

Experiment Number: 05131-03
Test Type: CHRONIC
Route: DOSED WATER
Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014
Time Report Requested: 03:27:14
First Dose M/F: NA / NA
Lab: NIEHS

C Number: C55221C
Lock Date: Not Entered.
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Male
PWG Approval Date: 10/15/1997

Experiment Number: 05131-03

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| | | DAY ON TEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|------------------------|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | |
| F 344/N Rat Male | | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | | | |
| | VEHICLE CONTROL | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 9 | 9 | 3 | 9 | 3 | 3 | 9 | 1 | 6 | 3 | 3 | 9 | 2 | 1 | 3 | 3 | 3 | | | | |
| | ANIMAL ID | 5 | 7 | 6 | 9 | 7 | 9 | 3 | 3 | 5 | 7 | 9 | 9 | 6 | 5 | 5 | 7 | 6 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | 1 | 6 | 3 | 7 | 9 | 7 | 6 | 0 | 7 | 7 | 7 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 0 | 0 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | |
| | | 4 | 8 | 9 | 1 | 9 | 4 | 6 | 7 | 9 | 2 | 5 | 0 | 8 | 0 | 1 | 0 | 4 | 4 | 9 | 2 | 6 | 7 | 9 | 2 | 2 | 7 | 3 | 4 | 6 | 7 | 8 | 8 | 8 | 8 | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|--|--|---|--|---|--|---|--|
| Oral Mucosa | | | | | | | | | | | | | | | + | | | + | | | | | | | | | | | | + | | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth, Incisor | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | A | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | | | | | | |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Odontoblast, Degeneration, Focal | | | | | | | | | | | | | | | | 3 | | 3 | | 2 | | | | | | | | | | | | 2 | | 2 | | | | | | | | 4 | | 3 | | | |
| Pulp, Ectopic Tissue, Focal | | | | | | | | | | | | | | | | | | 1 | | 1 | | 1 | | 1 | | | | | | | | | | | | 2 | | | | | | | | 1 | | 1 | |
| Tooth, Molar | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic | 1 | 1 | 1 | 2 | 2 | 2 | | | | 1 | 1 | 2 | 2 | 1 | | | | 2 | 1 | 2 | 2 | 2 | | | | 2 | 3 | 2 | 1 | 1 | 2 | | | | 1 | 1 | 1 | 1 | | | | | | | | | |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

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First Dose M/F: NA / NA
Lab: NIEHS

F 344/N Rat Male
VEHICLE CONTROL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANIMAL ID | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | 7 | 6 | 6 | 6 | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | 6 | 7 | 7 | | |
| | 9 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | 9 | 9 | 9 | 9 | 3 | 9 | 3 | 3 | 9 | 1 | 6 | 3 | 3 | 9 | 2 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | | |
| | 5 | 7 | 6 | 9 | 7 | 9 | 3 | 5 | 7 | 9 | 9 | 6 | 5 | 5 | 7 | 6 | 5 | 7 | 7 | 6 | 1 | 7 | 9 | 7 | 7 | 6 | 0 | 7 | 6 | 0 | 7 | 7 | 7 | 7 | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 0 | 0 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 0 | 0 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4 | 8 | 9 | 1 | 9 | 4 | 6 | 7 | 9 | 2 | 5 | 0 | 8 | 0 | 1 | 0 | 4 | 4 | 9 | 2 | 6 | 7 | 9 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|---|---|---|---|---|---|---|--|---|---|--|---|---|---|--|--|--|--|---|---|--|---|---|--|--|--|--|---|---|--|--|---|---|---|--|--|---|--|
| Bone, Tibia | | + | | | + | + | | | | + | + | | | + | + | | | | | + | | | + | + | | | | | + | + | | | + | + | + | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endosteum, Hyperostosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Periosteum, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 3 | |
| Bone, Vertebra | | | + | + | + | | + | + | | | + | | + | | | | | | | + | + | | | | | | | | | | | | | | | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
 I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

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Time Report Requested: 03:27:14

