

Experiment Number: 10188 - 02
Test Type: CHRONIC
Route: DOSED FEED
Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

Final 4

NTP Study Number: C10188
Lock Date: 07/15/2015
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

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Harlan Sprague Dawley RATS MALE

0 ppm Male

300 ppm Male

1000 ppm Male

3000 ppm Male

10000 ppm Male

Disposition Summary

| | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---|------------|--------------|---------------|---------------|----------------|
| Animals Initially In Study | 50 | 50 | 50 | 50 | 50 |
| Early Deaths | | | | | |
| Moribund Sacrifice | 12 | 9 | 4 | 8 | 7 |
| Natural Death | 13 | 7 | 6 | 7 | 14 |
| Survivors | | | | | |
| Natural Death | 1 | | 1 | | 1 |
| Terminal Sacrifice | 24 | 33 | 39 | 35 | 28 |
| Animals Examined Microscopically | 50 | 49 | 50 | 50 | 50 |

ALIMENTARY SYSTEM

| | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|--|------------|--------------|---------------|---------------|----------------|
| Esophagus | (50) | (49) | (50) | (50) | (50) |
| Intestine Large, Cecum | (49) | (49) | (50) | (50) | (48) |
| Hyperplasia, Lymphocyte Inflammation, Chronic | | 1 (2%) | | 1 (2%) | |
| Polyarteritis Nodosa | 2 (4%) | | | | |
| Intestine Large, Colon | (50) | (49) | (50) | (50) | (49) |
| Hyperplasia, Lymphocyte | 1 (2%) | 1 (2%) | | | |
| Parasite Metazoan | | | 1 (2%) | 2 (4%) | |
| Intestine Large, Rectum | (50) | (49) | (50) | (50) | (49) |
| Hyperplasia, Lymphocyte | 2 (4%) | 1 (2%) | | | |
| Parasite Metazoan | 4 (8%) | 6 (12%) | 9 (18%) | 10 (20%) | 7 (14%) |
| Polyarteritis Nodosa | 1 (2%) | | | 1 (2%) | |
| Intestine Small, Duodenum | (50) | (49) | (50) | (49) | (49) |
| Artery, Mineral | 1 (2%) | | | | |
| Intestine Small, Ileum | (50) | (49) | (50) | (50) | (49) |
| Artery, Mineral | 1 (2%) | | | | |
| Intestine Small, Jejunum | (49) | (49) | (50) | (50) | (49) |
| Hyperplasia, Lymphocyte | | | | 1 (2%) | |
| Artery, Mineral | 1 (2%) | | | | |
| Liver | (50) | (49) | (50) | (50) | (49) |
| Angiectasis | | | | 1 (2%) | |
| Basophilic Focus | 1 (2%) | 1 (2%) | 4 (8%) | 4 (8%) | 17 (35%) |
| Cholangiofibrosis | | | | 1 (2%) | |

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| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|------------------------------------|------------|--------------|---------------|---------------|----------------|
| Clear Cell Focus | 24 (48%) | 31 (63%) | 32 (64%) | 36 (72%) | 28 (57%) |
| Degeneration, Cystic | 1 (2%) | 1 (2%) | 1 (2%) | 1 (2%) | 2 (4%) |
| Eosinophilic Focus | 4 (8%) | 1 (2%) | 7 (14%) | 2 (4%) | 11 (22%) |
| Extramedullary Hematopoiesis | | 4 (8%) | 3 (6%) | 1 (2%) | |
| Fatty Change, Focal | | | 1 (2%) | | |
| Hepatodiaphragmatic Nodule | | | 1 (2%) | | |
| Hypertrophy | | | | | 1 (2%) |
| Mixed Cell Focus | | 1 (2%) | 1 (2%) | 3 (6%) | |
| Necrosis | 3 (6%) | 4 (8%) | 1 (2%) | 6 (12%) | 13 (27%) |
| Pigment | | 1 (2%) | 5 (10%) | 40 (80%) | 38 (78%) |
| Regeneration | | | | | 1 (2%) |
| Bile Duct, Dilation | 1 (2%) | | 1 (2%) | 1 (2%) | 1 (2%) |
| Bile Duct, Hyperplasia | 13 (26%) | 18 (37%) | 13 (26%) | 21 (42%) | 15 (31%) |
| Hepatocyte, Cytoplasmic Alteration | | | 1 (2%) | 28 (56%) | 37 (76%) |
| Hepatocyte, Hyperplasia | | | | | 1 (2%) |
| Hepatocyte, Hypertrophy | | | | 3 (6%) | 17 (35%) |
| Mesentery | (4) | (2) | (2) | (1) | (1) |
| Polyarteritis Nodosa | 1 (25%) | | | | |
| Artery, Mineral | 3 (75%) | 1 (50%) | 2 (100%) | 1 (100%) | 1 (100%) |
| Oral Mucosa | (0) | (1) | (0) | (0) | (0) |
| Pancreas | (50) | (49) | (50) | (50) | (49) |
| Basophilic Focus | 2 (4%) | 2 (4%) | | | |
| Hemorrhage | | | | | 1 (2%) |
| Hyperplasia | | | | | 1 (2%) |
| Inflammation, Chronic Active | | | 1 (2%) | 1 (2%) | |
| Polyarteritis Nodosa | 10 (20%) | 5 (10%) | 3 (6%) | 6 (12%) | 2 (4%) |
| Acinus, Atrophy | 1 (2%) | 1 (2%) | 6 (12%) | 3 (6%) | 1 (2%) |
| Acinus, Hyperplasia | 13 (26%) | 9 (18%) | 16 (32%) | 25 (50%) | 15 (31%) |
| Artery, Mineral | 1 (2%) | | | | |
| Artery, Necrosis | 1 (2%) | | | | |
| Duct, Inflammation, Chronic | | | | | 1 (2%) |
| Salivary Glands | (50) | (48) | (50) | (50) | (49) |
| Polyarteritis Nodosa | 1 (2%) | | | | |
| Artery, Mineral | 2 (4%) | | 2 (4%) | | |
| Stomach, Forestomach | (50) | (49) | (50) | (50) | (49) |
| Hyperplasia, Squamous | | | 1 (2%) | | |

