Test Type: SPECIAL STUDY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

NTP Study Number: C20605

Lock Date: Not Entered.

Cage Range: ALL

Date Range: ALL

Reasons For Removal: ALL

Removal Date Range: ALL

Treatment Groups: Include ALL

Study Gender: Both

TDMSE Version: 3.0.2.3_002

PWG Approval Date: NONE

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	=	0 0 2 8									
0 mg/kg ANIMAL ID	0 0 1 2 1	0 0 1 2 2	0 0 1 2 3	0 0 1 2 4	0 0 1 2 5	0 0 1 2 6	0 0 1 2 7	0 0 1 2 8	0 0 1 2 9	0 0 1 3 0	* TOTAL
ALIMENTARY SYSTEM	•										
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart Cardiomyopathy	+	+	+	+ 1	+	+	+	+	+	+	10 1
ENDOCRINE SYSTEM		,						,			
Adrenal Cortex Hypertrophy	+	+	+	+	+	+	+ 1	+	+	+	10 1
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland Infiltration Cellular, Mononuclear Cell	+	+	+	+	+	+	+ 1	+	+	+	10 1

GENERAL BODY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

4) Marked

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8											
0 mg/kg ANIMAL ID	0 0 1 2 1	0 0 1 2 2	0 0 1 2 3	0 0 1 2 4	0 0 1 2 5	0 0 1 2 6	0 0 1 2 7	0 0 1 2 8	0 0 1 2 9	0 0 1 3 0	*	TOTALS
GENITAL SYSTEM		-	-	-					-	-		
Epididymis Degeneration	+	+	+	+	+ 1	+	+	+	+	+	1	0 1 1.0
Prostate	+	+	+	+	+	+	+	+	+	+	1	0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	1	0
Testes	+	+	+	+	+	+	+	+	+	+	1	0
HEMATOPOIETIC SYSTEM		•						•				
Spleen	+	+	+	+	+	+	+	+	+	+	1	0
INTEGUMENTARY SYSTEM												
NONE												
MUSCULOSKELETAL SYSTEM												
NONE			_			_						
NERVOUS SYSTEM		_										
NONE												
RESPIRATORY SYSTEM												

X .. Lesion present

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8										
0 mg/kg ANIMAL ID	0 0 1 2 1	0 0 1 2 2	0 0 1 2 3	0 0 1 2 4	0 0 1 2 5	0 0 1 2 6	0 0 1 2 7	0 0 1 2 8	0 0 1 2 9	0 0 1 3 0	* TOTALS

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

Kidney Nephropathy

10

3 1.0

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Route: GAVAGE Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DA	DAY ON TEST	0 0 2 8										
62.5 mg/kg	ANIMAL ID	0 0 1 3 1	0 0 1 3 2	0 0 1 3 3	0 0 1 3 4	0 0 1 3 5	0 0 1 3 6	0 0 1 3 7	0 0 1 3 8	0 0 1 3 9	0 0 1 4 0	* TOTAL
ALIMENTARY SYSTEM	Л											
Stomach, Forestomach Mineralization				+ 2						+ 1		2 2

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

X .. Lesion present

MUSCULOSKELETAL SYSTEM

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

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

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

Test Type: SPECIAL STUDY

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8										
62.5 mg/kg ANIMAL ID	0 0 1 3 1	0 0 1 3 2	0 0 1 3 3	0 0 1 3 4	0 0 1 3 5	0 0 1 3 6	0 0 1 3 7	0 0 1 3 8	0 0 1 3 9	0 0 1 4 0	* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

Heart + 1
Cardiomyopathy 2

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

NONE

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

- M .. Missing tissue
- A .. Autolysis precludes evaluation

I .. Insufficient tissue

X .. Lesion present

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8											
125 mg/kg ANIMAL ID	0 0 1 4 1	0 0 1 4 2	0 0 1 4 3	0 0 1 4 4	0 0 1 4 5	0 0 1 4 6	0 0 1 4 7	0 0 1 4 8	0 0 1 4 9	0 0 1 5 0	* TO	OTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8		
250 mg/kg ANIMAL ID	0 0 1 5 1	0 0 1 5 2	0 0 1 5 3	0 0 1 5 4	0 0 1 5 5	0 0 1 5 6	0 0 1 5 7	0 0 1 5 8	0 0 1 5 9	0 0 1 6 0	* 7	TOTALS

