Inflammation, Focal				1 (2%)		
Mixed Cell Focus	1 (2%)	2 (4%)	4 (8%)	1 (2%)	8 (16%)	
Necrosis	3 (6%)	4 (8%)	5 (10%)		1 (2%)	
Pigment		. ,	. ,	1 (2%)	22 (45%)	
Polyarteritis Nodosa		1 (2%)		. ,	· · ·	
Regeneration					1 (2%)	
Thrombus					1 (2%)	
Bile Duct, Cyst	3 (6%)		3 (6%)	6 (12%)	6 (12%)	
Bile Duct, Dilation	1 (2%)	1 (2%)	1 (2%)		1 (2%)	
Bile Duct, Hyperplasia	12 (24%)	23 (46%)	17 (34%)	19 (38%)	29 (59%)	
Hepatocyte, Cytoplasmic Alteration			1 (2%)	1 (2%)	2 (4%)	
Hepatocyte, Pigment				2 (4%)		
Oval Cell, Hyperplasia			1 (2%)			
Mesentery	(4)	(0)	(3)	(0)	(1)	
Hemorrhage	1 (25%)					
Polyarteritis Nodosa	1 (25%)		1 (33%)			
Fat, Necrosis	1 (25%)		1 (33%)			
Pancreas	(50)	(50)	(50)	(50)	(50)	
Cyst			1 (2%)			
Inflammation, Chronic Active		1 (2%)				
Polyarteritis Nodosa	5 (10%)	4 (8%)	1 (2%)			
Acinus, Atrophy	5 (10%)	2 (4%)	3 (6%)	3 (6%)		
Acinus, Cytoplasmic Alteration					1 (2%)	
Acinus, Hyperplasia	8 (16%)	12 (24%)	8 (16%)	11 (22%)	12 (24%)	
Acinus, Inflammation, Chronic Active			1 (2%)			
Duct, Degeneration					1 (2%)	
Salivary Glands	(50)	(50)	(50)	(50)	(49)	
Inflammation, Suppurative			1 (2%)		1 (2%)	
Stomach, Forestomach	(50)	(50)	(50)	(50)	(50)	

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
Dysplasia			1 (2%)			
Erosion		1 (2%)				
Inflammation, Granulomatous		1 (2%)				
Inflammation, Acute	1 (2%)		2 (4%)			
Inflammation, Chronic	1 (2%)					
Inflammation, Chronic Active	4 (8%)	3 (6%)	3 (6%)	2 (4%)	2 (4%)	
Necrosis					1 (2%)	
Ulcer	3 (6%)		1 (2%)	1 (2%)	1 (2%)	
Epithelium, Hyperplasia	6 (12%)	2 (4%)	5 (10%)	2 (4%)	2 (4%)	
Stomach, Glandular	(50)	(50)	(50)	(50)	(50)	
Erosion	1 (2%)					
Inflammation, Suppurative	1 (2%)					
Inflammation, Acute			1 (2%)			
Inflammation, Chronic Active	1 (2%)			1 (2%)	1 (2%)	
Mineral	7 (14%)	5 (10%)	3 (6%)	2 (4%)	5 (10%)	
Polyarteritis Nodosa		1 (2%)				
CARDIOVASCULAR SYSTEM					·	
Blood Vessel	(50)	(50)	(50)	(50)	(50)	
Aneurysm			1 (2%)			
Degeneration	1 (2%)					
Degeneration, Hyaline	2 (4%)					
Inflammation, Chronic Active	1 (2%)		2 (4%)	2 (4%)		
Mineral	6 (12%)	8 (16%)	5 (10%)	2 (4%)	2 (4%)	
Necrosis, Fibrinoid	1 (2%)					
Carotid Artery, Polyarteritis Nodosa	1 (2%)					
Heart	(50)	(50)	(50)	(50)	(50)	
Cardiomyopathy	30 (60%)	30 (60%)	27 (54%)	26 (52%)	27 (54%)	
Inflammation, Acute	1 (2%)					
Inflammation, Chronic Active				1 (2%)		
Mineral	3 (6%)	3 (6%)	2 (4%)	•		
Polyarteritis Nodosa	· · ·	2 (4%)	1 (2%)	2 (4%)		
Atrium, Thrombus			. ,	1 (2%)		
Endocardium, Hyperplasia		1 (2%)		-	2 (4%)	