First Dose M/F: NA / NA

Lab: NIEHS

| | | | | | | | | | | | | | | | | | | | | |
|-------------------------------------|-------------|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| F 344/N Rat Male VEHICLE CONTROL | DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 7 | 7 | 6 | 6 | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 7 |
| | | 3 | 2 | 9 | 6 | 3 | 6 | 3 | 1 | 6 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 3 | 3 |
| | | 7 | 3 | 5 | 7 | 7 | 5 | 7 | 1 | 7 | 9 | 7 | 1 | 9 | 7 | 7 | 7 | 5 | 9 | 6 |
| | ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | |
| | | 4 | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 1 | 1 | |
| | | 9 | 2 | 5 | 7 | 3 | 7 | 1 | 5 | 9 | 2 | 6 | 9 | 0 | 1 | 8 | 2 | 6 | 6 | 7 |
| | | *TOTALS | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|---|----|-----|---|---|---|---|---|---|---|---|---|--|--|----|-----|
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | + | + | + | 7 | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | 1 | 4.0 | | | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic, Focal | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4.0 | | | | | | | | | | | | | |
| Ulcer | | | | | | | | | | | | | | | | | | | | | | | | 4 | | 1 | 4.0 | | | | | | | | | | | | | |
| Tooth, Incisor | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | 47 | | | | | | | | | | | | | | | | |
| Dysplasia | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 1 | 3.0 | | | | | | | | | | | | | |
| Odontoblast, Degeneration, Focal | | | | | | | | | | | | | | | | | | | | | | | | 3 | | 3 | 2.8 | | | | | | | | | | | | | |
| Pulp, Ectopic Tissue, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | 11 | 1.1 | | | | | | | | | | | | | |
| Tooth, Molar | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | 49 | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic | | | | | | | | | | | | | | | | | | | | | | 3 | 2 | | 1 | 2 | 3 | 1 | 1 | 3 | 2 | 3 | 3 | 2 | 1 | 1 | | | 41 | 1.7 |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

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 First Dose M/F: NA / NA
 Lab: NIEHS

**F 344/N Rat Male
 VEHICLE CONTROL**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 6 | 6 | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 7 |
| | 3 | 2 | 9 | 6 | 3 | 6 | 3 | 1 | 6 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 3 | 3 |
| | 7 | 3 | 5 | 7 | 7 | 5 | 7 | 1 | 7 | 9 | 7 | 1 | 9 | 7 | 7 | 5 | 9 | 3 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 4 | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 1 | 1 |
| | 9 | 2 | 5 | 7 | 3 | 7 | 1 | 5 | 9 | 2 | 6 | 9 | 0 | 1 | 8 | 2 | 6 | 6 | 7 |
| *TOTALS | | | | | | | | | | | | | | | | | | | |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|-----|
| Bone Marrow | | | | | | | | | | | | | | | | | | | | + | 9 | | |
| Humerus, Joint, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Humerus, Vertebra, Hyperplasia | | | | | | | | | | | | | | | | | | | | | | 1 | 1.0 |

Integumentary System

NONE

Musculoskeletal System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|----|---|---|-----|-----|
| Bone, Cranium | | | | | | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | | | |
| Bone, Femur | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 28 | | | | |
| Atrophy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Bone, Humerus | | | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | 21 | | | | | |
| Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 | |
| Bone, Intervertebral Disc | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | 4 | | |
| Degeneration, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 3 | 2.3 | |
| Inflammation, Granulomatous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 1.0 |
| Proliferation, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Bone, Joint | | | | | | | | | | | | | | | | | | | | + | + | | | + | + | + | + | + | + | + | + | + | + | + | + | 23 | | | | |
| Bone, Mandible | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | 1 | |
| Bone, Maxilla | | | | | | | | | | | | | | | | | | | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | | | | |
| Nasolacrim Dct, Cyst | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | 1 | 2.0 |
| Bone, Pelvis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | + | 1 | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
 A ..Autolysis precludes evaluation
 BLANK ..Not examined microscopically
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First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
VEHICLE CONTROL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 6 | 6 | 7 | 5 | 7 | 6 | 6 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 7 |
| | 3 | 2 | 9 | 6 | 3 | 6 | 3 | 1 | 6 | 3 | 3 | 1 | 3 | 3 | 3 | 3 | 9 | 3 | 3 |
| | 7 | 3 | 5 | 7 | 7 | 5 | 7 | 1 | 7 | 9 | 7 | 1 | 9 | 7 | 7 | 7 | 5 | 9 | 6 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 4 | 5 | 5 | 5 | 6 | 6 | 7 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 1 | 1 | 1 |
| | 9 | 2 | 5 | 7 | 3 | 7 | 1 | 5 | 9 | 2 | 6 | 9 | 0 | 1 | 8 | 2 | 6 | 6 | 7 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---|---|---|--|---|--|---|---|---|---|--|--|---|---|---|---|---|---|-------|
| Bone, Tibia | + | + | | | + | | + | + | + | + | | | + | + | | + | | | 28 |
| Atrophy | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Endosteum, Hyperostosis, Focal | | | 2 | | | | | | | | | | | | | | | | 1 2.0 |
| Periosteum, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 3.0 |
| Bone, Vertebra | | | | | + | | | | + | | | | | | + | + | + | | 14 |
| Atrophy | | | | | | | | | | | | | | | | | | 2 | 1 2.0 |
| Nervous System | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

