

TDMs No. 20009 - 04

**P18: INCIDENCE RATES OF NON-NEOPLASTIC LESIONS BY ANATOMIC SITE (a) WITH
AVERAGE SEVERITY GRADES[b]**

Date Report Requested: 05/27/2011

Test Type: CHRONIC

beta-Picoline

Time Report Requested: 09:52:36

Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: 11/09/04 / 11/08/04

Species/Strain: MICE/B6C3F1

Lab: BAT

F2_M3

C Number: C20009
Lock Date: 05/05/2008
Cage Range: ALL
Date Range: ALL
Reasons For Removal: ALL
Removal Date Range: ALL
Treatment Groups: Include ALL
Study Gender: Both
TDMSE Version: 2.4.1.0_004
PWG Approval Date: 12/14/2010

Test Type: CHRONIC

beta-Picoline

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Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: 11/09/04 / 11/08/04

Species/Strain: MICE/B6C3F1

Lab: BAT

| B6C3F1 MICE MALE | 0 mg/l | 312.5 mg/l | 625 mg/l | 1250 mg/l |
|------------------|--------|------------|----------|-----------|
|------------------|--------|------------|----------|-----------|

Disposition Summary

| | | | | |
|----------------------------------|----|----|----|----|
| Animals Initially In Study | 50 | 50 | 50 | 50 |
| Early Deaths | | | | |
| Moribund Sacrifice | 6 | 4 | 8 | 7 |
| Natural Death | 20 | 20 | 15 | 10 |
| Survivors | | | | |
| Terminal Sacrifice | 24 | 26 | 27 | 33 |
| Animals Examined Microscopically | 50 | 50 | 50 | 50 |

ALIMENTARY SYSTEM

| | | | | |
|--------------------------------------|---------|---------|---------|---------|
| Esophagus | (50) | (50) | (50) | (50) |
| Gallbladder | (36) | (33) | (39) | (42) |
| Degeneration, Hyaline | | 1 [3.0] | | |
| Inflammation, Chronic Active | | | 1 [3.0] | |
| Intestine Large, Cecum | (35) | (34) | (36) | (40) |
| Intestine Large, Colon | (40) | (40) | (41) | (40) |
| Intestine Large, Rectum | (39) | (38) | (42) | (41) |
| Intestine Small, Duodenum | (36) | (31) | (35) | (40) |
| Intestine Small, Ileum | (36) | (35) | (39) | (40) |
| Intestine Small, Jejunum | (35) | (32) | (37) | (40) |
| Diverticulum | 1 | | | |
| Peyer's Patch, Hyperplasia, Lymphoid | | 1 [3.0] | | |
| Liver | (50) | (50) | (50) | (50) |
| Angiectasis | 1 [2.0] | 3 [2.3] | 2 [2.0] | 3 [2.7] |
| Basophilic Focus | 10 | 12 | 15 | 7 |
| Clear Cell Focus | 15 | 19 | 16 | 9 |
| Congestion | | | | 1 [2.0] |
| Cyst | | | | 1 [2.0] |
| Eosinophilic Focus | 18 | 16 | 19 | 10 |
| Fatty Change | | 1 [3.0] | | |
| Hematopoietic Cell Proliferation | 1 [2.0] | | | |
| Inflammation, Chronic | | | 2 [1.5] | 1 [4.0] |
| Inflammation, Chronic Active | | | | 2 [1.0] |
| Mineralization | | | 1 [2.0] | |