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| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---------------------------------|------------|--------------|---------------|---------------|----------------|
| Inflammation, Chronic | 2 (4%) | 1 (2%) | 1 (2%) | | |
| Inflammation, Chronic Active | 3 (6%) | 1 (2%) | 3 (6%) | 1 (2%) | 1 (2%) |
| Mineral | 2 (4%) | 1 (2%) | 1 (2%) | 1 (2%) | |
| Polyarteritis Nodosa | 1 (2%) | | 1 (2%) | 1 (2%) | |
| Ulcer | 1 (2%) | 1 (2%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Artery, Mineral | 1 (2%) | | 1 (2%) | | |
| Epithelium, Hyperplasia | 3 (6%) | 3 (6%) | 3 (6%) | 3 (6%) | 6 (12%) |
| Stomach, Glandular | (50) | (49) | (50) | (50) | (49) |
| Cyst, Squamous | | | | | 1 (2%) |
| Erosion | | 1 (2%) | | | |
| Inflammation, Acute | | 1 (2%) | | | |
| Inflammation, Chronic | | | | | 1 (2%) |
| Inflammation, Chronic Active | 1 (2%) | | | | |
| Mineral | 6 (12%) | 3 (6%) | 4 (8%) | 1 (2%) | 1 (2%) |
| Polyarteritis Nodosa | | | 1 (2%) | | |
| Artery, Mineral | 1 (2%) | | 1 (2%) | | |
| Tongue | (0) | (0) | (2) | (0) | (0) |
| Inflammation, Suppurative | | | 1 (50%) | | |
| Inflammation, Acute | | | 1 (50%) | | |
| Polyarteritis Nodosa | | | 1 (50%) | | |
| CARDIOVASCULAR SYSTEM | | | | | |
| Blood Vessel | (50) | (49) | (50) | (50) | (49) |
| Aneurysm | | | 1 (2%) | 1 (2%) | |
| Degeneration | | | | 1 (2%) | |
| Dilation | | 1 (2%) | | | |
| Mineral | 7 (14%) | 2 (4%) | 3 (6%) | 3 (6%) | 2 (4%) |
| Thrombus | | | 1 (2%) | | |
| Heart | (50) | (49) | (50) | (50) | (49) |
| Cardiomyopathy | 27 (54%) | 27 (55%) | 26 (52%) | 34 (68%) | 21 (43%) |
| Inflammation, Acute | | 1 (2%) | | | |
| Inflammation, Chronic Active | | | | | 1 (2%) |
| Mineral | 5 (10%) | 1 (2%) | 2 (4%) | | 1 (2%) |
| Necrosis | | 1 (2%) | | | 3 (6%) |

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Lab: BAT

| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---------------------------------|------------|--------------|---------------|---------------|----------------|
| Necrosis, Focal | | | | | 1 (2%) |
| Polyarteritis Nodosa | 2 (4%) | 2 (4%) | 2 (4%) | 2 (4%) | 1 (2%) |
| Artery, Mineral | 4 (8%) | 2 (4%) | 2 (4%) | | 1 (2%) |
| Atrium, Thrombus | 1 (2%) | | | | 1 (2%) |
| Schwann Cell, Hyperplasia | 1 (2%) | | | | |
| Valve, Degeneration | 1 (2%) | | | | |
| Valve, Fibrosis | | 2 (4%) | 1 (2%) | 3 (6%) | 11 (22%) |
| Valve, Inflammation, Chronic | 1 (2%) | | | | |
| Valve, Thrombus | | | | | 6 (12%) |
| ENDOCRINE SYSTEM | | | | | |
| Adrenal Cortex | (50) | (49) | (50) | (50) | (49) |
| Cytoplasmic Alteration | | | | | 1 (2%) |
| Degeneration, Cystic | 1 (2%) | | 1 (2%) | 1 (2%) | 3 (6%) |
| Hemorrhage | | | | 1 (2%) | |
| Hyperplasia, Focal | 4 (8%) | 5 (10%) | 5 (10%) | 4 (8%) | |
| Hypertrophy | | | 1 (2%) | | |
| Hypertrophy, Focal | 6 (12%) | 3 (6%) | 6 (12%) | 6 (12%) | 3 (6%) |
| Metaplasia, Osseous | | | | 1 (2%) | |
| Necrosis | 3 (6%) | | | 1 (2%) | |
| Thrombus | | | | 1 (2%) | |
| Bilateral, Hyperplasia, Focal | 1 (2%) | | | | |
| Bilateral, Hypertrophy, Focal | 1 (2%) | | 2 (4%) | | |
| Adrenal Medulla | (50) | (49) | (50) | (50) | (49) |
| Hyperplasia | | 1 (2%) | 1 (2%) | | |
| Hyperplasia, Focal | 8 (16%) | 14 (29%) | 9 (18%) | 8 (16%) | 2 (4%) |
| Bilateral, Hyperplasia, Focal | 2 (4%) | | | | |
| Islets, Pancreatic | (50) | (49) | (50) | (50) | (49) |
| Atrophy | | | | 1 (2%) | |
| Hyperplasia | 4 (8%) | 4 (8%) | 7 (14%) | 3 (6%) | 1 (2%) |
| Parathyroid Gland | (42) | (32) | (31) | (43) | (38) |
| Hyperplasia, Focal | | | 1 (3%) | | |
| Hyperplasia, Diffuse | 2 (5%) | | | 1 (2%) | |
| Hypertrophy, Focal | 1 (2%) | | | | |

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| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|--|------------|----------------|--------------------|---------------|----------------|
| Bilateral, Hyperplasia, Diffuse Pituitary Gland Hemorrhage | (50) | 1 (3%) (49) | (50) | (50) | (49) |
| Infiltration Cellular, Lymphocyte Pars Distalis, Hyperplasia | 19 (38%) | 26 (53%) | 1 (2%) 22 (44%) | 21 (42%) | 14 (29%) |
| Pars Distalis, Hypertrophy | 3 (6%) | 7 (14%) | 5 (10%) | 15 (30%) | 37 (76%) |
| Thyroid Gland | (50) | (49) | (50) | (50) | (50) |
| C-cell, Hyperplasia | 5 (10%) | 8 (16%) | 14 (28%) | 8 (16%) | 2 (4%) |
| Follicular Cell, Hyperplasia | | | | 1 (2%) | 1 (2%) |

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

| | | | | | |
|---|---------|---------|---------|---------|----------|
| Epididymis | (49) | (49) | (50) | (50) | (49) |
| Hypospermia | | | 6 (12%) | 3 (6%) | |
| Inflammation, Chronic Active | 1 (2%) | | 1 (2%) | | |
| Bilateral, Hypospermia | 4 (8%) | 5 (10%) | 6 (12%) | 5 (10%) | 43 (88%) |
| Bilateral, Inflammation, Suppurative | | | | | 1 (2%) |
| Bilateral, Polyarteritis Nodosa | 2 (4%) | 1 (2%) | | | 1 (2%) |
| Bilateral, Duct, Exfoliated Germ Cell | 6 (12%) | 5 (10%) | 4 (8%) | | 2 (4%) |
| Duct, Exfoliated Germ Cell | | | 2 (4%) | | |
| Duct, Mineral | | | | | 1 (2%) |
| Preputial Gland | (50) | (49) | (50) | (50) | (48) |
| Inflammation, Suppurative | 1 (2%) | 1 (2%) | | | |
| Inflammation, Chronic Active | 1 (2%) | | | 1 (2%) | |
| Prostate | (50) | (49) | (50) | (50) | (49) |
| Artery, Mineral | 1 (2%) | | 1 (2%) | | |
| Dorsal, Epithelium, Lateral, Hyperplasia | | 2 (4%) | | 1 (2%) | |
| Dorsal, Lateral, Inflammation, Suppurative | | 1 (2%) | | | 1 (2%) |
| Dorsal, Lateral, Inflammation, Acute | 1 (2%) | | | | 2 (4%) |
| Dorsal, Lateral, Inflammation, Chronic | | | | | 1 (2%) |
| Dorsal, Lateral, Inflammation, Chronic Active | 1 (2%) | 2 (4%) | | | |

