Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

C Number: C99007
Lock Date: 10/11/2001
Cage Range: All
Date Range: All
Reasons For Removal: All
Removal Date Range: All
Treatment Groups: All
Study Gender: Both
PWG Approval Date: NONE
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

DAY ON TEST

F 344/N Rat Male
VEHICLE CONTROL

ANIMAL ID

0 0 0 0 0
0 0 0 0 0
1 1 1 1 1
5 5 5 5 5

*TOTALS

Alimentary System

Liver

+ + + + + 5

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically

Page 2
### P04: NEOPLASMS BY INDIVIDUAL ANIMAL

**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Total Animals:**

- **Respiratory System**: NONE
- **Special Senses System**: NONE
- **Urinary System**: NONE
- **Multiple Organ**: 5

---

*..Total animals with tissue examined microscopically; Total animals with tumor
+..Tissue examined microscopically
A..Autolysis precludes evaluation
M..Missing tissue
X..Lesion present
I..Insufficient tissue
BLANK..Not examined microscopically

---

Page 3
DAY ON TEST

F 344/N Rat Male
1560 PPM

ANIMAL ID

*TOTALS

Alimentary System
  NONE
Cardiovascular System
  NONE
Endocrine System
  NONE
General Body System
  NONE
Genital System
  NONE
Hematopoietic System
  NONE
Integumentary System
  NONE
Musculoskeletal System
  NONE
Nervous System
  NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
M ..Missing tissue
A ..Autolysis precludes evaluation
X ..Lesion present
I ..Insufficient tissue

Page 4
### DAY ON TEST

**F 344/N Rat Male**  
**1560 PPM**

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>*TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Respiratory System**  
NONE

**Special Senses System**  
NONE

**Urinary System**  
NONE

**SYSTEMIC LESIONS**

<table>
<thead>
<tr>
<th>Multiple Organ</th>
<th>0</th>
</tr>
</thead>
</table>

* ..Total animals with tissue examined microscopically; Total animals with tumor  
M ..Missing tissue  
+ ..Tissue examined microscopically  
A ..Autolysis precludes evaluation  
X ..Lesion present  
I ..Insufficient tissue  
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Male
3121 PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

ANIMAL ID

<table>
<thead>
<tr>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*TOTALS

Alimentary System

Liver + 1

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
F 344/N Rat Male
3121 PPM

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAY ON TEST</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS
Multiple Organ + 1

* ..Total animals with tissue examined microscopically; Total animals with tumor
M ..Missing tissue
+ ..Tissue examined microscopically
A ..Autolysis precludes evaluation
X ..Lesion present
I ..Insufficient tissue
BLANK ..Not examined microscopically
<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>*TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alimentary System</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular System</td>
</tr>
<tr>
<td></td>
<td>Endocrine System</td>
</tr>
<tr>
<td></td>
<td>General Body System</td>
</tr>
<tr>
<td></td>
<td>Genital System</td>
</tr>
<tr>
<td></td>
<td>Hematopoietic System</td>
</tr>
<tr>
<td></td>
<td>Integumentary System</td>
</tr>
<tr>
<td></td>
<td>Musculoskeletal System</td>
</tr>
<tr>
<td></td>
<td>Nervous System</td>
</tr>
</tbody>
</table>

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

DAY ON TEST

F 344/N Rat Male
6250 PPM

ANIMAL ID

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ 0

---

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Male
12500  PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

*TOTALS

Alimentary System
Liver

Cardiovascular System
NONE

Endocrine System
NONE

General Body System
NONE

Genital System
NONE

Hematopoietic System
NONE

Integumentary System
NONE

Musculoskeletal System
NONE

Nervous System
NONE

*..Total animals with tissue examined microscopically; Total animals with tumor
M..Missing tissue
+..Tissue examined microscopically
A..Autolysis precludes evaluation
X..Lesion present
I..Insufficient tissue
BLANK..Not examined microscopically
P04: NEOPLASMS BY INDIVIDUAL ANIMAL

Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Male
12500  PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ  +  +  +  +  +  5

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
A ..Autolysis precludes evaluation
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
BLANK ..Not examined microscopically
**Experiment Number:** 99007-01  
**Test Type:** 14-DAY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/F 344/N  

---

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**  
**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

---

**Date Report Requested:** 10/21/2014  
**Time Report Requested:** 18:15:55  
**First Dose M/F:** NA / NA  
**Lab:** MBA

---

### DAY ON TEST

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

---

### F 344/N Rat Male  
25000 PPM

---

### Alimentary System

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liver</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>5</td>
</tr>
</tbody>
</table>

---

### Cardiovascular System

- NONE

---

### Endocrine System

- NONE

---

### General Body System

- NONE

---

### Genital System

- NONE

---

### Hematopoietic System

- NONE

---

### Integumentary System

- NONE

---

### Musculoskeletal System

- NONE

---

### Nervous System

- NONE

---

* ..Total animals with tissue examined microscopically; Total animals with tumor  
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue  
M ..Missing tissue  
A ..Autolysis precludes evaluation  
BLANK ..Not examined microscopically