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

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

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Lab: BAT

| B6C3F1 MICE MALE | 0 mg/l | 312.5 mg/l | 625 mg/l | 1250 mg/l |
|------------------------------|---------|------------|----------|-----------|
| Mixed Cell Focus | 5 | 4 | 5 | 4 |
| Necrosis | 5 [2.8] | 6 [3.0] | 6 [2.7] | 4 [3.0] |
| Mesentery | (7) | (1) | (1) | (1) |
| Inflammation, Chronic Active | 1 [4.0] | | | |
| Fat, Necrosis | 5 [2.0] | | 1 [2.0] | 1 [2.0] |
| Pancreas | (49) | (48) | (48) | (49) |
| Atrophy | 1 [1.0] | | | |
| Necrosis | | | | 1 [2.0] |
| Salivary Glands | (50) | (50) | (50) | (50) |
| Stomach, Forestomach | (47) | (47) | (47) | (47) |
| Hyperplasia, Squamous | 2 [2.0] | 4 [2.3] | 3 [2.7] | 1 [4.0] |
| Ulcer | 5 [2.2] | 3 [2.7] | 4 [3.0] | 1 [2.0] |
| Stomach, Glandular | (42) | (45) | (43) | (45) |
| Mineralization | | 2 [1.0] | | |
| Necrosis | | | 1 [1.0] | |
| Ulcer | 1 [2.0] | 2 [1.5] | | |
| Tooth | (35) | (41) | (42) | (41) |
| Dysplasia | 35 | 41 | 42 | 41 |

CARDIOVASCULAR SYSTEM

| | | | | |
|--------------------------------------|----------|----------|---------|---------|
| Heart | (50) | (50) | (50) | (50) |
| Cardiomyopathy | 12 [1.0] | 17 [1.2] | 7 [1.0] | 4 [1.3] |
| Inflammation, Suppurative | 2 [2.5] | | | |
| Mineralization | 1 [1.0] | 1 [2.0] | 1 [2.0] | 1 [1.0] |
| Necrosis | | 1 [2.0] | 1 [2.0] | |
| Thrombosis | 2 [2.5] | 2 [3.0] | 1 [2.0] | |
| Artery, Inflammation, Chronic Active | | | 1 [3.0] | 2 [3.0] |

ENDOCRINE SYSTEM

| | | | | |
|----------------|----------|----------|----------|----------|
| Adrenal Cortex | (49) | (48) | (50) | (48) |
| Atrophy | | 1 [3.0] | | |
| Hyperplasia | 10 [2.0] | 8 [2.0] | 10 [2.0] | 5 [2.2] |
| Hypertrophy | 12 [2.1] | 14 [2.0] | 14 [2.1] | 17 [1.9] |

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beta-Picoline

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Lab: BAT

| B6C3F1 MICE MALE | 0 mg/l | 312.5 mg/l | 625 mg/l | 1250 mg/l |
|----------------------------|---------|------------|----------|-----------|
| Subcapsular, Hyperplasia | | 1 [2.0] | | |
| Adrenal Medulla | (49) | (47) | (50) | (48) |
| Hyperplasia | 1 [2.0] | 1 [2.0] | 1 [2.0] | |
| Islets, Pancreatic | (49) | (48) | (48) | (49) |
| Hyperplasia | | 1 [3.0] | 2 [2.0] | |
| Parathyroid Gland | (37) | (39) | (44) | (31) |
| Pituitary Gland | (47) | (49) | (49) | (49) |
| Thrombosis | 1 [4.0] | | | |
| Pars Distalis, Hyperplasia | 1 [3.0] | | 2 [2.5] | |
| Thyroid Gland | (49) | (50) | (49) | (49) |

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

| | | | | |
|------------------------------|---------|---------|---------|---------|
| Coagulating Gland | (2) | (0) | (0) | (0) |
| Inflammation, Suppurative | 1 [3.0] | | | |
| Epididymis | (50) | (50) | (50) | (49) |
| Granuloma Sperm | | 1 [3.0] | | 2 [1.5] |
| Mineralization | | | | 1 [2.0] |
| Preputial Gland | (50) | (50) | (50) | (50) |
| Cyst | | | | 1 [3.0] |
| Inflammation, Chronic Active | 3 [2.7] | 3 [3.0] | 4 [3.5] | 1 [1.0] |
| Prostate | (50) | (50) | (48) | (50) |
| Hyperplasia | | 1 [2.0] | | |
| Inflammation, Suppurative | 4 [2.8] | | 2 [3.0] | 1 [2.0] |
| Inflammation, Chronic Active | | | 1 [2.0] | |
| Seminal Vesicle | (47) | (48) | (49) | (47) |
| Amyloid Deposition | | | 2 [3.0] | 1 [3.0] |
| Inflammation, Suppurative | 1 [4.0] | | | |
| Inflammation, Chronic Active | | 1 [2.0] | 3 [3.3] | 2 [2.5] |
| Testes | (50) | (50) | (50) | (50) |
| Atrophy | 1 [3.0] | 2 [3.0] | 2 [1.5] | |