Experiment Number: 20712 - 03
Test Type: Chronic PN
Route: DOSED FEED

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
Pericardium, Hyperplasia					1 (2%)	
Valve, Fibrosis				1 (2%)	1 (2%)	
Ventricle, Dilation					1 (2%)	
ENDOCRINE SYSTEM		· · · · · · · · · · · · · · · · · · ·				
Adrenal Cortex	(50)	(50)	(50)	(50)	(50)	
Angiectasis		1 (2%)				
Atrophy			1 (2%)			
Degeneration, Cystic	4 (8%)	7 (14%)	4 (8%)	5 (10%)	3 (6%)	
Hyperplasia, Focal	5 (10%)	12 (24%)	11 (22%)	8 (16%)	8 (16%)	
Hypertrophy, Focal	15 (30%)	14 (28%)	19 (38%)	11 (22%)	13 (26%)	
Metaplasia, Osseous				1 (2%)		
Necrosis	1 (2%)	1 (2%)	1 (2%)		1 (2%)	
Thrombus			1 (2%)	1 (2%)		
Adrenal Medulla	(50)	(50)	(50)	(50)	(50)	
Hyperplasia, Focal	15 (30%)	25 (50%)	19 (38%)	14 (28%)	7 (14%)	
Necrosis	1 (2%)					
Islets, Pancreatic	(50)	(50)	(50)	(50)	(50)	
Hyperplasia	1 (2%)	5 (10%)	3 (6%)	3 (6%)	2 (4%)	
Parathyroid Gland	(49)	(46)	(46)	(44)	(45)	
Hyperplasia	5 (10%)	4 (9%)	2 (4%)	5 (11%)	1 (2%)	
Infiltration Cellular, Lymphocyte	1 (2%)					
Pituitary Gland	(50)	(50)	(50)	(50)	(49)	
Pars Distalis, Hyperplasia	18 (36%)	17 (34%)	22 (44%)	18 (36%)	12 (24%)	
Rathke's Cleft, Hyperplasia	1 (2%)	· · ·	· · ·	· · ·	· · ·	
Thyroid Gland	(50)	(50)	(50)	(50)	(49)	
Infiltration Cellular, Lymphocyte	1 (2%)		. ,	. ,	、 <i>,</i>	
Polyarteritis Nodosa			1 (2%)			
C-cell, Hyperplasia	12 (24%)	6 (12%)	5 (10%)	9 (18%)	12 (24%)	
Follicle, Hyperplasia	· · · ·		· · ·	1 (2%)	· · ·	

GENERAL BODY SYSTEM

None

Experiment Number: 20712 - 03 Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
GENITAL SYSTEM						
Coagulating Gland	(2)	(1)	(0)	(0)	(0)	
Hyperplasia	1 (50%)					
Inflammation, Suppurative		1 (100%)				
Inflammation, Chronic Active	1 (50%)					
Epididymis	(50)	(50)	(50)	(50)	(50)	
Polyarteritis Nodosa			1 (2%)	1 (2%)	1 (2%)	
Epithelium, Degeneration	1 (2%)				1 (2%)	
Penis	(1)	(0)	(0)	(0)	(0)	
Preputial Gland	(50)	(50)	(50)	(50)	(50)	
Hyperplasia	1 (2%)	x /		x · - /	· · /	
Inflammation, Suppurative	2 (4%)				1 (2%)	
Duct, Hyperplasia		1 (2%)			()	
Prostate	(50)	(50)	(50)	(50)	(50)	
Inflammation, Suppurative	()	1 (2%)	1 (2%)	()	1 (2%)	
Inflammation, Chronic Active	4 (8%)	3 (6%)	5 (10%)	8 (16%)	5 (10%)	
Polyarteritis Nodosa	()		1 (2%)	1 (2%)	1 (2%)	
Epithelium, Hyperplasia			5 (10%)	. (_,_,	3 (6%)	
Seminal Vesicle	(50)	(50)	(50)	(50)	(50)	
Atrophy	(00)	1 (2%)	(00)	(00)	(00)	
Inflammation, Chronic Active		1 (2%)	1 (2%)	1 (2%)		
Polyarteritis Nodosa		. (=/0)	. (_,,,,	1 (2%)		
Testis	(50)	(50)	(50)	(50)	(50)	
Mineral	(00)	1 (2%)	2 (4%)	1 (2%)	1 (2%)	
Polyarteritis Nodosa	13 (26%)	13 (26%)	9 (18%)	9 (18%)	3 (6%)	
Germinal Epithelium, Degeneration	21 (42%)	15 (30%)	14 (28%)	13 (26%)	8 (16%)	
Germinal Epithelium, Polyarteritis Nodosa	1 (2%)	1 (2%)				
Interstitial Cell, Hyperplasia	3 (6%)	1 (2%)		2 (4%)	3 (6%)	
				2 (170)		
HEMATOPOIETIC SYSTEM						
Bone Marrow	(50)	(50)	(50)	(50)	(50)	
Hemorrhage	6 (12%)	6 (12%)	2 (4%)	6 (12%)	1 (2%)	