---

Page 12
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Male
25000 PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ + + + + + 5
### Experiment Number: 99007-01
- **Test Type:** 14-DAY
- **Route:** DOSED FEED
- **Species/Strain:** Rat/F 344/N

**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

**Date Report Requested:** 10/21/2014  
**Time Report Requested:** 18:15:55

**First Dose M/F:** NA / NA  
**Lab:** MBA

---

### Alimentary System

<table>
<thead>
<tr>
<th>Day</th>
<th>Liver</th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>+</td>
<td>5</td>
</tr>
</tbody>
</table>

### Cardiovascular System

NONE

### Endocrine System

NONE

### General Body System

NONE

### Genital System

NONE

### Hematopoietic System

NONE

### Integumentary System

NONE

### Musculoskeletal System

NONE

### Nervous System

NONE

---

*..Total animals with tissue examined microscopically; Total animals with tumor
+..Tissue examined microscopically
X..Lesion present
I..Insufficient tissue
M..Missing tissue
A..Autolysis precludes evaluation
BLANK..Not examined microscopically

---

---

---

---
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Male
50000 PPM

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + +

5

***END OF MALE DATA***
### Experiment Number: 99007-01
- **Test Type:** 14-DAY
- **Route:** DOSED FEED
- **Species/Strain:** Rat/F 344/N

### P04: NEOPLASMS BY INDIVIDUAL ANIMAL
- **Test Compound:** Goldenseal root powder
- **CAS Number:** GOLDENSEALRT

### Date Report Requested: 10/21/2014
- **Time Report Requested:** 18:15:55
- **First Dose M/F:** NA / NA
- **Lab:** MBA

#### F 344/N Rat Female VEHICLE CONTROL

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

#### ANIMAL ID

<table>
<thead>
<tr>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* **TOTALS**

#### Alimentary System
- Liver: + + + + + 5

#### Cardiovascular System
- NONE

#### Endocrine System
- NONE

#### General Body System
- NONE

#### Genital System
- NONE

#### Hematopoietic System
- NONE

#### Integumentary System
- NONE

#### Musculoskeletal System
- NONE

#### Nervous System
- NONE

---

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

F 344/N Rat Female

VEHICLE CONTROL

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ

+ + + + + 5

*..Total animals with tissue examined microscopically; Total animals with tumor
+..Tissue examined microscopically
A..Autolysis precludes evaluation
M..Missing tissue
X..Lesion present
I..Insufficient tissue
BLANK..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Female
1560 PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

*TOTALS

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

Alimentary System

Liver + 1

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal System

NONE

Nervous System

NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

DAY ON TEST

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

ANIMAL ID

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ  +  1

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

DAY ON TEST
F 344/N Rat Female
3121 PPM

ANIMAL ID

*TOTALS

Alimentary System
NONE
Cardiovascular System
NONE
Endocrine System
NONE
General Body System
NONE
Genital System
NONE
Hematopoietic System
NONE
Integumentary System
NONE
Musculoskeletal System
NONE
Nervous System
NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
### P04: NEOPLASMS BY INDIVIDUAL ANIMAL

**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

---

**DIA ON TEST**

**F 344/N Rat Female**  
**3121 PPM**

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th><em>TOTALS</em></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory System</strong></td>
<td>NONE</td>
</tr>
<tr>
<td><strong>Special Senses System</strong></td>
<td>NONE</td>
</tr>
<tr>
<td><strong>Urinary System</strong></td>
<td>NONE</td>
</tr>
<tr>
<td><strong>SYSTEMIC LESIONS</strong></td>
<td><strong>Multiple Organ</strong></td>
</tr>
</tbody>
</table>

---

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue

M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
F 344/N Rat Female
6250 PPM

ALIMENTARY SYSTEM
NONE

CARDIOVASCULAR SYSTEM
NONE

ENDOCRINE SYSTEM
NONE

GENERAL BODY SYSTEM
NONE

GENITAL SYSTEM
NONE

HEMATOPOIETIC SYSTEM
NONE

INTEGUMENTARY SYSTEM
NONE

MUSCULOSKELETAL SYSTEM
NONE

NERVOUS SYSTEM
NONE

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
**Experiment Number:** 99007-01  
**Test Type:** 14-DAY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/F 344/N  
**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT  

**Date Report Requested:** 10/21/2014  
**Time Report Requested:** 18:15:55  
**First Dose M/F:** NA / NA  
**Lab:** MBA

### DAY ON TEST

**F 344/N Rat Female**  
**6250 PPM**

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>*TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respiratory System</strong></td>
<td>NONE</td>
</tr>
<tr>
<td><strong>Special Senses System</strong></td>
<td>NONE</td>
</tr>
<tr>
<td><strong>Urinary System</strong></td>
<td>NONE</td>
</tr>
</tbody>
</table>