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|------------------|--------|------------|----------|-----------|
|------------------|--------|------------|----------|-----------|

| | | | | |
|--|--|---------|---------|---------|
| Mineralization Interstitial Cell, Hyperplasia | | 1 [2.0] | 1 [2.0] | 1 [2.0] |
|--|--|---------|---------|---------|

HEMATOPOIETIC SYSTEM

| | | | | |
|------------------------------------|---------|---------|---------|---------|
| Bone Marrow | (50) | (50) | (48) | (50) |
| Angiectasis | | | 1 [3.0] | |
| Lymph Node | (2) | (1) | (0) | (2) |
| Renal, Hyperplasia, Lymphoid | 1 [4.0] | | | |
| Lymph Node, Mandibular | (50) | (49) | (49) | (50) |
| Infiltration Cellular, Plasma Cell | | | 1 [3.0] | |
| Lymph Node, Mesenteric | (45) | (45) | (43) | (45) |
| Hyperplasia, Lymphoid | | | | 1 [4.0] |
| Inflammation, Chronic | | | 1 [4.0] | |
| Spleen | (46) | (48) | (47) | (46) |
| Hematopoietic Cell Proliferation | 1 [4.0] | 1 [2.0] | | |
| Hyperplasia, Lymphoid | 2 [2.0] | | | |
| Thymus | (41) | (42) | (48) | (47) |

INTEGUMENTARY SYSTEM

| | | | | |
|------------------------------|---------|---------|------|------|
| Skin | (50) | (50) | (50) | (50) |
| Cyst Epithelial Inclusion | 1 [2.0] | | | |
| Inflammation, Chronic Active | 2 [4.0] | 1 [4.0] | | |

MUSCULOSKELETAL SYSTEM

| | | | | |
|-----------------|------|------|------|------|
| Bone | (50) | (50) | (50) | (50) |
| Skeletal Muscle | (1) | (0) | (0) | (0) |

NERVOUS SYSTEM

| | | | | |
|-------|------|------|------|------|
| Brain | (50) | (50) | (50) | (50) |
|-------|------|------|------|------|

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|------------------|--------|------------|----------|-----------|
|------------------|--------|------------|----------|-----------|

| | | | | |
|--------------------------|---------|---------|--|--|
| Hemorrhage | | 1 [2.0] | | |
| Glial Cell, Pigmentation | 1 [1.0] | | | |

RESPIRATORY SYSTEM

| | | | | |
|---|----------|----------|----------|----------|
| Lung | (50) | (50) | (50) | (50) |
| Hemorrhage | 2 [1.5] | 1 [1.0] | | |
| Inflammation, Suppurative | | 1 [4.0] | | |
| Inflammation, Granulomatous | 1 [3.0] | 1 [3.0] | | |
| Thrombosis | | | 1 [2.0] | 2 [1.0] |
| Alveolar Epithelium, Hyperplasia | 4 [1.8] | 6 [1.2] | 6 [2.7] | 7 [1.7] |
| Alveolus, Infiltration Cellular, Histiocyte | 2 [2.0] | 1 [3.0] | 3 [2.7] | 2 [2.5] |
| Bronchiole, Hyperplasia | 1 [1.0] | | 1 [2.0] | |
| Nose | (50) | (50) | (50) | (50) |
| Inflammation, Suppurative | 4 [1.5] | 9 [1.1] | 9 [1.0] | 6 [1.7] |
| Olfactory Epithelium, Atrophy | 3 [1.3] | 4 [1.3] | 8 [1.5] | 7 [1.6] |
| Olfactory Epithelium, Metaplasia, Respiratory | 8 [1.0] | 12 [1.1] | 30 [1.3] | 41 [1.7] |
| Respiratory Epithelium, Hyperplasia | 18 [1.3] | 23 [1.3] | 23 [1.3] | 17 [1.6] |
| Pleura | (0) | (1) | (0) | (1) |
| Trachea | (47) | (49) | (45) | (49) |