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Lab: NIEHS

F 344/N Rat Male
250 PPM

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | |
| | 9 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 1 | 1 | 3 | 3 | 0 | 3 | 1 | 3 | 9 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 9 | 6 |
| | 5 | 6 | 5 | 6 | 0 | 6 | 9 | 6 | 7 | 6 | 6 | 1 | 1 | 9 | 6 | 4 | 6 | 6 | 5 | 6 | 6 | 9 | 6 | 2 | 7 | 6 | 6 | 1 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 6 | 7 | 7 | 8 | 8 | 9 | 9 | 1 | 1 | 2 | 2 |
| | 1 | 3 | 5 | 3 | 4 | 7 | 3 | 5 | 6 | 2 | 3 | 5 | 8 | 0 | 1 | 4 | 7 | 9 | 7 | 5 | 8 | 9 | 3 | 8 | 2 | 3 | 3 | 4 | 3 |

Hematopoietic System

Bone Marrow +

Integumentary System

NONE

Musculoskeletal System

Bone, Cranium

Inflammation, Suppurative, Chronic, Focal +
4

Bone, Femur +

Bone, Humerus +

Bone, Joint +

Bone, Maxilla +

Inflammation, Suppurative, Chronic, Focal

Bone, Rib +

Costochon Jct, Degeneration

+
3

Bone, Tibia +

Bone, Vertebra +

Nervous System

NONE

Respiratory System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: CHRONIC

Test Compound: SODIUM FLUORIDE

Time Report Requested: 03:27:15

Route: DOSED WATER

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: NIEHS

**F 344/N Rat Male
250 PPM**

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 6 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 7 | 7 | 6 | 7 | 7 | 6 | 6 | | |
| | 9 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 1 | 1 | 3 | 3 | 0 | 3 | 1 | 3 | 9 | 3 | 3 | 3 | 3 | 3 | 6 | 3 | 3 | 9 | 6 |
| | 5 | 6 | 5 | 6 | 0 | 6 | 9 | 6 | 7 | 6 | 6 | 6 | 6 | 6 | 4 | 6 | 6 | 6 | 5 | 6 | 6 | 6 | 9 | 6 | 2 | 7 | 6 | 6 | 1 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 5 | 5 | 5 | 5 | 5 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 1 | 1 | 2 | 2 | 4 |
| | 1 | 3 | 5 | 3 | 4 | 7 | 3 | 5 | 6 | 2 | 3 | 5 | 8 | 0 | 1 | 4 | 7 | 9 | 7 | 5 | 8 | 3 | 8 | 2 | 3 | 3 | 4 | 3 | 6 | 2 |

Special Senses System

NONE

Urinary System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

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Test Compound: SODIUM FLUORIDE

Time Report Requested: 03:27:15

Route: DOSED WATER

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: NIEHS

F 344/N Rat Male
250 PPM

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 |
| | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 8 | 3 | 3 | 8 | 3 | 3 | 2 | 3 | 3 | 9 |
| | 9 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 3 | 6 | 6 | 3 | 6 | 9 | 0 | 6 | 6 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 6 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| | 0 | 4 | 5 | 6 | 2 | 0 | 4 | 8 | 4 | 5 | 7 | 3 | 7 | 8 | 9 | 3 | 9 | 1 | 2 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|---|---|---|--------|
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | 5 |
| Tooth, Incisor | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | | 49 |
| Ameloblast, Degeneration | | | | 2 | | | | | | | | 3 | | | | | | | | 6 3.5 |
| Ameloblast, Degeneration, Focal | | | | 2 | | | | | | | | | | | | | | | | 2 1.5 |
| Dentine, Malformation | | | | 2 | | | | | | | | | | 1 | | | | 1 | | 9 2.0 |
| Enamel, Malformation, Focal | | | | | | | | | 1 | | | | 2 | 1 | | | | | | 6 1.8 |
| Odontoblast, Degeneration, Focal | | | 4 | 4 | | | 3 | | | 4 | | | | 3 | 2 | | | | 3 | 21 3.1 |
| Pulp, Ectopic Tissue, Focal | | | | 1 | | 1 | | 1 | | 1 | | | | 1 | | | | | | 16 1.1 |
| Tooth, Molar | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | | | | 49 |
| Inflammation, Suppurative, Chronic | 1 | 2 | 2 | 3 | 1 | 4 | 3 | | 3 | 2 | 1 | 2 | 1 | 2 | 1 | | 2 | 3 | 3 | 44 1.8 |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