Experiment Number: 20712 - 03

Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
Hypercellularity	21 (42%)	15 (30%)	15 (30%)	12 (24%)	16 (32%)	
Hypocellularity	1 (2%)					
Necrosis		1 (2%)		1 (2%)	1 (2%)	
Lymph Node	(2)	(4)	(2)	(1)	(4)	
Mediastinal, Infiltration Cellular, Histiocyte			1 (50%)			
Mediastinal, Pigment			1 (50%)			
Pancreatic, Hemorrhage		1 (25%)	1 (50%)			
Pancreatic, Hyperplasia		1 (25%)				
Pancreatic, Infiltration Cellular, Histiocyte			1 (50%)			
Renal, Infiltration Cellular, Histiocyte		1 (25%)				
Lymph Node, Mandibular	(50)	(50)	(49)	(50)	(50)	
Atrophy	2 (4%)			1 (2%)		
Hyperplasia, Lymphocyte	· · · ·	1 (2%)				
Hyperplasia, Plasma Cell		()		1 (2%)		
Inflammation, Suppurative				1 (2%)		
Lymphatic Sinus, Dilation		2 (4%)				
Lymph Node, Mesenteric	(50)	(49)	(49)	(49)	(50)	
Atrophy	2 (4%)					
Hyperplasia, Lymphocyte	· · · ·	2 (4%)	1 (2%)			
Spleen	(50)	(50)	(50)	(50)	(49)	
Extramedullary Hematopoiesis	39 (78%)	38 (76%)	41 (82%)	43 (86%)	43 (88%)	
Hemorrhage		1 (2%)	1 (2%)		2 (4%)	
Pigment	46 (92%)	45 (90%)	42 (84%)	44 (88%)	42 (86%)	
White Pulp, Atrophy	15 (30%)	10 (20%)	13 (26%)	9 (18%)	8 (16%)	
Thymus	(49)	(45)	(47)	(50)	(48)	
Atrophy	44 (90%)	43 (96%)	45 (96%)	47 (94%)	43 (90%)	
Ectopic Tissue, Parathyroid Gland	2 (4%)	()				
Hyperplasia, Lymphocyte	2 (4%)				1 (2%)	
Polyarteritis Nodosa	1 (2%)			2 (4%)	1 (2%)	
INTEGUMENTARY SYSTEM						
Mammary Gland	(45)	(50)	(50)	(50)	(49)	
Hyperplasia	(07)	2 (4%)	(00)	3 (6%)	1 (2%)	
Skin	(50)	(50)	(50)	(50)	(50)	
OMIT	(00)	(00)	(00)	(00)	(00)	

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
Cyst Epithelial Inclusion		3 (6%)	1 (2%)	1 (2%)	1 (2%)	
Inflammation, Suppurative		1 (2%)				
Inflammation, Chronic Active			1 (2%)			
Ulcer			1 (2%)			
Epithelium, Hyperplasia					1 (2%)	
MUSCULOSKELETAL SYSTEM						
Bone	(50)	(50)	(50)	(50)	(50)	
Fracture, Chronic	1 (2%)					
Increased Bone					2 (4%)	
Cartilage, Vertebra, Hyperplasia	1 (2%)					
Joint, Degeneration	1 (2%)					
Skeletal Muscle	(3)	(0)	(3)	(1)	(4)	
Degeneration	2 (67%)		1 (33%)			
Hemorrhage					1 (25%)	
Inflammation, Chronic Active					1 (25%)	
Mineral	1 (33%)					
NERVOUS SYSTEM						
Brain	(50)	(50)	(50)	(50)	(50)	
Gliosis	1 (2%)	2 (4%)		1 (2%)	2 (4%)	
Hemorrhage	2 (4%)	2 (4%)	1 (2%)		2 (4%)	
Infiltration Cellular, Histiocyte			1 (2%)			
Necrosis	4 (8%)	1 (2%)	3 (6%)	1 (2%)	3 (6%)	
Thrombus		1 (2%)			<i>(</i>	
Brain Trigeminal Ganglion	(1)	(0)	(0)	(0)	(0)	
Nerve Trigeminal	(2)	(2)	(1)	(1)	(1)	
Peripheral Nerve	(3)	(2)	(4)	(1)	(4)	
Axon, Sciatic, Degeneration	4 (222)	1 (50%)	2 (50%)			
Axon, Tibial, Degeneration	1 (33%)	1 (50%)	2 (50%)		1 (050())	
Ganglion, Infiltration Cellular, Histiocyte			4 (050()		1 (25%)	
Ganglion, Vacuolation, Cytoplasmic	4 (000()		1 (25%)		1 (25%)	
Spinal, Hyperplasia	1 (33%)					