**SYSTEMIC LESIONS**

- **Multiple Organ**: 0

---

* Total animals with tissue examined microscopically; Total animals with tumor  
+ Tissue examined microscopically  
M Missing tissue  
A Autolysis precludes evaluation  
X Lesion present  
BLANK Not examined microscopically  
I Insufficient tissue
**Experiment Number:** 99007-01  
**Test Type:** 14-DAY  
**Route:** DOSED FEED  
**Species/Strain:** Rat/F 344/N  

### P04: NEOPLASMS BY INDIVIDUAL ANIMAL

**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT  
**Date Report Requested:** 10/21/2014  
**Time Report Requested:** 18:15:55  
**First Dose M/F:** NA / NA  
**Lab:** MBA

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

**F 344/N Rat Female**  
**12500 PPM**

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Alimentary System**

- Liver  
  - +  
  - +  
  - +  
  - +  
  - 5

**Cardiovascular System**

- NONE

**Endocrine System**

- NONE

**General Body System**

- NONE

**Genital System**

- NONE

**Hematopoietic System**

- NONE

**Integumentary System**

- NONE

**Musculoskeletal System**

- NONE

**Nervous System**

- NONE

---

* ..Total animals with tissue examined microscopically; Total animals with tumor  
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue  
M ..Missing tissue  
A ..Autolysis precludes evaluation  
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

F 344/N Rat Female
12500 PPM

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>0</td>
</tr>
</tbody>
</table>

*TOTALS

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS

Multiple Organ + + + + + 5

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
I ..Insufficient tissue
M ..Missing tissue
### Experiment Number: 99007-01
### Test Type: 14-DAY
### Route: DOSED FEED
### Species/Strain: Rat/F 344/N

#### Test Compound: Goldenseal root powder
#### CAS Number: GOLDENSEALRT

---

**P04: NEOPLASMS BY INDIVIDUAL ANIMAL**

**Date Report Requested:** 10/21/2014  
**Time Report Requested:** 18:15:55  
**First Dose M/F:** NA / NA

- **Lab:** MBA

---

**D&O Test: 99007-01**

**Species/Strain:** Rat/F 344/N  
**Test Type:** 14-DAY  
**Route:** DOSED FEED

**Test Compound:** Goldenseal root powder  
**CAS Number:** GOLDENSEALRT

---

**F 344/N Rat Female**

**25000 PPM**

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Alimentary System**

- **Liver**
  - **Value:** + + + + +
  - **Count:** 5

**Cardiovascular System**

- **Value:** NONE

**Endocrine System**

- **Value:** NONE

**General Body System**

- **Value:** NONE

**Genital System**

- **Value:** NONE

**Hematopoietic System**

- **Value:** NONE

**Integumentary System**

- **Value:** NONE

**Musculoskeletal System**

- **Value:** NONE

**Nervous System**

- **Value:** NONE

---

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically  
X ..Lesion present  
I ..Insufficient tissue

M ..Missing tissue  
A ..Autolysis precludes evaluation  
BLANK ..Not examined microscopically

---

Page 26
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Female
25000   PPM

<table>
<thead>
<tr>
<th>DAY ON TEST</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Respiratory System

NONE

Special Senses System

NONE

Urinary System

NONE

SYSTEMIC LESIONS

Multiple Organ + + + + + 5

* ..Total animals with tissue examined microscopically; Total animals with tumor
M ..Missing tissue
+ ..Tissue examined microscopically
A ..Autolysis precludes evaluation
X ..Lesion present
I ..Insufficient tissue
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

F 344/N Rat Female
50000 PPM

<table>
<thead>
<tr>
<th>ANIMAL ID</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*TOTALS

<table>
<thead>
<tr>
<th>System</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alimentary System</td>
<td></td>
</tr>
<tr>
<td>Liver</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Endocrine System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>General Body System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Genital System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Hematopoietic System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Integumentary System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Musculoskeletal System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
<tr>
<td>Nervous System</td>
<td></td>
</tr>
<tr>
<td>NONE</td>
<td></td>
</tr>
</tbody>
</table>

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically
Experiment Number: 99007-01
Test Type: 14-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P04: NEOPLASMS BY INDIVIDUAL ANIMAL
Test Compound: Goldenseal root powder
CAS Number: GOLDENSEALRT

Date Report Requested: 10/21/2014
Time Report Requested: 18:15:55
First Dose M/F: NA / NA
Lab: MBA

Respiratory System
NONE

Special Senses System
NONE

Urinary System
NONE

SYSTEMIC LESIONS
Multiple Organ

+ + + + + 5

** END OF REPORT **

* ..Total animals with tissue examined microscopically; Total animals with tumor
+ ..Tissue examined microscopically
X ..Lesion present
I ..Insufficient tissue
M ..Missing tissue
A ..Autolysis precludes evaluation
BLANK ..Not examined microscopically