Tissue NOS + 1

Genital System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

I ..Insufficient tissue

BLANK ..Not examined microscopically

2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:15

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
250 PPM

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 |
| | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 8 | 3 | 3 | 8 | 3 | 3 | 2 | 3 | 3 | 9 |
| | 9 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 3 | 6 | 6 | 3 | 6 | 9 | 0 | 6 | 6 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 6 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| | 0 | 4 | 5 | 6 | 2 | 0 | 4 | 8 | 4 | 5 | 7 | 3 | 7 | 8 | 9 | 3 | 9 | 1 | 2 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Hematopoietic System

Bone Marrow

+ 2

Integumentary System

NONE

Musculoskeletal System

Bone, Cranium

1

Inflammation, Suppurative, Chronic, Focal

1 4.0

Bone, Femur

+ + + + + + + + + + + + + + + + 19

Bone, Humerus

+ + + + 13

Bone, Joint

+ + + + + + + + + + 16

Bone, Maxilla

+ + + + + + + + + + + + + + + + 49

Inflammation, Suppurative, Chronic, Focal

4 1 4.0

Bone, Rib

+ 2

Costochon Jct, Degeneration

1 3.0

Bone, Tibia

+ + + + 17

Bone, Vertebra

+ + + + 15

Nervous System

NONE

Respiratory System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:15

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
250 PPM

| | | | | | | | | | | | | | | | | | | | |
|-------------|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 6 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 6 |
| | 3 | 3 | 3 | 3 | 3 | 1 | 1 | 3 | 3 | 8 | 3 | 3 | 8 | 3 | 3 | 2 | 3 | 3 | 9 |
| | 9 | 6 | 6 | 6 | 6 | 2 | 6 | 6 | 6 | 3 | 6 | 6 | 3 | 6 | 9 | 0 | 6 | 6 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 6 | 6 | 7 | 8 | 8 | 8 | 9 | 9 | 9 | 0 | 0 | 0 | 0 | 1 | 1 | 2 | 2 |
| | 0 | 4 | 5 | 6 | 2 | 0 | 4 | 8 | 4 | 5 | 7 | 3 | 7 | 8 | 9 | 3 | 9 | 1 | 2 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Special Senses System

NONE

Urinary System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014
 Time Report Requested: 03:27:15
 First Dose M/F: NA / NA
 Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 5 | 7 | 6 | 7 | 5 |
| | 3 | 6 | 3 | 3 | 3 | 3 | 2 | 3 | 6 | 0 | 5 | 3 | 3 | 3 | 3 | 1 | 8 | 3 | 0 | 3 | 3 | 8 | 3 | 9 | 3 | 3 | 6 | 3 |
| | 9 | 5 | 9 | 8 | 9 | 9 | 3 | 8 | 7 | 5 | 5 | 9 | 9 | 9 | 9 | 1 | 3 | 8 | 2 | 9 | 9 | 3 | 3 | 8 | 5 | 6 | 9 | 5 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 6 | 6 | 8 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 |
| | 2 | 6 | 0 | 2 | 7 | 9 | 1 | 2 | 4 | 6 | 6 | 1 | 4 | 5 | 0 | 6 | 7 | 8 | 0 | 3 | 5 | 1 | 2 | 9 | 0 | 9 | 0 | 3 |

Alimentary System

Oral Mucosa

Inflammation, Suppurative, Chronic, Focal

Ulcer

Tooth, Incisor

Ameloblast, Degeneration

Dentine, Malformation

Dysplasia

Odontoblast, Degeneration, Focal

Pulp, Ectopic Tissue, Focal

Tooth, Molar

Inflammation, Suppurative, Chronic

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | | |
| | | | | | | | | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | 3 | | | | | | | | | | | | 1 | | | | | | | | |
| | | | | | 3 | 3 | | 4 | 4 | 4 | | | | 4 | | | 2 | | | 3 | 3 | | | | | 4 | | | | | 2 | | | |
| | | | 1 | | 2 | 1 | 1 | | | | | 1 | 1 | | 1 | 1 | | 1 | 1 | | 1 | 1 | | | 1 | | | | | | 1 | | | |
| | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | |
| | 1 | | 1 | 3 | 2 | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 2 | 2 | 3 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | | 2 | 2 | 1 | 2 | | | 1 | | | |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: CHRONIC

Test Compound: SODIUM FLUORIDE

Time Report Requested: 03:27:16

Route: DOSED WATER

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

Table with columns for DAY ON TEST, ANIMAL ID, and 30 columns of numerical data representing lesion counts for various tissues.