Experiment Number: 20712 - 03 Fest Type: Chronic PN Route: DOSED FEED Species/Strain: RATS/HSD	P03: INCIDENCE F	RATES OF NON-NEOP Tris(Chloropro CAS Numbe	Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT		
Iarlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males
Trigeminal, Degeneration			1 (25%)		
Spinal Cord	(2)	(2)	(2)	(1)	(1)
Hemorrhage		1 (50%)			
RESPIRATORY SYSTEM					
Lung	(50)	(50)	(50)	(50)	(50)
Foreign Body	1 (2%)				
Hemorrhage				1 (2%)	
Infiltration Cellular, Histiocyte	31 (62%)	36 (72%)	32 (64%)	37 (74%)	40 (80%)
Inflammation, Granulomatous, Focal	7 (14%)	14 (28%)	11 (22%)	19 (38%)	24 (48%)
Inflammation, Acute	1 (2%)	3 (6%)	1 (2%)		
Inflammation, Chronic Active	3 (6%)		1 (2%)	2 (4%)	
Mineral	1 (2%)	2 (4%)			
Alveolar Epithelium, Hyperplasia	2 (4%)	6 (12%)	3 (6%)	1 (2%)	2 (4%)
Bronchiole, Cyst	1 (2%)				
Bronchiole, Fibrosis	1 (2%)				
Nose	(50)	(50)	(50)	(50)	(50)
Foreign Body	2 (4%)	2 (4%)	2 (4%)		1 (2%)
Fungus			1 (2%)		
Inflammation, Suppurative	1 (2%)	2 (4%)	2 (4%)		2 (4%)
Inflammation, Acute	6 (12%)	6 (12%)	4 (8%)	5 (10%)	3 (6%)
Inflammation, Chronic Active			1 (2%)		1 (2%)
Polyarteritis Nodosa		1 (2%)			
Epithelium, Accumulation, Hyaline Droplet	37 (74%)	42 (84%)	45 (90%)	43 (86%)	45 (90%)
Olfactory Epithelium, Metaplasia, Respiratory	1 (2%)	1 (2%)	1 (2%)		
Olfactory Epithelium, Necrosis	1 (2%)				1 (2%)
Respiratory Epithelium, Dilation, Glands	1 (2%)				
Respiratory Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	1 (2%)	3 (6%)
Respiratory Epithelium, Metaplasia, Squamous			2 (4%)		
Respiratory Epithelium, Necrosis	2 (4%)				
Squamous Epithelium, Metaplasia, Respiratory			1 (2%)		
Trachea	(50)	(50)	(50)	(50)	(50)

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males	
SPECIAL SENSES SYSTEM						
Eye	(50)	(50)	(50)	(50)	(50)	
Choroid, Hyperplasia	1 (2%)					
Cornea, Inflammation, Suppurative	1 (2%)		- /			
Cornea, Inflammation, Acute	4 (8%)	1 (2%)	3 (6%)			
Lens, Cataract		0 (40()	1 (2%)	4 (00()	4 (00()	
Retina, Degeneration	(50)	2 (4%)	1 (2%)	1 (2%)	1 (2%)	
Harderian Gland	(50)	(50)	(50)	(50)	(50)	
Atrophy Hyperplasia				1 (2%)	1 (2%)	
Polyarteritis Nodosa		1 (2%)		T (270)	1 (2%)	
Polyanentis Nodosa		1 (276)			1 (276)	
URINARY SYSTEM						
Kidney	(50)	(50)	(50)	(50)	(50)	
Calculus Micro Observation Only	1 (2%)					
Hemorrhage			1 (2%)			
Infarct	2 (4%)	4 (8%)	4 (8%)	2 (4%)	1 (2%)	
Nephropathy, Chronic Progressive	49 (98%)	50 (100%)	49 (98%)	48 (96%)	48 (96%)	
Polyarteritis Nodosa				1 (2%)		
Papilla, Necrosis		1 (2%)				
Pelvis, Dilation	1 (2%)			1 (2%)		
Pelvis, Inflammation, Suppurative				1 (2%)		
Pelvis, Inflammation, Chronic Active		1 (2%)	- (()		- (()	
Renal Tubule, Accumulation, Hyaline Droplet	1 (2%)	2 (4%)	2 (4%)	4 (00()	2 (4%)	
Renal Tubule, Cyst		1 (2%)	1 (2%)	1 (2%)	1 (2%)	
Renal Tubule, Hyperplasia		1 (2%)	2 (4%)		2 (4%)	
Renal Tubule, Hyperplasia, Atypical		4 (00/)	1 (2%)			
Renal Tubule, Hyperplasia, Oncocytic	$\langle 0 \rangle$	1 (2%)	$\langle 0 \rangle$	(4)	(0)	
Ureter	(0)	(0)	(0)	(1)	(0)	
Degeneration	(EQ)			1 (100%)	(EO)	
Urinary Bladder	(50)	(50)	(50)	(50)	(50)	
Inflammation, Chronic Active		1 (2%)		1 (2%)	1 (2%)	
Polyarteritis Nodosa		1 (2%)				