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|--|------------|--------------|---------------|---------------|----------------|
| Epithelium, Ventral, Hyperplasia | 4 (8%) | 2 (4%) | 3 (6%) | 3 (6%) | 3 (6%) |
| Ventral, Hemorrhage | 1 (2%) | | | | |
| Ventral, Inflammation, Suppurative | | 2 (4%) | | | |
| Ventral, Inflammation, Granulomatous | | | | 1 (2%) | |
| Ventral, Inflammation, Acute | 3 (6%) | | | | 1 (2%) |
| Ventral, Inflammation, Chronic | 1 (2%) | | | | 1 (2%) |
| Ventral, Inflammation, Chronic Active | 3 (6%) | 3 (6%) | 1 (2%) | 2 (4%) | 2 (4%) |
| Seminal Vesicle | (50) | (49) | (50) | (50) | (49) |
| Atrophy | | | | 1 (2%) | |
| Inflammation, Suppurative | | 1 (2%) | | | |
| Inflammation, Acute | | 1 (2%) | | | |
| Artery, Mineral | | | 1 (2%) | | |
| Bilateral, Inflammation, Suppurative | | 1 (2%) | | | 1 (2%) |
| Bilateral, Inflammation, Acute | 2 (4%) | | | 1 (2%) | 2 (4%) |
| Bilateral, Inflammation, Chronic Active | 1 (2%) | | | | 3 (6%) |
| Testis | (49) | (49) | (50) | (50) | (49) |
| Degeneration | 1 (2%) | | | | |
| Edema | 8 (16%) | 7 (14%) | 9 (18%) | 9 (18%) | 5 (10%) |
| Inflammation, Granulomatous | | 1 (2%) | | | |
| Inflammation, Chronic Active | | | 1 (2%) | | |
| Polyarteritis Nodosa | 1 (2%) | | | | |
| Bilateral, Edema | 12 (24%) | 16 (33%) | 17 (34%) | 14 (28%) | 18 (37%) |
| Bilateral, Polyarteritis Nodosa | 18 (37%) | 15 (31%) | 10 (20%) | 9 (18%) | 6 (12%) |
| Bilateral, Germinal Epithelium, Degeneration | 10 (20%) | 10 (20%) | 7 (14%) | 9 (18%) | 37 (76%) |
| Bilateral, Interstitial Cell, Hyperplasia, Focal | | | | | 7 (14%) |
| Bilateral, Seminiferous Tubule, Dysgenesis | | | | | 2 (4%) |
| Bilateral, Seminiferous Tubule, Mineral | | 4 (8%) | 1 (2%) | | 2 (4%) |
| Germinal Epithelium, Degeneration | 6 (12%) | 15 (31%) | 14 (28%) | 12 (24%) | 7 (14%) |
| Interstitial Cell, Hyperplasia, Focal | 4 (8%) | 3 (6%) | 6 (12%) | 5 (10%) | 23 (47%) |
| Seminiferous Tubule, Dysgenesis | | | | | 8 (16%) |
| Tunic, Edema | | | | | 1 (2%) |
| Tunic, Hyperplasia, Mesothelium | 1 (2%) | | | | |

HEMATOPOIETIC SYSTEM

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|--|------------|--------------|---------------|---------------|----------------|
| Bone Marrow | (50) | (49) | (50) | (50) | (50) |
| Congestion | | 1 (2%) | 2 (4%) | 2 (4%) | 1 (2%) |
| Hypercellularity | 21 (42%) | 17 (35%) | 29 (58%) | 34 (68%) | 36 (72%) |
| Hypocellularity | | | | | 5 (10%) |
| Increased Bone | | | 1 (2%) | | |
| Necrosis | | | 1 (2%) | | |
| Thrombus | | | 1 (2%) | | |
| Lymph Node | (2) | (1) | (6) | (1) | (1) |
| Deep Cervical, Hemorrhage | | 1 (100%) | | | |
| Deep Cervical, Infiltration Cellular, Histiocyte | | | | 1 (100%) | |
| Deep Cervical, Pigment | | | | 1 (100%) | |
| Lumbar, Dilation | | | 1 (17%) | | |
| Lumbar, Infiltration Cellular, Histiocyte | | | | 1 (100%) | |
| Lumbar, Infiltration Cellular, Plasma Cell | 1 (50%) | | | | |
| Lumbar, Pigment | | | | 1 (100%) | |
| Mediastinal, Hemorrhage | 1 (50%) | | 1 (17%) | | |
| Mediastinal, Hyperplasia, Lymphocyte | | | 1 (17%) | | 1 (100%) |
| Pancreatic, Hyperplasia, Lymphocyte | 1 (50%) | | | | |
| Lymph Node, Mandibular | (50) | (47) | (49) | (50) | (49) |
| Atrophy | 1 (2%) | 1 (2%) | 1 (2%) | | 5 (10%) |
| Infiltration Cellular, Histiocyte | | | | 1 (2%) | |
| Infiltration Cellular, Plasma Cell | 1 (2%) | | 1 (2%) | | |
| Inflammation, Suppurative | | 1 (2%) | | | |
| Inflammation, Chronic Active | | | | 1 (2%) | |
| Pigment | | | | 1 (2%) | |
| Lymph Node, Mesenteric | (49) | (49) | (49) | (50) | (48) |
| Atrophy | 3 (6%) | 2 (4%) | 1 (2%) | | 6 (13%) |
| Hemorrhage | | | | 1 (2%) | |
| Hyperplasia, Lymphocyte | | | | 1 (2%) | |
| Spleen | (50) | (49) | (50) | (50) | (49) |
| Extramedullary Hematopoiesis | 42 (84%) | 42 (86%) | 42 (84%) | 47 (94%) | 36 (73%) |
| Hemorrhage | | | 2 (4%) | | |
| Hyperplasia, Histiocytic | 1 (2%) | | | | |
| Pigment | 41 (82%) | 43 (88%) | 42 (84%) | 46 (92%) | 38 (78%) |
| White Pulp, Atrophy | 13 (26%) | 8 (16%) | 6 (12%) | 5 (10%) | 9 (18%) |
| White Pulp, Hyperplasia | 1 (2%) | | | | 1 (2%) |