SPECIAL SENSES SYSTEM

| | | | | |
|--------------------------------------|---------|---------|---------|---------|
| Eye | (36) | (39) | (43) | (40) |
| Degeneration | 1 [4.0] | 1 [4.0] | 1 [4.0] | 1 [4.0] |
| Inflammation, Suppurative | | | | 1 [3.0] |
| Cornea, Inflammation, Chronic Active | | | 1 [2.0] | |
| Retina, Hemorrhage, Chronic | 1 [3.0] | | 1 [3.0] | |
| Harderian Gland | (46) | (47) | (46) | (47) |
| Hyperplasia | 1 [3.0] | 1 [2.0] | | 4 [1.5] |
| Inflammation, Chronic | | | 1 [3.0] | |

URINARY SYSTEM

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Lab: BAT

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|--------------------------------------|----------|------------|----------|-----------|
| Kidney | (50) | (50) | (50) | (49) |
| Amyloid Deposition | | | 1 [2.0] | |
| Cyst | 1 [2.0] | | | |
| Hydronephrosis | 1 [3.0] | 2 [2.0] | 1 [3.0] | 2 [2.5] |
| Infarct | | 1 [2.0] | 1 [3.0] | |
| Inflammation, Suppurative | 2 [3.0] | | | 1 [3.0] |
| Metaplasia, Osseous | 4 [1.3] | 4 [1.0] | 1 [1.0] | 4 [1.0] |
| Mineralization | 3 [2.0] | 2 [1.0] | 2 [2.0] | 1 [2.0] |
| Nephropathy | 43 [2.0] | 49 [1.9] | 49 [2.2] | 49 [2.1] |
| Thrombosis | 1 [3.0] | | | |
| Artery, Inflammation, Chronic Active | | 1 [3.0] | 1 [3.0] | |
| Papilla, Necrosis | 2 [4.0] | | 1 [3.0] | 2 [3.0] |
| Renal Tubule, Hyperplasia | | | 1 [2.0] | |
| Renal Tubule, Hypertrophy | | 1 [2.0] | | |
| Renal Tubule, Pigmentation | 1 [4.0] | | | 1 [3.0] |
| Urethra | (3) | (3) | (5) | (3) |
| Inflammation, Suppurative | 1 [3.0] | 3 [2.3] | 3 [2.3] | 1 [2.0] |
| Urinary Bladder | (45) | (45) | (45) | (46) |
| Hemorrhage | 1 [3.0] | 1 [2.0] | | |
| Inflammation, Suppurative | 1 [1.0] | | | |
| Inflammation, Chronic | | | 1 [1.0] | |

*** END OF MALE ***

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|--------------------|--------|------------|----------|-----------|
|--------------------|--------|------------|----------|-----------|

Disposition Summary

| | | | | |
|---|-----------|-----------|-----------|-----------|
| Animals Initially In Study | 50 | 50 | 50 | 50 |
| Early Deaths | | | | |
| Moribund Sacrifice | 4 | 3 | 1 | 4 |
| Natural Death | 8 | 15 | 14 | 13 |
| Survivors | | | | |
| Natural Death | | | 1 | |
| Terminal Sacrifice | 38 | 32 | 34 | 33 |
| Animals Examined Microscopically | 50 | 50 | 50 | 50 |