Experiment Number: 20712 - 03 Test Type: Chronic PN Route: DOSED FEED Species/Strain: RATS/HSD	P03: INCIDENCE I	• •	LASTIC LESIONS BY opyl)phosphate sr: 13674-84-5	ANATOMIC SITE(a)	Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT
Harlan Sprague Dawley RATS MALE	0 ppm males	2500 ppm males	5000 ppm males	10000 ppm males	20000 ppm males
Urothelium, Hyperplasia Urothelium, Infiltration Cellular, Mast Cell	1 (2%)	1 (2%)			

*** END OF MALE ***

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female
Disposition Summary					
Animals Initially In Study	50	50	50	50	50
Early Deaths					
Moribund Sacrifice	15	10	8	7	6
Natural Death	13	8	8	8	11
Survivors					
Moribund Sacrifice		1			
Natural Death			1	1	
Terminal Sacrifice	22	31	33	34	33
Animals Examined Microscopically	50	50	50	50	50
ALIMENTARY SYSTEM					
Esophagus	(50)	(50)	(50)	(50)	(50)
Dilation		()	()	1 (2%)	()
Inflammation, Suppurative					1 (2%)
Necrosis					1 (2%)
Intestine Large, Cecum	(49)	(49)	(49)	(48)	(49)
Intestine Large, Colon	(49)	(50)	(49)	(49)	(50)
Erosion		()	1 (2%)		()
Inflammation, Chronic Active			1 (2%)		
Parasite Metazoan	2 (4%)	1 (2%)	(2 (4%)	
Lymphoid Tissue, Hyperplasia				1 (2%)	
Intestine Large, Rectum	(50)	(50)	(50)	(49)	(50)
Mineral	· · /		· · /	. ,	1 (2%)
Parasite Metazoan	4 (8%)	7 (14%)	8 (16%)	6 (12%)	3 (6%)
Intestine Small, Duodenum	(49)	(49)	(50)	(49)	(50)
Intestine Small, Ileum	(49)	(49)	(49)	(48)	(50)
Intestine Small, Jejunum	(49)	(49)	(49)	(49)	(50)
Liver	(50)	(50)	(50)	(50)	(50)
Angiectasis	1 (2%)	- /	2 (4%)	. ,	. /
Basophilic Focus	5 (10%)	7 (14%)	9 (18%)	8 (16%)	10 (20%)
Clear Cell Focus	11 (22%)	14 (28%)	10 (20%)	9 (18%)	13 (26%)
Degeneration, Cystic	1 (2%)		1 (2%)		
Eosinophilic Focus	5 (10%)	2 (4%)	13 (26%)	18 (36%)	25 (50%)

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

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arlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female	
Extramedullary Hematopoiesis		1 (2%)		1 (2%)		
Hepatodiaphragmatic Nodule		2 (4%)	1 (2%)	. ,	1 (2%)	
Inflammation, Focal	1 (2%)					
Mixed Cell Focus	2 (4%)		1 (2%)	1 (2%)	7 (14%)	
Necrosis	6 (12%)	2 (4%)	3 (6%)	5 (10%)	3 (6%)	
Pigment				3 (6%)	23 (46%)	
Thrombus				1 (2%)		
Bile Duct, Cyst	1 (2%)	6 (12%)	12 (24%)	19 (38%)	21 (42%)	
Bile Duct, Dilation		1 (2%)		1 (2%)		
Bile Duct, Hyperplasia	7 (14%)	21 (42%)	24 (48%)	29 (58%)	11 (22%)	
Hepatocyte, Cytoplasmic Alteration	2 (4%)			3 (6%)	4 (8%)	
Hepatocyte, Hypertrophy	1 (2%)	1 (2%)		2 (4%)	1 (2%)	
Hepatocyte, Regeneration			1 (2%)		1 (2%)	
Oval Cell, Hyperplasia				1 (2%)		
Mesentery	(3)	(3)	(1)	(1)	(4)	
Hemorrhage	1 (33%)					
Inflammation, Chronic Active		1 (33%)				
Necrosis	1 (33%)					
Fat, Necrosis			1 (100%)			
Pancreas	(49)	(50)	(50)	(50)	(50)	
Inflammation, Chronic Active			2 (4%)			
Acinus, Atrophy	2 (4%)	5 (10%)	3 (6%)	1 (2%)		
Salivary Glands	(50)	(50)	(49)	(50)	(49)	
Hyperplasia					1 (2%)	
Inflammation, Chronic Active			1 (2%)			
Necrosis				1 (2%)		
Stomach, Forestomach	(50)	(50)	(50)	(50)	(50)	
Foreign Body				1 (2%)		
Inflammation, Chronic Active	1 (2%)	1 (2%)	1 (2%)	3 (6%)	1 (2%)	
Ulcer		1 (2%)		1 (2%)		
Epithelium, Hyperplasia	1 (2%)	1 (2%)	1 (2%)	3 (6%)	1 (2%)	
Stomach, Glandular	(50)	(50)	(50)	(50)	(50)	
Inflammation, Chronic Active					1 (2%)	
Mineral	2 (4%)	3 (6%)	1 (2%)		2 (4%)	