Hematopoietic System

Bone Marrow + +
Femur, Hyperplasia 1
Humerus, Hyperplasia 1
Humerus, Hyperplasia, Focal 1
Tibia, Hyperplasia 1

Integumentary System

NONE

Musculoskeletal System

Bone, Cranium +
Fibrous Osteodystrophy 2
Bone, Femur + + + + + + +
Endosteum, Hyperostosis +
Fibrous Osteodystrophy 2
Bone, Humerus + + + + + + + +
Endosteum, Hyperostosis +
Fibrous Osteodystrophy 2
Bone, Intervertebral Disc + + + + +
Degeneration, Focal 2 2 1 2 3
Proliferation, Focal 2
Bone, Joint + + + + + + + + +

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

M ..Missing tissue

1-4 ..Lesion qualified as:

X ..Lesion present

A ..Autolysis precludes evaluation

1) Minimal 3) Moderate

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Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:16

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 5 | 7 | 6 | 7 | 5 | |
| | 3 | 6 | 3 | 3 | 3 | 3 | 2 | 3 | 6 | 0 | 5 | 3 | 3 | 3 | 3 | 1 | 8 | 3 | 0 | 3 | 3 | 8 | 3 | 9 | 3 | 3 | 6 | 3 | 1 | 3 | 8 |
| | 9 | 5 | 9 | 8 | 9 | 9 | 3 | 8 | 7 | 5 | 5 | 9 | 9 | 9 | 9 | 1 | 3 | 8 | 2 | 9 | 9 | 3 | 8 | 5 | 6 | 9 | 5 | 9 | 1 | 9 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 6 | 8 | 9 | 9 | 9 | 9 | 0 | 0 | 0 | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | |
| | 2 | 6 | 0 | 2 | 7 | 9 | 1 | 2 | 4 | 6 | 6 | 1 | 4 | 5 | 0 | 6 | 7 | 8 | 0 | 3 | 5 | 1 | 2 | 9 | 0 | 0 | 3 | 4 | 0 | 1 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bone, Maxilla | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + |
| Bone, Pelvis | | | | | | | | | | | | | | | | | + | | | | | | | | | | | | | |
| Bone, Rib | | | | | | | | | | | | | | | | | | | | | | | + | | | | | | | |
| Costochon Jct, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | 2 | | | | | |
| Bone, Scapula | | | | | | | | | | | | | | | | | | | | | | | | | | | + | | | |
| Degeneration, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Tarsal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Tibia | + | | | | | + | + | | | | | + | + | + | | | | + | + | | + | | | | | | | | | + |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrous Osteodystrophy | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |
| Bone, Vertebra | + | + | | + | | + | | | | | | | + | + | + | | | | + | | + | | | | | | | + | | |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrous Osteodystrophy | | | | | | | | | | | 2 | | | | | | | | | | | | | | | | | | | |

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically
 X ..Lesion present
 I ..Insufficient tissue
 M ..Missing tissue
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 2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:16

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 |
| | 3 | 3 | 3 | 3 | 3 | 8 | 2 | 3 | 0 | 6 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 6 |
| | 6 | 9 | 9 | 9 | 9 | 3 | 2 | 7 | 2 | 7 | 1 | 6 | 9 | 9 | 9 | 9 | 9 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | 3 | 6 | 0 | 2 | 8 | 9 | 3 | 4 | 3 | 9 | 5 | 0 | 4 | 5 | 8 | 3 | 4 | 5 |
| | *TOTALS | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|--------|
| Oral Mucosa | + | | | | | + | | | | | + | | | | | | | | 4 | | |
| Inflammation, Suppurative, Chronic, Focal | | | | | | | 4 | | | | | 1 | | | | | | | | 2 | 2.5 |
| Ulcer | | | | | | | | | | | | | | | 2 | | | | | 1 | 2.0 |
| Tooth, Incisor | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 48 | |
| Ameloblast, Degeneration | | | | | | | 3 | | | | | | | | | | | | | 2 | 3.0 |
| Dentine, Malformation | | | | | | | | 1 | | | | | | | | | | | | 2 | 1.0 |
| Dysplasia | | | | | | | | | | | | | | | | | | | | 1 | 3.0 |
| Odontoblast, Degeneration, Focal | 4 | | | | | 2 | | | | 4 | | | | | | | | | | 2 | 15 3.2 |
| Pulp, Ectopic Tissue, Focal | | 2 | 1 | 1 | | | | 1 | 1 | | | | | | 1 | | | | | | 20 1.1 |
| Tooth, Molar | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 49 | |
| Inflammation, Suppurative, Chronic | 2 | 3 | 1 | | 2 | | | | | 1 | 2 | | 2 | 3 | 2 | 2 | 2 | 1 | 2 | | 39 1.7 |