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| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---------------------------------|------------|--------------|---------------|---------------|----------------|
| Thymus | (47) | (46) | (49) | (47) | (47) |
| Atrophy | 45 (96%) | 45 (98%) | 43 (88%) | 45 (96%) | 36 (77%) |
| Atrophy, Lymphocyte | | | | | 5 (11%) |
| Ectopic Thyroid | | 1 (2%) | | | |
| Polyarteritis Nodosa | 1 (2%) | | | | |

INTEGUMENTARY SYSTEM

| | | | | | |
|------------------------------|--------|--------|--------|--------|------|
| Mammary Gland | (49) | (48) | (50) | (50) | (48) |
| Galactocele | | | 1 (2%) | | |
| Hyperplasia | 1 (2%) | | | 1 (2%) | |
| Artery, Mineral | 1 (2%) | | | | |
| Skin | (50) | (48) | (50) | (50) | (50) |
| Cyst Epithelial Inclusion | 3 (6%) | 1 (2%) | 3 (6%) | | |
| Inflammation, Suppurative | 1 (2%) | 1 (2%) | | | |
| Inflammation, Acute | | | | 1 (2%) | |
| Inflammation, Chronic | | 1 (2%) | | | |
| Inflammation, Chronic Active | 3 (6%) | 2 (4%) | 1 (2%) | 1 (2%) | |
| Ulcer | 1 (2%) | 1 (2%) | | 2 (4%) | |
| Epidermis, Hyperplasia | 1 (2%) | | | 1 (2%) | |

MUSCULOSKELETAL SYSTEM

| | | | | | |
|--------------------------------|---------|------|--------|------|--------|
| Bone | (50) | (49) | (50) | (50) | (50) |
| Osteopetrosis | | | 2 (4%) | | |
| Cartilage, Joint, Degeneration | 1 (2%) | | | | 2 (4%) |
| Skeletal Muscle | (2) | (0) | (0) | (1) | (0) |
| Artery, Mineral | 1 (50%) | | | | |

NERVOUS SYSTEM

| | | | | | |
|---------|------|--------|--------|------|--------|
| Brain | (50) | (49) | (50) | (50) | (49) |
| Edema | | | 1 (2%) | | |
| Gliosis | | 1 (2%) | | | 1 (2%) |

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Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|-------------------------------------|------------|--------------|---------------|---------------|----------------|
| Hemorrhage | | 2 (4%) | 3 (6%) | | |
| Inflammation, Acute | | 1 (2%) | | 1 (2%) | 1 (2%) |
| Necrosis | 1 (2%) | 2 (4%) | | 2 (4%) | 4 (8%) |
| Nerve Trigeminal | (0) | (0) | (0) | (1) | (0) |
| Peripheral Nerve | (3) | (0) | (1) | (1) | (0) |
| Axon, Degeneration | 1 (33%) | | | | |
| Axon, Sciatic, Degeneration | | | | 1 (100%) | |
| Ganglion, Vacuolization Cytoplasmic | 2 (67%) | | 1 (100%) | | |
| Spinal Cord | (1) | (0) | (0) | (1) | (0) |
| Axon, Degeneration | | | | 1 (100%) | |
| Nerve, Degeneration | 1 (100%) | | | | |

RESPIRATORY SYSTEM

| | | | | | |
|--|----------|----------|----------|----------|----------|
| Lung | (50) | (49) | (50) | (50) | (49) |
| Fibrosis | 1 (2%) | | | | |
| Hemorrhage | 1 (2%) | | | | |
| Infiltration Cellular, Histiocyte | 34 (68%) | 30 (61%) | 33 (66%) | 32 (64%) | 32 (65%) |
| Inflammation, Granulomatous | 4 (8%) | 8 (16%) | 9 (18%) | 10 (20%) | 9 (18%) |
| Inflammation, Acute | 1 (2%) | 2 (4%) | | 1 (2%) | |
| Inflammation, Chronic Active | 7 (14%) | 1 (2%) | 3 (6%) | 2 (4%) | 4 (8%) |
| Metaplasia, Osseous | 1 (2%) | | | | |
| Mineral | 2 (4%) | 1 (2%) | 1 (2%) | | |
| Polyarteritis Nodosa | | 1 (2%) | | | |
| Thrombus | | 1 (2%) | | | |
| Alveolar Epithelium, Hyperplasia | | 1 (2%) | 5 (10%) | 4 (8%) | 3 (6%) |
| Artery, Mineral | 4 (8%) | 1 (2%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Nose | (50) | (49) | (50) | (50) | (50) |
| Accumulation, Hyaline Droplet | | | | 1 (2%) | |
| Foreign Body | 1 (2%) | | 1 (2%) | | 1 (2%) |
| Inflammation, Suppurative | 4 (8%) | 6 (12%) | | | 2 (4%) |
| Inflammation, Acute | 7 (14%) | | 10 (20%) | 4 (8%) | 5 (10%) |
| Inflammation, Chronic Active | | | 2 (4%) | | |
| Glands, Respiratory Epithelium, Dilation | 1 (2%) | | | | 1 (2%) |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---|------------|--------------|---------------|---------------|----------------|
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 33 (66%) | 38 (78%) | 38 (76%) | 44 (88%) | 33 (66%) |
| Olfactory Epithelium, Metaplasia, Respiratory | 3 (6%) | 1 (2%) | 2 (4%) | | 1 (2%) |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 2 (4%) | 1 (2%) | 3 (6%) | 4 (8%) | |
| Respiratory Epithelium, Hyperplasia | 1 (2%) | | | | 1 (2%) |
| Respiratory Epithelium, Squamous Metaplasia | | | | 1 (2%) | |
| Trachea | (50) | (49) | (50) | (50) | (50) |
| Inflammation, Chronic Active | | | | | 1 (2%) |

SPECIAL SENSES SYSTEM

| | | | | | |
|--|---------|--------|--------|--------|--------|
| Eye | (50) | (49) | (50) | (50) | (49) |
| Anterior Chamber, Inflammation, Acute | | 1 (2%) | 1 (2%) | | |
| Anterior Chamber, Bilateral, Inflammation, Acute | | 1 (2%) | 1 (2%) | | |
| Bilateral, Cornea, Inflammation, Acute | 4 (8%) | 2 (4%) | 2 (4%) | 1 (2%) | 1 (2%) |
| Choroid, Hyperplasia | 1 (2%) | | | 1 (2%) | |
| Cornea, Inflammation, Acute | 5 (10%) | 2 (4%) | 1 (2%) | 2 (4%) | 1 (2%) |
| Iris, Inflammation, Acute | 1 (2%) | 2 (4%) | | | |
| Lens, Cataract | 1 (2%) | | 1 (2%) | | |
| Lens, Inflammation, Acute | | 1 (2%) | | | |
| Retina, Degeneration | 1 (2%) | 1 (2%) | | | 2 (4%) |
| Retina, Dysplasia | | 1 (2%) | | 1 (2%) | |
| Retina, Hyperplasia | | 1 (2%) | | | |
| Harderian Gland | (50) | (49) | (50) | (50) | (50) |
| Degeneration | 1 (2%) | | | | |
| Inflammation, Chronic | | | 1 (2%) | | |
| Inflammation, Chronic Active | | | | | 1 (2%) |
| Zymbal's Gland | (1) | (0) | (0) | (0) | (0) |