ALIMENTARY SYSTEM

| | | | | |
|----------------------------------|---------|---------|---------|---------|
| Esophagus | (50) | (49) | (49) | (50) |
| Gallbladder | (43) | (36) | (36) | (35) |
| Degeneration, Hyaline | | | 1 [4.0] | 1 [3.0] |
| Intestine Large, Cecum | (44) | (36) | (38) | (39) |
| Intestine Large, Colon | (44) | (35) | (40) | (38) |
| Intestine Large, Rectum | (43) | (35) | (37) | (38) |
| Intestine Small, Duodenum | (42) | (35) | (36) | (37) |
| Lymphangiectasis | | | 1 [3.0] | |
| Intestine Small, Ileum | (44) | (36) | (37) | (37) |
| Inflammation, Acute | | | 1 [4.0] | |
| Intestine Small, Jejunum | (43) | (35) | (37) | (38) |
| Inflammation, Granulomatous | | 1 [3.0] | | |
| Inflammation, Acute | | | 1 [4.0] | |
| Liver | (49) | (50) | (50) | (50) |
| Angiectasis | 3 [3.3] | 3 [3.0] | 6 [2.3] | 5 [2.4] |
| Basophilic Focus | 4 | 2 | 1 | 6 |
| Clear Cell Focus | 3 | 2 | 6 | |
| Congestion | | | | 1 [3.0] |
| Eosinophilic Focus | 11 | 10 | 14 | 15 |
| Fatty Change | | 4 [2.8] | 1 [3.0] | 2 [2.5] |
| Hematopoietic Cell Proliferation | | 1 [1.0] | | |
| Mixed Cell Focus | | | | 2 |
| Necrosis | 4 [2.8] | 2 [3.0] | 3 [3.3] | 2 [2.0] |

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|-----------------------|---------|------------|----------|-----------|
| Tension Lipidosis | 1 [2.0] | 1 [2.0] | | 2 [2.0] |
| Thrombosis | | 1 [3.0] | | |
| Mesentery | (8) | (16) | (16) | (9) |
| Fat, Hemorrhage | | 1 [4.0] | | |
| Fat, Necrosis | 7 [2.0] | 14 [2.0] | 13 [2.0] | 8 [2.0] |
| Pancreas | (48) | (42) | (46) | (45) |
| Atrophy | 2 [3.0] | | 2 [1.0] | 1 [1.0] |
| Thrombosis | | 1 [4.0] | | |
| Duct, Cyst | 1 [4.0] | 1 [2.0] | | |
| Salivary Glands | (50) | (47) | (47) | (50) |
| Inflammation, Chronic | | | | 1 [2.0] |
| Necrosis | 1 [4.0] | | | |
| Stomach, Forestomach | (47) | (43) | (45) | (47) |
| Hyperplasia, Squamous | | 1 [2.0] | 3 [2.0] | 3 [2.7] |
| Ulcer | | 1 [2.0] | 1 [3.0] | |
| Stomach, Glandular | (45) | (39) | (41) | (41) |
| Dysplasia | | | 1 [2.0] | |
| Hyperplasia | | 1 [3.0] | | |
| Mineralization | 2 [2.0] | 2 [2.0] | 1 [2.0] | |
| Tongue | (0) | (0) | (0) | (1) |
| Tooth | (0) | (1) | (2) | (9) |
| Dysplasia | | | 2 | 9 |

CARDIOVASCULAR SYSTEM

| | | | | |
|--------------------------------------|---------|---------|---------|---------|
| Blood Vessel | (2) | (3) | (1) | (0) |
| Mineralization | 2 [3.0] | 3 [3.0] | 1 [3.0] | |
| Heart | (50) | (50) | (49) | (50) |
| Cardiomyopathy | 4 [1.0] | 1 [2.0] | 7 [1.1] | 3 [1.0] |
| Inflammation, Suppurative | 1 [3.0] | 1 [3.0] | | 1 [3.0] |
| Mineralization | 1 [3.0] | 4 [1.5] | 1 [2.0] | |
| Necrosis | | 1 [2.0] | | |
| Thrombosis | 2 [3.0] | 1 [4.0] | | |
| Artery, Inflammation, Chronic Active | | | | 1 [3.0] |
| Capillary, Hyperplasia | | 1 [2.0] | | |

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|--------------------|--------|------------|----------|-----------|