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Tris(Chloropropyl)phosphate

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Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female	
CARDIOVASCULAR SYSTEM						
Blood Vessel	(50)	(50)	(50)	(50)	(50)	
Aneurysm			1 (2%)			
Inflammation, Chronic Active	1 (2%)		2 (4%)	1 (2%)		
Mineral	1 (2%)					
Thrombus			1 (2%)			
Heart	(50)	(50)	(50)	(50)	(50)	
Cardiomyopathy	7 (14%)	8 (16%)	4 (8%)	7 (14%)	6 (12%)	
Mineral					1 (2%)	
ENDOCRINE SYSTEM					· · · · · · · · · · · · · · · · · · ·	
Adrenal Cortex	(50)	(50)	(50)	(50)	(50)	
Angiectasis	5 (10%)	6 (12%)		1 (2%)	2 (4%)	
Degeneration, Cystic	8 (16%)	8 (16%)	4 (8%)	10 (20%)	5 (10%)	
Fibrosis	1 (2%)					
Hemorrhage			1 (2%)			
Hyperplasia, Focal	2 (4%)	7 (14%)	2 (4%)	3 (6%)	2 (4%)	
Hypertrophy, Focal	5 (10%)	3 (6%)	6 (12%)	3 (6%)	9 (18%)	
Inflammation, Chronic				1 (2%)		
Necrosis	1 (2%)		1 (2%)		1 (2%)	
Thrombus	1 (2%)	1 (2%)	1 (2%)			
Vacuolization Cytoplasmic	1 (2%)					
Bilateral, Hypertrophy, Focal	3 (6%)					
Bilateral, Necrosis	1 (2%)					
Adrenal Medulla	(50)	(50)	(50)	(50)	(48)	
Hyperplasia, Focal	9 (18%)	11 (22%)	8 (16%)	6 (12%)	1 (2%)	
Necrosis					1 (2%)	
Islets, Pancreatic	(49)	(50)	(50)	(50)	(50)	
Hyperplasia	3 (6%)	4 (8%)	2 (4%)	1 (2%)	1 (2%)	
Metaplasia, Hepatocyte		1 (2%)			1 (2%)	
Parathyroid Gland	(44)	(39)	(45)	(44)	(46)	
Hyperplasia		1 (3%)	1 (2%)	1 (2%)		
Pituitary Gland	(50)	(50)	(50)	(50)	(49)	

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

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Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female
Angiectasis	1 (2%)				
Cyst			1 (2%)		
Pars Distalis, Hyperplasia	17 (34%)	15 (30%)	18 (36%)	16 (32%)	20 (41%)
Pars Distalis, Hyperplasia, Atypical				1 (2%)	
Pars Distalis, Necrosis				2 (4%)	
Pars Intermedia, Hyperplasia		1 (2%)			
Rathke's Cleft, Hyperplasia			1 (2%)		
Thyroid Gland	(50)	(50)	(50)	(50)	(49)
C-cell, Hyperplasia	9 (18%)	11 (22%)	11 (22%)	3 (6%)	10 (20%)
GENERAL BODY SYSTEM					
Peritoneum	(0)	(1)	(0)	(0)	(0)
Inflammation, Chronic Active	(0)	1 (100%)	(0)		(0)
GENITAL SYSTEM					
Clitoral Gland	(40)	(40)	(50)	(47)	(10)
	(46)	(49)	(50)	(47)	(49)
Hyperplasia, Squamous	1 (00()	1 (2%)			
Inflammation, Chronic Active Ovary	1 (2%) (50)	(50)	(50)	(49)	(50)
•		(50) 38 (76%)	(50) 32 (64%)	40 (82%)	(50)
Atrophy Dilation	32 (64%)	30 (70%)	32 (04%)	40 (82%) 1 (2%)	28 (56%)
Fibrosis	1 (2%)			1 (270)	
Inflammation, Chronic	1 (2/0)	1 (2%)			
Pigment	1 (2%)	· (∠/0)			
Bursa, Cyst	1 (2%)	1 (2%)	4 (8%)		
Follicle, Cyst	12 (24%)	8 (16%)	7 (14%)	14 (29%)	11 (22%)
Germinal Epithelium, Cyst	12 (2470)	2 (4%)	/ (1 4 /0)	17 (23/0)	11 (22/0)
Germinal Epithelium, Hyperplasia		∠ (+/0)			1 (2%)
Germinal Epithelium, Hyperplasia Granulosa Cell, Hyperplasia	2 (4%)		2 (4%)		1 (2%)
Interstitial Cell, Hyperplasia	2 (4 /0)		∠ (+ /0)	1 (2%)	1 (270)
Paraovarian Tissue, Cyst	3 (6%)	2 (4%)	3 (6%)	i (∠ /0)	2 (4%)
Oviduct	(1)	(0)	(0)	(1)	(0)
	(1)	(0)	(0)	(1)	(0)