URINARY SYSTEM

| | | | | | |
|----------------------------|------|--------|------|------|------|
| Kidney | (50) | (49) | (50) | (50) | (49) |
| Developmental Malformation | | 1 (2%) | | | |

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Experiment Number: 10188 - 02

Test Type: CHRONIC

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Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS MALE | 0 ppm Male | 300 ppm Male | 1000 ppm Male | 3000 ppm Male | 10000 ppm Male |
|---|------------|--------------|---------------|---------------|----------------|
| Infarct | 2 (4%) | 10 (20%) | 9 (18%) | 7 (14%) | 17 (35%) |
| Inflammation, Suppurative | | | 1 (2%) | | |
| Inflammation, Acute | 1 (2%) | 1 (2%) | | | 1 (2%) |
| Inflammation, Chronic Active | | | | | 1 (2%) |
| Mineral | 1 (2%) | 2 (4%) | | | 3 (6%) |
| Nephropathy, Chronic Progressive | 49 (98%) | 49 (100%) | 49 (98%) | 50 (100%) | 41 (84%) |
| Artery, Mineral | 3 (6%) | | | | 1 (2%) |
| Bilateral, Pelvis, Dilation | 1 (2%) | | | | |
| Cortex, Hemorrhage | | | | | 1 (2%) |
| Epithelium, Papilla, Hyperplasia | 9 (18%) | 4 (8%) | 4 (8%) | 3 (6%) | 17 (35%) |
| Papilla, Edema | | | | | 39 (80%) |
| Papilla, Hemorrhage | | 1 (2%) | | 2 (4%) | 12 (24%) |
| Pelvis, Dilation | | | | 2 (4%) | 3 (6%) |
| Pelvis, Inflammation, Suppurative | 1 (2%) | | | | |
| Pelvis, Inflammation, Acute | 1 (2%) | 1 (2%) | | | 1 (2%) |
| Pelvis, Inflammation, Chronic Active | | | | | 1 (2%) |
| Renal Tubule, Accumulation, Hyaline Droplet | | 2 (4%) | 2 (4%) | | |
| Renal Tubule, Cyst | 9 (18%) | 2 (4%) | 4 (8%) | 7 (14%) | 5 (10%) |
| Renal Tubule, Dilation | | | | 2 (4%) | |
| Renal Tubule, Hyperplasia | | 1 (2%) | | 1 (2%) | |
| Renal Tubule, Hyperplasia, Atypical | | | 1 (2%) | 1 (2%) | |
| Urinary Bladder | (50) | (49) | (50) | (50) | (48) |
| Hemorrhage | | 1 (2%) | | | |
| Inflammation, Acute | 1 (2%) | | | | |
| Inflammation, Chronic | | | | | 1 (2%) |
| Inflammation, Chronic Active | 1 (2%) | | | 1 (2%) | |
| Polyarteritis Nodosa | | | 1 (2%) | | |
| Artery, Mineral | 1 (2%) | 1 (2%) | | | |

*** END OF MALE ***

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|-----------------------------------|--------------|----------------|-----------------|-----------------|------------------|
|-----------------------------------|--------------|----------------|-----------------|-----------------|------------------|

Disposition Summary

| | | | | | |
|---|-----------|-----------|-----------|-----------|-----------|
| Animals Initially In Study | 50 | 50 | 50 | 50 | 50 |
| Early Deaths | | | | | |
| Moribund Sacrifice | 13 | 9 | 9 | 7 | 12 |
| Natural Death | 5 | 9 | 7 | 9 | 11 |
| Survivors | | | | | |
| Moribund Sacrifice | | | | 1 | |
| Natural Death | 1 | | | 1 | |
| Terminal Sacrifice | 31 | 32 | 34 | 32 | 27 |
| Animals Examined Microscopically | 50 | 50 | 50 | 50 | 50 |

ALIMENTARY SYSTEM

| | | | | | |
|------------------------------|---------|---------|---------|--------|----------|
| Esophagus | (49) | (50) | (50) | (49) | (49) |
| Intestine Large, Cecum | (50) | (50) | (49) | (50) | (48) |
| Inflammation, Chronic Active | | | 1 (2%) | | |
| Parasite Metazoan | | 1 (2%) | | | |
| Polyarteritis Nodosa | | | 1 (2%) | | |
| Ulcer | | | 1 (2%) | | |
| Artery, Polyarteritis Nodosa | | | | 1 (2%) | |
| Intestine Large, Colon | (50) | (50) | (50) | (50) | (48) |
| Parasite Metazoan | 2 (4%) | 4 (8%) | | 2 (4%) | |
| Polyarteritis Nodosa | | | | 2 (4%) | |
| Intestine Large, Rectum | (50) | (50) | (50) | (50) | (48) |
| Parasite Metazoan | 8 (16%) | 6 (12%) | 8 (16%) | 4 (8%) | 3 (6%) |
| Polyarteritis Nodosa | | 1 (2%) | 1 (2%) | 1 (2%) | |
| Intestine Small, Duodenum | (49) | (50) | (50) | (49) | (48) |
| Inflammation, Chronic Active | | 1 (2%) | | | |
| Intestine Small, Ileum | (50) | (50) | (49) | (49) | (48) |
| Parasite Metazoan | | | | | 1 (2%) |
| Intestine Small, Jejunum | (50) | (50) | (50) | (50) | (48) |
| Hyperplasia, Lymphocyte | 1 (2%) | | | | |
| Liver | (49) | (50) | (50) | (50) | (48) |
| Angiectasis | 1 (2%) | | | | 2 (4%) |
| Basophilic Focus | 4 (8%) | 5 (10%) | 3 (6%) | 2 (4%) | 10 (21%) |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|------------------------------------|--------------|----------------|-----------------|-----------------|------------------|
| Cholangiofibrosis | 1 (2%) | | | | |
| Clear Cell Focus | 14 (29%) | 18 (36%) | 15 (30%) | 11 (22%) | 8 (17%) |
| Degeneration, Cystic | | | | 1 (2%) | 1 (2%) |
| Eosinophilic Focus | 3 (6%) | 4 (8%) | 4 (8%) | 7 (14%) | 12 (25%) |
| Extramedullary Hematopoiesis | 7 (14%) | 6 (12%) | 3 (6%) | 4 (8%) | 4 (8%) |
| Fibrosis | | | | 1 (2%) | |
| Hepatodiaphragmatic Nodule | 2 (4%) | 3 (6%) | 3 (6%) | | |
| Hyperplasia, Nodular | | | | | 1 (2%) |
| Mixed Cell Focus | | 2 (4%) | 1 (2%) | | |
| Necrosis | 3 (6%) | 9 (18%) | 3 (6%) | 7 (14%) | 8 (17%) |
| Pigment | | 6 (12%) | 14 (28%) | 36 (72%) | 40 (83%) |
| Regeneration | | | | 1 (2%) | |
| Bile Duct, Cyst | | 1 (2%) | 1 (2%) | 2 (4%) | |
| Bile Duct, Dilation | | | 1 (2%) | 3 (6%) | |
| Bile Duct, Hyperplasia | 9 (18%) | 13 (26%) | 13 (26%) | 21 (42%) | 8 (17%) |
| Endothelial Cell, Hypertrophy | | 1 (2%) | | | |
| Hepatocyte, Cytoplasmic Alteration | | 4 (8%) | 7 (14%) | 39 (78%) | 39 (81%) |
| Hepatocyte, Hypertrophy | | 2 (4%) | 5 (10%) | 9 (18%) | 34 (71%) |
| Mesentery | (1) | (1) | (1) | (2) | (1) |
| Polyarteritis Nodosa | | | | 2 (100%) | |
| Artery, Thrombus | | | | 1 (50%) | |
| Fat, Necrosis | | 1 (100%) | 1 (100%) | | |
| Pancreas | (49) | (50) | (50) | (50) | (48) |
| Basophilic Focus | 1 (2%) | | | 1 (2%) | |
| Inflammation, Acute | | | | 1 (2%) | |
| Polyarteritis Nodosa | 1 (2%) | 1 (2%) | | 2 (4%) | 1 (2%) |
| Acinus, Atrophy | 1 (2%) | 2 (4%) | 3 (6%) | 3 (6%) | 1 (2%) |
| Acinus, Hyperplasia | | | | 2 (4%) | 3 (6%) |
| Acinus, Metaplasia, Hepatocyte | | | | | 1 (2%) |
| Salivary Glands | (49) | (50) | (50) | (46) | (45) |
| Stomach, Forestomach | (50) | (50) | (50) | (50) | (48) |
| Inflammation, Acute | | 1 (2%) | | | |
| Inflammation, Chronic | | | | | 1 (2%) |
| Inflammation, Chronic Active | 2 (4%) | | 2 (4%) | 5 (10%) | 2 (4%) |
| Mineral | | | | 1 (2%) | |
| Polyarteritis Nodosa | | | 1 (2%) | | |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