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Thymus	+	+	2
Hemorrhage	2	1	2 1.5
Inflammation, Chronic	3		1 3.0

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

- M .. Missing tissue
- A .. Autolysis precludes evaluation

I .. Insufficient tissue

X .. Lesion present

BLANK .. Not examined microscopically

- 1-4 .. Lesion qualified as:
 - 1) Minimal 3) Moderate
 - 2) Mild
- 4) Marked

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	
250 mg/kg ANIMAL ID	0 0 1 5	0 0 1 5 2	0 0 1 5 3	0 0 1 5 4	0 0 1 5 5	0 0 1 5 6	0 0 1 5 7	0 0 1 5 8	0 0 1 5 9	0 0 1 6 0	* TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Route: GAVAGE

Species/Strain: RATS/HSD

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8										
I 000 mg/kg ANIMAL ID	0 0 1 7 1	0 0 1 7 2	0 0 1 7 3	0 0 1 7 4	0 0 1 7 5	0 0 1 7 6	0 0 1 7 7	0 0 1 7 8	0 0 1 7 9	0 0 1 8 0	* TOTAL
ALIMENTARY SYSTEM											
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex Hypertrophy Vacuolization Cytoplasmic	+ 1	+ 1	+	+ 1	+	+	+	+ 1	+	+ 2	10 4 2
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	М	+	+	+	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

4) Marked

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS MALE	0 0 2 8	1 0	002)	0 0 2 8							
1000 mg/kg ANIMAL ID	0 0 1 7 1	0 0 1 7 2	0 0 1 7 3	0 0 1 7 4	0 0 1 7 5	0 0 1 7 6	0 0 1 7 7	0 1 7	1 7)	0 0 1 8 0	* TOTALS
GENITAL SYSTEM							_					
Epididymis	+	+	+	+	+	+	+	+	+	-	+	10
Prostate	+	+	+	+	+	+	+	+	+	-	+	10
Seminal Vesicle	+	+	+	+	+	+	+	+	+	-	+	10
Testes	+	+	+	+	+	+	+	+	+	-	+	10
HEMATOPOIETIC SYSTEM												
Spleen	+	+	+	+	+	+	+	+	+	-	+	10
INTEGUMENTARY SYSTEM												
NONE												
MUSCULOSKELETAL SYSTEM												
NONE					•			•	•	_		
NERVOUS SYSTEM												
NONE												
RESPIRATORY SYSTEM												
NONE												

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

SPECIAL SENSES SYSTEM

- 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

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAW	DAY ON TEST	0 0 2 8										
1000 mg/kg	ANIMAL ID	0 0 1 7 1	0 0 1 7 2	0 0 1 7 3	0 0 1 7 4	0 0 1 7 5	0 0 1 7 6	0 0 1 7 7	0 0 1 7 8	0 0 1 7 9	0 0 1 8 0	* TOTALS
NONE												
URINARY SYSTEM												
Kidney Developmental Malformation Nephropathy		+	+ 3 1	+	+ 1	+ 1	+	+	+	+	+ 1	10 1 3.0 6 1.0

*** END OF MALE DATA ***

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

²⁾ Mild 4) Marked

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8	0 0 2 8	0 0 2 8								
0 mg/kg ANIMAL ID	0 0 1 8 1	0 0 1 8 2	0 0 1 8 3	0 0 1 8 4	0 0 1 8 5	0 0 1 8 6	0 0 1 8 7	0 0 1 8 8	0 0 1 8 9	0 0 1 9	* TOTALS
ALIMENTARY SYSTEM											
Liver	+	+	+	+	+	+	+	+	+	+	10
Pancreas	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Blood Vessel Infiltration Cellular, Mononuclear Cell	+	+	+	+	+ 1	+	+	+	+	+	10 1 1.0
Heart	+	+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex Hypertrophy Vacuolization Cytoplasmic	+ 1	+	+	+	+	+ 1	+	+	+ 1	+	10 1 1.0 2 1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	М	+	+	+	+	+	+	+	9
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