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female	
Uterus	(50)	(50)	(50)	(49)	(50)	
Adenomyosis		1 (2%)	2 (4%)			
Angiectasis	1 (2%)	1 (2%)				
Cyst, Squamous					2 (4%)	
Dilation	4 (8%)	4 (8%)	3 (6%)	6 (12%)	3 (6%)	
Hemorrhage		3 (6%)		3 (6%)		
Hyperplasia, Atypical	5 (10%)	10 (20%)	6 (12%)	13 (27%)	8 (16%)	
Inflammation, Suppurative	5 (10%)	5 (10%)	7 (14%)	11 (22%)	7 (14%)	
Inflammation, Chronic Active			1 (2%)	1 (2%)	1 (2%)	
Metaplasia, Cartilagenous				1 (2%)		
Squamous Metaplasia	23 (46%)	32 (64%)	26 (52%)	26 (53%)	24 (48%)	
Thrombus	· · · /	2 (4%)	1 (2%)		、 <i>、</i>	
Ulcer		1 (2%)	. /	2 (4%)		
Cervix, Cyst, Squamous					1 (2%)	
Cervix, Hyperplasia, Atypical	1 (2%)					
Cervix, Hyperplasia, Squamous					1 (2%)	
Cervix, Inflammation, Suppurative					3 (6%)	
Cervix, Necrosis					1 (2%)	
Endometrium, Hyperplasia, Cystic	18 (36%)	27 (54%)	23 (46%)	27 (55%)	19 (38%)	
Lymphatic, Angiectasis			1 (2%)			
Myometrium, Cyst	1 (2%)					
Vagina	(50)	(49)	(48)	(44)	(48)	
Hypertrophy, Stromal	(),	1 (2%)			(),	
Inflammation, Suppurative	2 (4%)	(_,,,)	1 (2%)			
HEMATOPOIETIC SYSTEM						
Bone Marrow	(50)	(50)	(50)	(50)	(50)	
Hemorrhage			1 (2%)	1 (2%)	· · ·	
Hypercellularity	37 (74%)	32 (64%)	39 (78%)	42 (84%)	40 (80%)	
Hypocellularity		1 (2%)		· · · ·		
Necrosis		(· · · /			1 (2%)	
Lymph Node	(8)	(4)	(3)	(5)	(7)	
Axillary, Hyperplasia, Plasma Cell	3 (38%)	('/	(*)		2 (29%)	
Lumbar, Hemorrhage	0 (00 /0)	1 (25%)			- ()	
Earlisar, Homornago		1 (2070)				

Experiment Number: 20712 - 03

Test Type: Chronic PN Route: DOSED FEED

Species/Strain: RATS/HSD

P03: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE(a)

Tris(Chloropropyl)phosphate

CAS Number: 13674-84-5

Date Report Requested: 09/18/2020 Time Report Requested: 11:04:53 First Dose M/F: 12/12/11 / 12/13/11 Lab: BAT

Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female
Lumbar, Hyperplasia, Plasma Cell	3 (38%)	1 (25%)		1 (20%)	
Lumbar, Infiltration Cellular, Histiocyte	1 (13%)			· · ·	
Lumbar, Pigment	1 (13%)				
Mediastinal, Hyperplasia, Plasma Cell			1 (33%)		
Mediastinal, Infiltration Cellular, Histiocyte			1 (33%)		
Lymph Node, Mandibular	(50)	(50)	(49)	(50)	(49)
Atrophy	1 (2%)	1 (2%)			2 (4%)
Hyperplasia, Plasma Cell				1 (2%)	
Lymph Node, Mesenteric	(49)	(49)	(49)	(50)	(49)
Hemorrhage			. ,	1 (2%)	
Spleen	(49)	(50)	(50)	(50)	(50)
Extramedullary Hematopoiesis	46 (94%)	44 (88%)	48 (96%)	45 (90%)	46 (92%)
Hemorrhage	1 (2%)		. ,	1 (2%)	
Infarct					1 (2%)
Inflammation, Chronic Active			1 (2%)		
Pigment	35 (71%)	39 (78%)	35 (70%)	33 (66%)	39 (78%)
White Pulp, Atrophy	9 (18%)	7 (14%)	8 (16%)	7 (14%)	8 (16%)
Thymus	(50)	(48)	(49)	(48)	(48)
Atrophy	45 (90%)	45 (94%)	46 (94%)	38 (79%)	45 (94%)
Ectopic Thyroid					1 (2%)
Ectopic Tissue, Parathyroid Gland				1 (2%)	2 (4%)
Hyperplasia, Epithelial	1 (2%)				
INTEGUMENTARY SYSTEM					
Mammary Gland	(50)	(50)	(50)	(50)	(50)
Galactocele	2 (4%)	1 (2%)			· · /
Hyperplasia	14 (28%)	10 (20%)	12 (24%)	9 (18%)	15 (30%)
Hyperplasia, Adenomatous	· · · ·	1 (2%)		· · ·	· · ·
Skin	(50)	(50)	(50)	(50)	(50)
MUSCULOSKELETAL SYSTEM					
Bone	(50)	(50)	(50)	(50)	(50)
Joint, Degeneration			2 (4%)		