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

Di(2-ethylhexyl) Phthalate

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Date Report Requested: 06/02/2020

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First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|-----------------------------------|--------------|----------------|-----------------|-----------------|------------------|
| Ulcer | 1 (2%) | | 1 (2%) | 1 (2%) | 1 (2%) |
| Epithelium, Hyperplasia | 4 (8%) | 1 (2%) | 3 (6%) | 3 (6%) | 3 (6%) |
| Epithelium, Hyperplasia, Atypical | | 1 (2%) | | | |
| Stomach, Glandular | (50) | (50) | (50) | (50) | (48) |
| Inflammation, Chronic Active | | 1 (2%) | | | |
| Mineral | 6 (12%) | 3 (6%) | 4 (8%) | 5 (10%) | 3 (6%) |
| Ulcer | | 1 (2%) | | | |
| Glands, Dysplasia | 1 (2%) | | | | |

CARDIOVASCULAR SYSTEM

| | | | | | |
|-----------------------------------|----------|----------|---------|----------|---------|
| Blood Vessel | (49) | (50) | (50) | (50) | (48) |
| Aneurysm | | | | 2 (4%) | |
| Mineral | | | | | 2 (4%) |
| Thrombus | | | | 1 (2%) | |
| Heart | (49) | (50) | (50) | (49) | (48) |
| Cardiomyopathy | 10 (20%) | 12 (24%) | 8 (16%) | 13 (27%) | 9 (19%) |
| Mineral | | | | | 2 (4%) |
| Atrium, Thrombus | | | | 1 (2%) | |
| Endocardium, Hyperplasia | | | 1 (2%) | | |
| Epicardium, Inflammation, Chronic | | | | | 1 (2%) |

ENDOCRINE SYSTEM

| | | | | | |
|-----------------------------------|----------|---------|---------|---------|----------|
| Adrenal Cortex | (50) | (50) | (50) | (50) | (48) |
| Accessory Adrenal Cortical Nodule | | 1 (2%) | | | |
| Angiectasis | 1 (2%) | 1 (2%) | 2 (4%) | 1 (2%) | |
| Degeneration, Cystic | 12 (24%) | 8 (16%) | 9 (18%) | 6 (12%) | 12 (25%) |
| Extramedullary Hematopoiesis | 1 (2%) | | 1 (2%) | | |
| Hemorrhage | | 1 (2%) | | | |
| Hyperplasia | 1 (2%) | | 1 (2%) | 1 (2%) | 3 (6%) |
| Metaplasia, Osseous | | 1 (2%) | | | |
| Mineral | | | 1 (2%) | | |
| Necrosis | | 1 (2%) | 2 (4%) | | |
| Thrombus | 2 (4%) | 2 (4%) | | 1 (2%) | |

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Experiment Number: 10188 - 02

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Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|-----------------------------------|--------------|----------------|-----------------|-----------------|------------------|
| Adrenal Medulla | (50) | (50) | (50) | (50) | (47) |
| Hyperplasia | 1 (2%) | 2 (4%) | 1 (2%) | | |
| Islets, Pancreatic | (49) | (50) | (50) | (50) | (48) |
| Hyperplasia | 3 (6%) | 2 (4%) | 7 (14%) | 4 (8%) | |
| Parathyroid Gland | (42) | (43) | (42) | (37) | (38) |
| Hyperplasia | | | 1 (2%) | 1 (3%) | 1 (3%) |
| Pituitary Gland | (49) | (50) | (49) | (49) | (49) |
| Angiectasis | | | 1 (2%) | | |
| Cyst | | | | 1 (2%) | |
| Pars Distalis, Hyperplasia | 19 (39%) | 18 (36%) | 13 (27%) | 20 (41%) | 12 (24%) |
| Thyroid Gland | (49) | (50) | (50) | (47) | (48) |
| Inflammation, Acute | | 1 (2%) | 1 (2%) | | |
| Polyarteritis Nodosa | | 1 (2%) | | | |
| Bilateral, C-cell, Hyperplasia | | 3 (6%) | | | |
| C-cell, Hyperplasia | 14 (29%) | 8 (16%) | 13 (26%) | 6 (13%) | 2 (4%) |
| Follicular Cell, Hyperplasia | | | | | 2 (4%) |

GENERAL BODY SYSTEM

| | | | | | |
|-----------------------|-----|-----|----------|-----|-----|
| Peritoneum | (0) | (0) | (2) | (0) | (0) |
| Inflammation, Chronic | | | 2 (100%) | | |