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

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8											
0 mg/kg ANIMAL ID	0 0 1 8 1	0 0 1 8 2	0 0 1 8 3	0 0 1 8 4	0 0 1 8 5	0 0 1 8 6	0 0 1 8 7	0 0 1 8 8	0 0 1 8 9	0 0 1 9 0	* TO	ΓALS
GENITAL SYSTEM			-	_								
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10	
Ovary	+	+	+	+	+	+	+	+	+	+	10	
Uterus Hyperplasia, Cystic	+	+	+ 1	+	+	+	+	+	+	+	10	1 1.0
HEMATOPOIETIC SYSTEM												
Spleen	+	+	+	+	+	+	+	+	+	+	10	
INTEGUMENTARY SYSTEM												
NONE				•								
MUSCULOSKELETAL SYSTEM												
NONE												
NERVOUS SYSTEM												
NONE			_	_	_		_					
RESPIRATORY SYSTEM												
NONE												

+ .. Tissue examined microscopically

SPECIAL SENSES SYSTEM

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

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

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

Kidney

Nephropathy

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

10

4 1.0

Lab: BAT

NONE	ANIMAL ID	1 8 1	1 8 2	1 8 3	1 8 4	1 8 5	1 8 6	1 8 7	1 8 8	1 8 9	1 9 0	* TOTALS
0 mg/kg	ANUMAL ID	0	0	0	0	0	0	0	0	0	0	
HARLAN SPRAGUE D	DAY ON TEST DAWLEY RATS	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE FEMALE	DAY ON TEST DAWLEY RATS	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	0 0 2 8	
62.5 mg/kg	ANIMAL ID	0 0 1 9	0 0 1 9 2	0 0 1 9 3	0 0 1 9 4	0 0 1 9 5	0 0 1 9 6	0 0 1 9 7	0 0 1 9 8	0 0 1 9	0 0 2 0 0	* TOTALS
ALIMENTARY SYST	EM			•								
Liver Fibrosis											+ 2	1 1 2.0
CARDIOVASCULAR	SYSTEM		•						•			
NONE												
ENDOCRINE SYSTE	:M											
NONE												
GENERAL BODY SY	/STEM		•									
NONE												
GENITAL SYSTEM												
NONE												
HEMATOPOIETIC S'	YSTEM											
Thymus Hemorrhage Inflammation, Chronic		+ 1	+ 4 4									2 2 2.5 1 4.0

INTEGUMENTARY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract

CAS Number: GUMGUGGULEXT

Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	8	8	8	8	8	8	8	8	8	8
62.5 mg/kg ANIMAL ID	0 0 1 9	0 0 1 9 2	0 0 1 9 3	0 0 1 9 4	0 0 1 9 5	0 0 1 9 6	0 0 1 9 7	0 0 1 9 8	0 0 1 9	0 0 2 0 0

MUSCULOSKELETAL SYSTEM

Skeletal Muscle + 1
Degeneration 1 1.0

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

BLANK .. Not examined microscopically

²⁾ Mild 4) Marked

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	8	8	8	8	8	8	8	8	8	8
125 mg/kg ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1
	1	2	3	4	5	6	7	8	9	0

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Thymus 1 1 1.0 Hemorrhage

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

X .. Lesion present

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

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8											
125 mg/kg ANIMAL ID	0 0 2 0 1	0 0 2 0 2	0 0 2 0 3	0 0 2 0 4	0 0 2 0 5	0 0 2 0 6	0 0 2 0 7	0 0 2 0 8	0 0 2 0 9	0 0 2 1 0	* TOTALS	

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	8	8	8	8	8	8	8	8	8	8
250 mg/kg ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Thymus 3 1 1 2 3 1.3 Hemorrhage

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

- M .. Missing tissue
- A .. Autolysis precludes evaluation

X .. Lesion present I .. Insufficient tissue

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8											
250 mg/kg ANIMAL ID	0 0 2 1 1	0 0 2 1 2	0 0 2 1 3	0 0 2 1 4	0 0 2 1 5	0 0 2 1 6	0 0 2 1 7	0 0 2 1 8	0 0 2 1 9	0 0 2 2 0	*1	TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	8	8	8	8	8	8	8	8	8	8
500 mg/kg ANIMAL ID	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	2	2	2	2	2	3
	1	2	3	4	5	6	7	8	9	0