Experiment Number: 20712 - 03 Test Type: Chronic PN

Route: DOSED FEED

Species/Strain: RATS/HSD

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Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female	
Skeletal Muscle	(1)	(1)	(0)	(1)	(2)	
NERVOUS SYSTEM						
Brain	(50)	(50)	(50)	(50)	(49)	
Gliosis			. ,	1 (2%)		
Hemorrhage	1 (2%)	1 (2%)		3 (6%)		
Necrosis	1 (2%)	2 (4%)		1 (2%)		
Cranial Nerve, Gliosis	ζ,		1 (2%)	(),		
Peripheral Nerve	(0)	(0)	(0)	(1)	(0)	
RESPIRATORY SYSTEM						
Lung	(50)	(50)	(50)	(50)	(50)	
Cyst, Squamous, Multiple			. ,	1 (2%)		
Cyst, Squamous	1 (2%)			1 (2%)		
Infiltration Cellular, Histiocyte	46 (92%)	50 (100%)	47 (94%)	48 (96%)	50 (100%)	
Inflammation, Granulomatous, Focal	7 (14%)	3 (6%)	6 (12%)	6 (12%)	5 (10%)	
Inflammation, Acute		1 (2%)	ζ, γ	(),	1 (2%)	
Inflammation, Chronic Active				1 (2%)	· · · ·	
Squamous Metaplasia			1 (2%)	ζ,		
Alveolus, Epithelium, Hyperplasia		2 (4%)	1 (2%)	1 (2%)	1 (2%)	
Nose	(49)	(50)	(50)	(50)	(50)	
Inflammation, Suppurative	ζ,	1 (2%)	()	(),		
Inflammation, Acute	2 (4%)	1 (2%)	6 (12%)	4 (8%)	6 (12%)	
Inflammation, Chronic Active	()	1 (2%)	()		(),	
Epithelium, Accumulation, Hyaline Droplet	48 (98%)	50 (100%)	49 (98%)	47 (94%)	46 (92%)	
Glands, Hyperplasia	\/	· · · · · /	1 (2%)	(****)		
Olfactory Epithelium, Metaplasia, Respiratory		1 (2%)	1 (2%)			
Olfactory Epithelium, Metaplasia, Squamous		× /			1 (2%)	
Respiratory Epithelium, Metaplasia, Squamous			1 (2%)			
Sinus, Metaplasia, Squamous		1 (2%)	\/			
Trachea	(50)	(50)	(50)	(50)	(50)	

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Tris(Chloropropyl)phosphate

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Harlan Sprague Dawley RATS FEMALE	0 ppm females	2500 ppm females	5000 ppm females	10000 ppm female	20000 ppm female
SPECIAL SENSES SYSTEM					
Еуе	(50)	(50)	(49)	(50)	(49)
Atrophy	()	1 (2%)	()	()	
Inflammation, Chronic Active		- (-/-)	1 (2%)		
Lens, Cataract		1 (2%)	(/		
Retina, Degeneration	3 (6%)	1 (2%)	2 (4%)	2 (4%)	1 (2%)
Retina, Detachment		1 (2%)			
Harderian Gland	(50)	(50)	(49)	(50)	(50)
RINARY SYSTEM					
Kidney	(50)	(50)	(50)	(50)	(50)
Developmental Malformation	1 (2%)				
Ectopic Tissue, Adrenal Cortex	1 (2%)				
Infarct	3 (6%)	1 (2%)			3 (6%)
Inflammation, Suppurative	3 (6%)	· · ·			8 (16%)
Inflammation, Chronic Active		1 (2%)			
Nephropathy, Chronic Progressive	41 (82%)	37 (74%)	33 (66%)	34 (68%)	36 (72%)
Pigment					1 (2%)
Pelvis, Dilation		1 (2%)	1 (2%)		
Pelvis, Inflammation, Chronic Active		2 (4%)	1 (2%)		1 (2%)
Renal Tubule, Accumulation, Hyaline Droplet	1 (2%)			1 (2%)	
Renal Tubule, Hyperplasia			1 (2%)	1 (2%)	1 (2%)
Renal Tubule, Hyperplasia, Atypical				2 (4%)	
Urinary Bladder	(50)	(50)	(50)	(49)	(50)
Inflammation, Suppurative		1 (2%)			
Inflammation, Chronic Active		2 (4%)			
Urothelium, Hyperplasia		1 (2%)			1 (2%)

*** END OF REPORT ***