GENITAL SYSTEM

| | | | | | |
|---------------------------------|----------|----------|----------|----------|----------|
| Clitoral Gland | (50) | (49) | (49) | (50) | (46) |
| Inflammation, Chronic Active | 1 (2%) | | | | |
| Ovary | (50) | (50) | (50) | (50) | (48) |
| Cyst | | 1 (2%) | | | 1 (2%) |
| Pigment | | 1 (2%) | | | |
| Bilateral, Atrophy | 40 (80%) | 35 (70%) | 30 (60%) | 28 (56%) | 19 (40%) |
| Bilateral, Polyarteritis Nodosa | | | | 1 (2%) | |
| Bilateral, Follicle, Cyst | 1 (2%) | | | 3 (6%) | 4 (8%) |
| Bursa, Cyst | 4 (8%) | 5 (10%) | 1 (2%) | 2 (4%) | 1 (2%) |
| Corpus Luteum, Cyst | | | | 1 (2%) | |
| Follicle, Cyst | 9 (18%) | 9 (18%) | 6 (12%) | 8 (16%) | 5 (10%) |

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Experiment Number: 10188 - 02

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Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|---|--------------|----------------|-----------------|-----------------|------------------|
| Germinal Epithelium, Cyst | | 1 (2%) | | 1 (2%) | 3 (6%) |
| Interstitial Cell, Hyperplasia | | 1 (2%) | | | |
| Paraovarian Tissue, Cyst | 1 (2%) | | 2 (4%) | | 1 (2%) |
| Paraovarian Tissue, Inflammation, Chronic | | 1 (2%) | | | |
| Rete Ovarii, Hyperplasia | | 1 (2%) | | | |
| Oviduct | (0) | (0) | (0) | (1) | (0) |
| Inflammation, Chronic | | | | 1 (100%) | |
| Uterus | (50) | (50) | (50) | (50) | (48) |
| Adenomyosis | 1 (2%) | 1 (2%) | | | |
| Cyst, Squamous | 2 (4%) | | 1 (2%) | | |
| Dilation | 3 (6%) | 1 (2%) | 1 (2%) | 1 (2%) | 3 (6%) |
| Hemorrhage | | 2 (4%) | 1 (2%) | 1 (2%) | 2 (4%) |
| Hyperplasia, Stromal | 1 (2%) | | | | |
| Inflammation, Suppurative | 4 (8%) | | | | |
| Inflammation, Acute | | | 6 (12%) | 2 (4%) | |
| Inflammation, Chronic Active | 2 (4%) | | 1 (2%) | | 1 (2%) |
| Perforation | | | 1 (2%) | | |
| Polyarteritis Nodosa | | | | 1 (2%) | |
| Thrombus | 1 (2%) | 1 (2%) | | | 1 (2%) |
| Cervix, Hyperplasia, Squamous | | | 1 (2%) | | |
| Endometrium, Atypical Hyperplasia | | | | | 1 (2%) |
| Endometrium, Hyperplasia, Atypical | 1 (2%) | 1 (2%) | | | |
| Endometrium, Hyperplasia, Cystic | 27 (54%) | 24 (48%) | 28 (56%) | 23 (46%) | 16 (33%) |
| Endometrium, Squamous Metaplasia | 25 (50%) | 17 (34%) | 20 (40%) | 17 (34%) | 7 (15%) |
| Vagina | (49) | (50) | (50) | (50) | (49) |
| Inflammation, Chronic Active | | 1 (2%) | | | |
| Necrosis | | 1 (2%) | | | |
| Prolapse | 1 (2%) | | | | |

HEMATOPOIETIC SYSTEM

| | | | | | |
|------------------|----------|----------|----------|----------|----------|
| Bone Marrow | (50) | (50) | (50) | (50) | (50) |
| Congestion | 1 (2%) | | | | |
| Hypercellularity | 39 (78%) | 37 (74%) | 40 (80%) | 47 (94%) | 38 (76%) |
| Hypocellularity | | | | | 7 (14%) |

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|---|--------------|----------------|-----------------|-----------------|------------------|
| Myelofibrosis | 1 (2%) | | | | |
| Lymph Node | (0) | (4) | (4) | (2) | (2) |
| Axillary, Hemorrhage | | 1 (25%) | | | |
| Inguinal, Infiltration Cellular, Histiocyte | | | 1 (25%) | | |
| Lumbar, Hemorrhage | | 1 (25%) | | | |
| Lumbar, Hyperplasia, Lymphocyte | | | | 1 (50%) | |
| Lumbar, Infiltration Cellular, Plasma Cell | | | 2 (50%) | | |
| Mediastinal, Hemorrhage | | | | 1 (50%) | |
| Mediastinal, Hyperplasia, Plasma Cell | | 1 (25%) | | | |
| Pancreatic, Inflammation | | 1 (25%) | | | |
| Renal, Sinusoid, Dilation | | 1 (25%) | | | |
| Lymph Node, Mandibular | (49) | (49) | (50) | (46) | (42) |
| Atrophy | | | | | 3 (7%) |
| Infiltration Cellular, Plasma Cell | | 1 (2%) | 1 (2%) | | |
| Lymph Node, Mesenteric | (49) | (50) | (50) | (49) | (47) |
| Atrophy | 1 (2%) | | | | 4 (9%) |
| Hemorrhage | 1 (2%) | | | | |
| Hyperplasia, Lymphocyte | | | 1 (2%) | | |
| Infiltration Cellular, Plasma Cell | | 1 (2%) | | | |
| Spleen | (49) | (50) | (50) | (50) | (47) |
| Extramedullary Hematopoiesis | 44 (90%) | 46 (92%) | 47 (94%) | 45 (90%) | 39 (83%) |
| Hemorrhage | 1 (2%) | 1 (2%) | | 1 (2%) | |
| Pigment | 37 (76%) | 39 (78%) | 41 (82%) | 43 (86%) | 38 (81%) |
| White Pulp, Atrophy | 7 (14%) | 4 (8%) | 2 (4%) | 9 (18%) | 11 (23%) |
| Thymus | (46) | (50) | (48) | (48) | (45) |
| Atrophy | 45 (98%) | 46 (92%) | 45 (94%) | 44 (92%) | 42 (93%) |
| Cyst | | | 1 (2%) | | |
| Ectopic Parathyroid Gland | | | | 1 (2%) | 1 (2%) |
| Hyperplasia, Tubular | | 1 (2%) | | | |
| Necrosis | | | | | 1 (2%) |