ALIMENTARY SYSTEM

NONE

CARDIOVASCULAR SYSTEM

NONE

ENDOCRINE SYSTEM

NONE

GENERAL BODY SYSTEM

NONE

GENITAL SYSTEM

NONE

HEMATOPOIETIC SYSTEM

Thymus	+	+	2
Hemorrhage	4	2	2 3.0
Inflammation, Chronic	4		1 4.0

INTEGUMENTARY SYSTEM

NONE

MUSCULOSKELETAL SYSTEM

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

- M .. Missing tissue
- A .. Autolysis precludes evaluation

X .. Lesion present I .. Insufficient tissue

BLANK .. Not examined microscopically

- 1-4 .. Lesion qualified as:
 - 1) Minimal 3) Moderate
 - 2) Mild

Test Type: SPECIAL STUDY

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8											
500 mg/kg ANIMAL ID	0 0 2 2 1	0 0 2 2 2	0 0 2 2 3	0 0 2 2 4	0 0 2 2 5	0 0 2 2 6	0 0 2 2 7	0 0 2 2 8	0 0 2 2 9	0 0 2 3 0	*	TOTALS

NONE

NERVOUS SYSTEM

NONE

RESPIRATORY SYSTEM

NONE

SPECIAL SENSES SYSTEM

NONE

URINARY SYSTEM

NONE

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number:** GUMGUGGULEXT Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TEST HARLAN SPRAGUE DAWLEY RATS FEMALE	0 0 2 8										
1000 mg/kg ANIMAL ID	0 0 2 3 1	0 0 2 3 2	0 0 2 3 3	0 0 2 3 4	0 0 2 3 5	0 0 2 3 6	0 0 2 3 7	0 0 2 3 8	0 0 2 3 9	0 0 2 4 0	* TOTALS
ALIMENTARY SYSTEM											
Liver Fatty Change	+	+	+	+	+	+	+	+	+	+ 1	10 1 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
CARDIOVASCULAR SYSTEM											
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
ENDOCRINE SYSTEM											
Adrenal Cortex Hypertrophy Vacuolization Cytoplasmic	+	+ 1	+	+ 1	+	+	+	+	+ 1	+	10 4 1.0 1 1.0
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	М	+	+	+	М	8
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

GENERAL BODY SYSTEM

NONE

M .. Missing tissue

A .. Autolysis precludes evaluation

BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

2) Mild

4) Marked

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

^{+ ..} Tissue examined microscopically

X .. Lesion present

I .. Insufficient tissue

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

DAY ON TES HARLAN SPRAGUE DAWLEY RAT FEMALE	1 2	0 0 2 8									
1000 mg/kg ANIMAL II	0 0 2 3 1	0 0 2 3 2	0 0 2 3 3	0 0 2 3 4	0 0 2 3 5	0 0 2 3 6	0 0 2 3 7	0 0 2 3 8	0 0 2 3 9	0 0 2 4 0	* тот
GENITAL SYSTEM								_	_		
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus Hyperplasia, Cystic	+	+ 2	+	+	+	+	+	+	+	+	10
HEMATOPOIETIC SYSTEM			-				-				
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus Hemorrhage Inflammation, Chronic				+ 4 4							1
INTEGUMENTARY SYSTEM											
NONE											

NERVOUS SYSTEM

NONE

NONE

RESPIRATORY SYSTEM

- * .. 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

Species/Strain: RATS/HSD

Route: GAVAGE

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Gum Guggul Extract **CAS Number: GUMGUGGULEXT** Date Report Requested: 05/13/2019 Time Report Requested: 15:00:28 First Dose M/F: 07/23/09 / 07/24/09

Lab: BAT

HARLAN SPRAGUE DAY FEMALE 1000 mg/kg	DAY ON TEST DAWLEY RATS	0 0 2 8										
	ANIMAL ID	0 0 2 3 1	0 0 2 3 2	0 0 2 3 3	0 0 2 3 4	0 0 2 3 5	0 0 2 3 6	0 0 2 3 7	0 0 2 3 8	0 0 2 3 9	0 0 2 4 0	* TOTALS
NONE												
SPECIAL SENSES S	YSTEM											
NONE												
URINARY SYSTEM												
Kidney Nephropathy		+	+	+	+	+	+	+ 1	+	+	+	10 1 1.0

*** END OF REPORT ***

I .. Insufficient tissue

M .. Missing tissue

A .. Autolysis precludes evaluation BLANK .. Not examined microscopically

1-4 .. Lesion qualified as:

1) Minimal 3) Moderate

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

^{+ ..} Tissue examined microscopically

X .. Lesion present