ENDOCRINE SYSTEM

| | | | | |
|------------------------------|---------|----------|----------|---------|
| Adrenal Cortex | (49) | (45) | (46) | (50) |
| Hyperplasia | 2 [2.0] | | | 1 [2.0] |
| Hypertrophy | 1 [3.0] | 1 [3.0] | | 1 [2.0] |
| Vacuolization Cytoplasmic | | | 1 [3.0] | |
| Adrenal Medulla | (49) | (45) | (46) | (50) |
| Hyperplasia | | 1 [1.0] | | |
| Islets, Pancreatic | (48) | (41) | (45) | (45) |
| Hyperplasia | | | 1 [2.0] | 1 [3.0] |
| Parathyroid Gland | (38) | (34) | (40) | (41) |
| Hyperplasia | | | 2 [2.0] | |
| Pituitary Gland | (50) | (46) | (47) | (46) |
| Pars Distalis, Angiectasis | 3 [2.3] | 1 [2.0] | | 1 [2.0] |
| Pars Distalis, Hyperplasia | 8 [2.0] | 14 [2.1] | 13 [2.3] | 7 [2.4] |
| Thyroid Gland | (48) | (45) | (45) | (49) |
| Cyst | | | | 2 [2.5] |
| Follicular Cell, Hyperplasia | 1 [2.0] | | | 1 [2.0] |
| Follicular Cell, Hypertrophy | | | 1 [2.0] | |

GENERAL BODY SYSTEM

None

GENITAL SYSTEM

| | | | | |
|---------------------|---------|---------|---------|---------|
| Clitoral Gland | (50) | (50) | (48) | (50) |
| Ovary | (49) | (48) | (48) | (47) |
| Cyst | 5 [2.2] | 5 [3.8] | 5 [3.0] | 4 [3.0] |
| Thrombosis | | | 2 [4.0] | 4 [4.0] |
| Uterus | (49) | (47) | (49) | (49) |
| Angiectasis | | 1 [4.0] | | |
| Inflammation, Acute | | | | 2 [3.5] |

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Route: DOSED WATER

CAS Number: 108-99-6

First Dose M/F: 11/09/04 / 11/08/04

Species/Strain: MICE/B6C3F1

Lab: BAT

| B6C3F1 MICE FEMALE | 0 mg/l | 312.5 mg/l | 625 mg/l | 1250 mg/l |
|----------------------------------|----------|------------|----------|-----------|
| Necrosis | | | | 1 [4.0] |
| Thrombosis | 1 [3.0] | | 1 [4.0] | |
| Endometrium, Hyperplasia, Cystic | 33 [3.2] | 29 [3.1] | 33 [3.4] | 37 [3.0] |

HEMATOPOIETIC SYSTEM

| | | | | |
|------------------------------------|---------|---------|---------|---------|
| Bone Marrow | (49) | (46) | (48) | (49) |
| Angiectasis | | | | 1 [2.0] |
| Lymph Node | (6) | (8) | (6) | (8) |
| Lumbar, Angiectasis | 1 [3.0] | | | |
| Lumbar, Hemorrhage | | | 1 [3.0] | |
| Mediastinal, Hyperplasia, Lymphoid | 1 [2.0] | 1 [2.0] | | |
| Pancreatic, Ectasia | 1 [4.0] | | | |
| Renal, Ectasia | 1 [4.0] | 1 [3.0] | 1 [4.0] | |
| Lymph Node, Mandibular | (48) | (42) | (47) | (47) |
| Hyperplasia, Lymphoid | | | 1 [3.0] | |
| Lymph Node, Mesenteric | (46) | (38) | (45) | (46) |
| Angiectasis | | | | 1 [3.0] |
| Hemorrhage | | | 1 [3.0] | 1 [3.0] |
| Spleen | (46) | (42) | (45) | (46) |
| Hematopoietic Cell Proliferation | 4 [2.8] | 3 [3.3] | 5 [2.2] | 1 [3.0] |
| Hyperplasia, Lymphoid | | | | 1 [2.0] |
| Thrombosis | | 1 [3.0] | | |
| Thymus | (45) | (44) | (48) | (47) |
| Amyloid Deposition | | | 1 [2.0] | |
| Hyperplasia, Lymphoid | | | 1 [2.0] | 1 [3.0] |

INTEGUMENTARY SYSTEM

| | | | | |
|------------------------------|---------|---------|---------|------|
| Mammary Gland | (50) | (49) | (49) | (48) |
| Hyperplasia | 1 [2.0] | | | |
| Skin | (50) | (50) | (50) | (50) |
| Hyperplasia, Squamous | | 1 [4.0] | | |
| Inflammation, Acute | | | 1 [3.0] | |
| Inflammation, Chronic Active | | 2 [4.0] | | |