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:16

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

| | | | | | | | | | | | | | | | | | | |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 |
| | 3 | 3 | 3 | 3 | 3 | 8 | 2 | 3 | 0 | 6 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 6 |
| | 6 | 9 | 9 | 9 | 9 | 3 | 7 | 9 | 2 | 7 | 1 | 6 | 9 | 9 | 9 | 9 | 9 | 7 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | 3 | 6 | 0 | 2 | 8 | 9 | 3 | 4 | 3 | 9 | 5 | 0 | 4 | 5 | 8 | 3 | 4 | 5 |
| | *TOTALS | | | | | | | | | | | | | | | | | |

Hematopoietic System

| | | | | | | | | | | | | | | | | | | | |
|-----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Bone Marrow | | | | | | | | | | | | | | | | | | | 5 |
| Femur, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Humerus, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Humerus, Hyperplasia, Focal | | | | | | | | | | | | | | | | | | | 1 1.0 |
| Tibia, Hyperplasia | | | | | | | | | | | | | | | | | | | 1 1.0 |

Integumentary System

NONE

Musculoskeletal System

| | | | | | | | | | | | | | | | | | | | |
|---------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------|
| Bone, Cranium | | | | | | | | | | | | | | | | | | | 1 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Femur | | | | | | | | | | | | | | | | | | | 19 |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Humerus | | | | | | | | | | | | | | | | | | | 16 |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Intervertebral Disc | | | | | | | | | | | | | | | | | | | 7 |
| Degeneration, Focal | | | | | | | | | | | | | | | | | | | 6 1.8 |
| Proliferation, Focal | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Joint | | | | | | | | | | | | | | | | | | | 17 |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:16

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
IRRAD WATER

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
|-----------------------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----------------|
| | 7 | 7 | 7 | 7 | 7 | 5 | 5 | 7 | 7 | 6 | 6 | 7 | 7 | 6 | 7 | 7 | 7 | 6 | |
| | 3 | 3 | 3 | 3 | 3 | 8 | 2 | 3 | 0 | 6 | 1 | 3 | 3 | 3 | 3 | 3 | 3 | 6 | |
| | 6 | 9 | 9 | 9 | 9 | 3 | 7 | 9 | 2 | 7 | 1 | 6 | 9 | 9 | 9 | 9 | 9 | 7 | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | 5 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 8 | 9 | 0 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | |
| | 3 | 6 | 0 | 2 | 8 | 9 | 3 | 4 | 3 | 9 | 5 | 0 | 4 | 5 | 8 | 3 | 4 | 5 | *TOTALS |
| Bone, Maxilla | + | + | + | + | + | + | + | + | | + | + | + | + | + | + | + | + | + | 48 |
| Bone, Pelvis | | | | | | | | | | | | | | | | | | | 1 |
| Bone, Rib | | | | | | | | | | | | | | | | | | | 1 |
| Costochon Jct, Degeneration | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Scapula | | | | | | | | | | | | | | | | + | | | 2 |
| Degeneration, Focal | | | | | | | | | | | | | | | | 2 | | | 1 2.0 |
| Bone, Tarsal | | | | | | | | | + | | | | | | | | | | 1 |
| Bone, Tibia | | | | + | + | | | | + | + | + | + | | + | + | | | + | 19 |
| Endosteum, Hyperostosis | | | | | | | | | 2 | | | | | 1 | | | | | 2 1.5 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | 1 2.0 |
| Bone, Vertebra | | | | | + | | + | + | + | | + | + | | + | | | | + | 18 |
| Endosteum, Hyperostosis | | | | | | | | | 2 | | | | | | | | | | 1 2.0 |
| Fibrous Osteodystrophy | | | | | | | | | | | | | | | | | | | 1 2.0 |

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03
 Test Type: CHRONIC
 Route: DOSED WATER
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014
 Time Report Requested: 03:27:17
 First Dose M/F: NA / NA
 Lab: NIEHS