INTEGUMENTARY SYSTEM

| | | | | | |
|---------------|--------|--------|--------|--------|--------|
| Mammary Gland | (50) | (50) | (50) | (50) | (47) |
| Galactocele | 2 (4%) | 2 (4%) | 1 (2%) | 3 (6%) | 1 (2%) |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|---|--------------|----------------|-----------------|-----------------|------------------|
| Hyperplasia | 16 (32%) | 20 (40%) | 15 (30%) | 23 (46%) | 10 (21%) |
| Hyperplasia, Atypical | | 1 (2%) | | | |
| Infiltration Cellular, Mononuclear Cell | 1 (2%) | | | | |
| Inflammation, Chronic | 1 (2%) | | | | |
| Skin | (50) | (50) | (50) | (50) | (49) |
| Inflammation, Chronic Active | | 1 (2%) | 1 (2%) | | |
| Ulcer | | | 1 (2%) | | |
| MUSCULOSKELETAL SYSTEM | | | | | |
| Bone | (50) | (50) | (50) | (50) | (50) |
| Inflammation, Chronic | | 1 (2%) | | | |
| Necrosis | | 1 (2%) | | | |
| Osteopetrosis | 1 (2%) | | | | |
| Skeletal Muscle | (2) | (1) | (0) | (0) | (2) |
| Hemorrhage | 1 (50%) | | | | |
| NERVOUS SYSTEM | | | | | |
| Brain | (50) | (50) | (50) | (50) | (49) |
| Degeneration | | | | 1 (2%) | |
| Gliosis | | 1 (2%) | 1 (2%) | | |
| Hemorrhage | 1 (2%) | 1 (2%) | | | |
| Necrosis | 2 (4%) | | | 2 (4%) | 1 (2%) |
| Medulla, Demyelination | | 1 (2%) | | | |
| Meninges, Hyperplasia | | | | | 1 (2%) |
| Nerve Trigeminal | (0) | (1) | (0) | (0) | (0) |
| Peripheral Nerve | (0) | (1) | (1) | (0) | (0) |
| Spinal Cord | (0) | (1) | (0) | (0) | (0) |
| Demyelination | | 1 (100%) | | | |
| Axon, Degeneration | | 1 (100%) | | | |
| Nerve, Gliosis | | 1 (100%) | | | |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|---|--------------|----------------|-----------------|-----------------|------------------|
| RESPIRATORY SYSTEM | | | | | |
| Lung | (49) | (50) | (50) | (49) | (48) |
| Hyperplasia, Lymphocyte | 1 (2%) | | | | |
| Infiltration Cellular, Histiocyte | 45 (92%) | 48 (96%) | 49 (98%) | 47 (96%) | 42 (88%) |
| Inflammation, Granulomatous | 8 (16%) | 7 (14%) | 8 (16%) | 10 (20%) | 7 (15%) |
| Inflammation, Chronic Active | 1 (2%) | 2 (4%) | 1 (2%) | | |
| Thrombus | | 2 (4%) | 1 (2%) | | 1 (2%) |
| Alveolar Epithelium, Hyperplasia | 2 (4%) | | | | |
| Bronchiole, Hyperplasia | 1 (2%) | | | | |
| Nose | (50) | (50) | (50) | (50) | (50) |
| Inflammation, Chronic Active | 1 (2%) | 6 (12%) | 2 (4%) | 3 (6%) | |
| Thrombus | | 1 (2%) | | | |
| Olfactory Epithelium, Accumulation, Hyaline Droplet | 50 (100%) | 48 (96%) | 49 (98%) | 49 (98%) | 41 (82%) |
| Respiratory Epithelium, Accumulation, Hyaline Droplet | 11 (22%) | 6 (12%) | 10 (20%) | 3 (6%) | 1 (2%) |
| Respiratory Epithelium, Hyperplasia | | 1 (2%) | | | |
| Respiratory Epithelium, Squamous Metaplasia | | | | 1 (2%) | |
| Trachea | (49) | (50) | (50) | (49) | (49) |
| SPECIAL SENSES SYSTEM | | | | | |
| Eye | (50) | (50) | (50) | (50) | (49) |
| Choroid, Hyperplasia | | | | 2 (4%) | |
| Cornea, Inflammation, Acute | | | | | 2 (4%) |
| Lens, Cataract | 1 (2%) | | | | 1 (2%) |
| Retina, Degeneration | 1 (2%) | 1 (2%) | 1 (2%) | | 2 (4%) |
| Retina, Dysplasia | 1 (2%) | | | | |
| Retina, Hyperplasia | | | 1 (2%) | 1 (2%) | |
| Harderian Gland | (50) | (50) | (50) | (50) | (49) |
| Atrophy | 1 (2%) | 1 (2%) | 1 (2%) | 1 (2%) | |
| Lacrimal Gland | (1) | (0) | (0) | (0) | (0) |

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

Experiment Number: 10188 - 02

Test Type: CHRONIC

Route: DOSED FEED

Species/Strain: RATS/HSD

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

Di(2-ethylhexyl) Phthalate

CAS Number: 117-81-7

Date Report Requested: 06/02/2020

Time Report Requested: 13:48:37

First Dose M/F: 06/27/11 / 06/28/11

Lab: BAT

| Harlan Sprague Dawley RATS FEMALE | 0 ppm Female | 300 ppm Female | 1000 ppm Female | 3000 ppm Female | 10000 ppm Female |
|---|--------------|----------------|-----------------|-----------------|------------------|
| URINARY SYSTEM | | | | | |
| Kidney | (50) | (50) | (50) | (50) | (48) |
| Calculus Micro Observation Only | | 1 (2%) | | | |
| Cyst | | 1 (2%) | | | |
| Infarct | | 3 (6%) | 7 (14%) | 5 (10%) | 12 (25%) |
| Nephropathy, Chronic Progressive | 42 (84%) | 36 (72%) | 41 (82%) | 45 (90%) | 37 (77%) |
| Polyarteritis Nodosa | | | | 1 (2%) | |
| Epithelium, Papilla, Hyperplasia | 2 (4%) | 1 (2%) | 2 (4%) | 4 (8%) | 15 (31%) |
| Papilla, Edema | | | 2 (4%) | | 38 (79%) |
| Papilla, Hemorrhage | | | | | 2 (4%) |
| Papilla, Necrosis | 1 (2%) | | | | |
| Pelvis, Dilation | | | | | 1 (2%) |
| Pelvis, Inflammation, Acute | | | 1 (2%) | | |
| Renal Tubule, Accumulation, Hyaline Droplet | 2 (4%) | 1 (2%) | | | 1 (2%) |
| Renal Tubule, Cyst | | | 2 (4%) | | 7 (15%) |
| Renal Tubule, Dilation | | | | | 3 (6%) |
| Renal Tubule, Hyperplasia, Atypical | | 1 (2%) | | | |
| Urethra | (0) | (0) | (0) | (0) | (1) |
| Urinary Bladder | (50) | (50) | (50) | (48) | (48) |
| Inflammation, Acute | | | 1 (2%) | | |
| Polyarteritis Nodosa | | | | 1 (2%) | |

*** END OF REPORT ***

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