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

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

Test Type: CHRONIC

beta-Picoline

Time Report Requested: 09:52:36

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|--------------------|--------|------------|----------|-----------|
|--------------------|--------|------------|----------|-----------|

MUSCULOSKELETAL SYSTEM

| | | | | |
|-----------------|------|------|------|---------|
| Bone | (50) | (50) | (50) | (50) |
| Hyperostosis | | | | 1 [3.0] |
| Skeletal Muscle | (1) | (0) | (0) | (1) |

NERVOUS SYSTEM

| | | | | |
|------------------|------|---------|------|---------|
| Brain | (50) | (47) | (47) | (50) |
| Hemorrhage | | 1 [2.0] | | 1 [1.0] |
| Necrosis | | 1 [1.0] | | |
| Peripheral Nerve | (1) | (0) | (0) | (1) |
| Spinal Cord | (1) | (0) | (0) | (1) |

RESPIRATORY SYSTEM

| | | | | |
|---|---------|---------|---------|----------|
| Lung | (50) | (50) | (49) | (50) |
| Hemorrhage | | | | 1 [1.0] |
| Inflammation, Acute | | | 1 [3.0] | |
| Inflammation, Chronic Active | | 1 [2.0] | | |
| Mineralization | 1 [4.0] | 3 [3.0] | 2 [2.0] | |
| Alveolar Epithelium, Hyperplasia | 2 [1.5] | 4 [2.5] | 3 [1.3] | 8 [1.8] |
| Alveolus, Infiltration Cellular, Histiocyte | 2 [2.0] | 1 [3.0] | 1 [2.0] | |
| Bronchiole, Hyperplasia | | | 3 [2.0] | 1 [2.0] |
| Nose | (49) | (44) | (49) | (47) |
| Inflammation, Suppurative | 1 [1.0] | | | 1 [1.0] |
| Olfactory Epithelium, Atrophy | 1 [1.0] | 2 [1.0] | 2 [1.0] | 7 [1.3] |
| Olfactory Epithelium, Metaplasia, Respiratory | 2 [1.0] | 2 [1.0] | 7 [1.0] | 14 [1.2] |
| Respiratory Epithelium, Hyperplasia | 7 [1.0] | 2 [1.0] | 6 [1.0] | 13 [1.2] |
| Pleura | (0) | (0) | (0) | (1) |
| Trachea | (47) | (41) | (45) | (44) |
| Mineralization | 1 [3.0] | 1 [3.0] | | |

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SPECIAL SENSES SYSTEM

| | | | | |
|--------------------------------------|---------|---------|---------|---------|
| Eye | (43) | (35) | (36) | (39) |
| Cataract | 1 [3.0] | | | |
| Degeneration | 1 [4.0] | | 1 [3.0] | 1 [4.0] |
| Cornea, Inflammation, Acute | 1 [1.0] | 1 [2.0] | | |
| Cornea, Inflammation, Chronic Active | | | | 1 [3.0] |
| Harderian Gland | (45) | (41) | (43) | (47) |
| Hyperplasia | 5 [2.4] | 2 [2.0] | 1 [2.0] | 1 [3.0] |
| Inflammation, Chronic | | | 1 [1.0] | |
| Zymbal's Gland | (0) | (0) | (0) | (1) |

URINARY SYSTEM

| | | | | |
|---------------------------|----------|----------|----------|----------|
| Kidney | (49) | (47) | (48) | (49) |
| Amyloid Deposition | 1 [3.0] | 1 [2.0] | 1 [3.0] | |
| Hydronephrosis | | 1 [2.0] | | |
| Inflammation, Suppurative | 1 [2.0] | | | 1 [2.0] |
| Metaplasia, Osseous | | 1 [1.0] | 1 [1.0] | |
| Mineralization | 3 [2.0] | 2 [1.5] | 1 [3.0] | 2 [2.5] |
| Nephropathy | 29 [1.4] | 16 [1.6] | 25 [1.5] | 30 [1.6] |
| Renal Tubule, Necrosis | 2 [2.5] | 3 [2.7] | 1 [2.0] | 2 [3.5] |
| Urinary Bladder | (44) | (37) | (39) | (41) |
| Inflammation, Chronic | | | | 1 [2.0] |

*** END OF REPORT ***

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