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| F 344/N Rat Male | 5 | 6 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | |
| 250 PPM IRR FL | 5 | 1 | 3 | 8 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | |
| | 5 | 1 | 8 | 3 | 6 | 8 | 8 | 8 | 8 | 3 | 8 | 8 | 8 | 8 | 8 | 3 | 8 | 8 | 6 | 8 | 8 | 8 | 8 | 6 | 8 | 5 | 9 | 8 | 8 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 0 | 1 | 1 | |
| | 2 | 6 | 7 | 9 | 0 | 1 | 5 | 8 | 4 | 0 | 5 | 3 | 2 | 3 | 6 | 9 | 2 | 3 | 4 | 2 | 7 | 1 | 5 | 1 | 4 | 8 | 0 | 5 | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth Malformation, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth, Incisor | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ameloblast, Degeneration | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ameloblast, Degeneration, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dentine, Malformation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Enamel, Malformation, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Odontoblast, Degeneration, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pulp, Ectopic Tissue, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tooth, Molar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Inflammation, Suppurative, Chronic | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Cardiovascular System

NONE

Endocrine System

Adrenal Cortex

General Body System

NONE

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
 + ..Tissue examined microscopically M ..Missing tissue 1-4 ..Lesion qualified as:
 X ..Lesion present A ..Autolysis precludes evaluation 1) Minimal 3) Moderate
 I ..Insufficient tissue BLANK ..Not examined microscopically 2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:17

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
250 PPM IRR FL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
|-------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5 | 6 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 | 7 | | | |
| | 5 | 1 | 3 | 8 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | 3 | | | |
| | 5 | 1 | 8 | 3 | 6 | 8 | 8 | 8 | 3 | 8 | 8 | 8 | 8 | 3 | 8 | 6 | 8 | 8 | 6 | 8 | 8 | 8 | 6 | 8 | 5 | 9 | 8 | 8 | 8 | | |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | | |
| | 2 | 6 | 7 | 9 | 0 | 1 | 5 | 8 | 4 | 0 | 5 | 3 | 2 | 3 | 6 | 9 | 2 | 3 | 4 | 2 | 7 | 1 | 5 | 1 | 4 | 8 | 0 | 5 | 6 | 8 | 8 |

Genital System

NONE

Hematopoietic System

Bone Marrow

A + +

Femur, Hyperplasia

1

Femur, Hyperplasia, Focal

2

Humerus, Hyperplasia, Focal

2

Vertebra, Hyperplasia, Focal

2

Integumentary System

NONE

Musculoskeletal System

Bone, Femur

+ +

Endosteum, Hyperostosis

Fibrosis, Focal

Bone, Humerus

+ +

Endosteum, Hyperostosis

Fibrosis, Focal

Bone, Joint

+ +

Bone, Mandible

Bone, Maxilla

+ +

Bone, Radius

+

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade

+ ..Tissue examined microscopically

X ..Lesion present

I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

BLANK ..Not examined microscopically

1-4 ..Lesion qualified as:

1) Minimal 3) Moderate

2) Mild 4) Marked

Experiment Number: 05131-03

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: CHRONIC

Test Compound: SODIUM FLUORIDE

Time Report Requested: 03:27:17

Route: DOSED WATER

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: NIEHS

| DAY ON TEST | ANIMAL ID | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------|-----------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| F 344/N Rat Male | 5 | 6 | 7 | 5 | 7 | 7 | 7 | 7 | 5 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 6 | 6 | 7 | 7 |
| 250 PPM IRR FL | 5 | 1 | 3 | 8 | 3 | 3 | 3 | 3 | 8 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 9 | 3 | 3 | 3 | |
| | 5 | 1 | 8 | 3 | 6 | 8 | 8 | 8 | 3 | 8 | 8 | 8 | 8 | 8 | 3 | 8 | 6 | 8 | 8 | 6 | 8 | 8 | 8 | 8 | 6 | 8 | 5 | 9 | 8 | 8 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 5 | 6 | 6 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | |
| | 2 | 6 | 7 | 9 | 0 | 1 | 5 | 8 | 4 | 0 | 5 | 3 | 2 | 3 | 6 | 9 | 2 | 3 | 4 | 2 | 7 | 1 | 5 | 1 | 4 | 8 | 0 | 5 | 6 | 8 | |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Bone, Radius | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Rib | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Tibia | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Bone, Vertebra | + | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Nervous System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Respiratory System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Senses System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Urinary System | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 05131-03

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: CHRONIC

Test Compound: SODIUM FLUORIDE

Time Report Requested: 03:27:17

Route: DOSED WATER

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: NIEHS

F 344/N Rat Male
250 PPM IRR FL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 |
| | 3 | 3 | 1 | 5 | 3 | 3 | 3 | 9 | 3 | 5 | 1 | 3 | 8 | 3 | 9 | 3 | 0 | 3 | 2 |
| | 8 | 6 | 1 | 5 | 8 | 8 | 8 | 6 | 8 | 5 | 6 | 8 | 3 | 8 | 5 | 8 | 9 | 6 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 2 | 2 | 3 | 3 | 3 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 1 | 1 |
| | 4 | 5 | 1 | 6 | 9 | 8 | 1 | 4 | 0 | 6 | 8 | 1 | 7 | 2 | 6 | 0 | 4 | 1 | 2 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

Alimentary System

| | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|----|-----|
| Oral Mucosa | | | | | | | | | | | | | | | | | | | | 8 | |
| Hyperplasia, Squamous | | | | | | | | | | | | | | | | | | | | 4 | 2.3 |
| Inflammation, Suppurative, Chronic, Focal | | | | | | | | | | | | | | | | | | | | 1 | 2.0 |
| Tooth | | | | | | | | | | | | | | | | | | | | 1 | |
| Malformation, Focal | | | | | | | | | | | | | | | | | | | | 1 | 4.0 |
| Tooth, Incisor | + | + | + | + | | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 47 | |
| Ameloblast, Degeneration | | | | | | | | | | | | | | | | | | | | 8 | 2.8 |
| Ameloblast, Degeneration, Focal | | | | | | | | | | | | | | | | | | | | 3 | 1.7 |
| Dentine, Malformation | | | | | | | | | | | | | | | | | | | | 7 | 2.0 |
| Enamel, Malformation, Focal | | | | | | | | | | | | | | | | | | | | 9 | 2.6 |
| Odontoblast, Degeneration, Focal | | | | | | | | | | | | | | | | | | | | 15 | 3.1 |
| Pulp, Ectopic Tissue, Focal | 1 | | | | | | | | | | | | | | | | | | | 14 | 1.2 |
| Tooth, Molar | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | + | 50 | |
| Inflammation, Suppurative, Chronic | 1 | 1 | 1 | 2 | 1 | 1 | 2 | 1 | | 1 | | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 45 | 1.5 |

Cardiovascular System

| | | | | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| NONE | | | | | | | | | | | | | | | | | | | | 2 |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

Endocrine System

| | | | | | | | | | | | | | | | | | | | | |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| Adrenal Cortex | | | | | | | | | | | | | | | | | | | | 2 |
|----------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

General Body System

| | | | | | | | | | | | | | | | | | | | | |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|
| NONE | | | | | | | | | | | | | | | | | | | | 2 |
|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|

* ..Total animals with tissue examined microscopically; Total animals with lesion and mean severity grade
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
1-4 ..Lesion qualified as:
1) Minimal 3) Moderate
2) Mild 4) Marked

Experiment Number: 05131-03

Test Type: CHRONIC

Route: DOSED WATER

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: SODIUM FLUORIDE

Date Report Requested: 10/19/2014

Time Report Requested: 03:27:17

First Dose M/F: NA / NA

Lab: NIEHS

F 344/N Rat Male
250 PPM IRR FL

| DAY ON TEST | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|-------------|----------------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 7 | 6 | 5 | 7 | 7 | 7 | 6 | 7 | 5 | 7 | 7 | 5 | 7 | 6 | 7 | 7 | 7 | 7 |
| | 3 | 3 | 1 | 5 | 3 | 3 | 3 | 9 | 3 | 5 | 1 | 3 | 8 | 3 | 9 | 3 | 0 | 3 | 2 |
| | 8 | 6 | 1 | 5 | 8 | 8 | 8 | 6 | 8 | 5 | 6 | 8 | 3 | 8 | 5 | 8 | 9 | 6 | 3 |
| ANIMAL ID | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 |
| | 2 | 2 | 3 | 3 | 3 | 5 | 6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 0 | 0 | 1 | 1 |
| | 4 | 5 | 1 | 6 | 9 | 8 | 1 | 4 | 0 | 6 | 8 | 1 | 7 | 2 | 6 | 0 | 4 | 1 | 2 |
| | *TOTALS | | | | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|--|---|---|--|---|--|---|---|---|---|---|--|--|---|---|---|---|---|----|---|-----|
| Bone, Radius | | | | | | | | | | | | | | | | | | | 1 | | |
| Bone, Rib | | | | | | | | | | | | | | | | | | | 1 | | |
| Bone, Tibia | | + | + | | + | | + | | + | + | | | | | + | + | | + | 20 | | |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Bone, Vertebra | | | + | | + | | | + | | | + | | | + | | | + | | 14 | | |
| Endosteum, Hyperostosis | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |
| Fibrosis, Focal | | | | | | | | | | | | | | | | | | | 2 | 1 | 2.0 |

Nervous System

NONE

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

END OF MALE DATA

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+ ..Tissue examined microscopically

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I ..Insufficient tissue

M ..Missing tissue

A ..Autolysis precludes evaluation

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