

Experiment Number: 56111-01
Test Type: 90-DAY
Route: DOSED FEED
Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
Test Compound: trans-Cinnamaldehyde
CAS Number: 14371-10-9

Date Report Requested: 10/19/2014
Time Report Requested: 07:16:42
First Dose M/F: NA / NA
Lab: BAT

C Number:	C56111B
Lock Date:	01/02/1996
Cage Range:	All
Date Range:	All
Reasons For Removal:	All
Removal Date Range:	All
Treatment Groups:	All
Study Gender:	Both
PWG Approval Date	NONE

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**F 344/N Rat Male
 UNTREATDCONTROL**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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	1
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Parasite Metazoan									X		1
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Hepatodiaphragmatic Nodule		X									1
Inflammation, Chronic		1	1	1		1	1	1		1	7 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy, Chronic	1	1	1	1			1	1	1	1	8 1.0

Endocrine 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

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Lab: BAT

F 344/N Rat Male UNTREATDCONTROL	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	1	2	3	4	5	6	7	8	9	0	
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
General Body System											
NONE											
Genital System											
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active	2										1 2.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic System											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

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

+ ..Tissue examined microscopically

X ..Lesion present

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F 344/N Rat Male UNTREATDCONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	2	
	0	0	0	0	0	0	0	0	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	2	3	4	5	6	7	8	9	9	0	

Integumentary System

Mammary Gland	+	+	+	M	+	M	+	+	+	+	8
Skin	+	+	+	+	+	+	+	+	+	+	10

Musculoskeletal System

Bone	+	+	+	+	+	+	+	+	+	+	10
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Nervous System

Brain	+	+	+	+	+	+	+	+	+	+	10
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Respiratory System

Lung	+	+	+	+	+	+	+	+	+	+	10
Alveolus, Infiltration Cellular, Histiocyte			1	1							2 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Foreign Body				X							1
Trachea	+	+	+	+	+	+	+	+	+	+	10

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Renal Tubule, Regeneration	1	1	1	1	1	1	1	1	1	1	10 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

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

+ ..Tissue examined microscopically

X ..Lesion present

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**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
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Parasite Metazoan									X		1
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic	1		1		1		1	1	1	1	7 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy, Chronic	1	1	1	1	1		1	1	1	1	9 1.0

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
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* ..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:

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2) Mild 4) Marked

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Date Report Requested: 10/19/2014

Time Report Requested: 07:16:42

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male VEHICLE CONTROL	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
Adrenal Medulla	0	0	0	0	0	0	0	0	0	0	10
Islets, Pancreatic	0	0	0	0	0	0	0	0	0	0	10
Parathyroid Gland	0	0	0	0	0	0	0	0	0	0	9
Pituitary Gland	0	0	0	0	0	0	0	0	0	0	10
Pars Distalis, Cyst	1	1	1	1	1	1	1	1	1	2	2 1.0
Thyroid Gland	1	2	3	4	5	6	7	8	9	0	10
General Body System											
NONE											
Genital System											
Epididymis	+	+	+	+	+	+	+	+	+	+	10
Preputial Gland	+	+	+	+	+	+	+	+	+	M	9
Prostate	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active						1					1 1.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Testes	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic System											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	M	+	+	+	9

* ..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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1-4 ..Lesion qualified as:

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2) Mild 4) Marked

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

**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
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	1	1	1	1	1	1	1	1	1	2
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Integumentary System

Mammary Gland	M	+	+	+	+	+	+	+	+	+	9
Skin	+	+	+	+	+	+	+	+	+	+	10

Musculoskeletal System

Bone	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

Nervous System

Brain	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	----

Respiratory System

Lung	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic			1								1 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

Special Senses System

NONE

Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Renal Tubule, Regeneration	1		1	1	1	1	1	1	1	1	9 1.0
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

* ..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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1-4 ..Lesion qualified as:

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Species/Strain: Rat/F 344/N

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CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
1.25%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
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	
	2	2	2	2	2	2	2	2	2	3	
	1	2	3	4	5	6	7	8	9	0	*TOTALS

Alimentary System

Liver											6
Inflammation, Chronic											6 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary System

NONE

Musculoskeletal 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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Experiment Number: 56111-01

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First Dose M/F: NA / NA

Lab: BAT

**F 344/N Rat Male
1.25%**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	2	2	2	2	2	2	2	2	3	3
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

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

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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
2.5%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	3	3	3	3	3	3	3	3	3	4
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Liver	+	+	+	+		+		+		7
Inflammation, Chronic	1	1	1	1		1		1		7 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	10
Epithelium, Hyperplasia, Squamous			3	1	3	3	1		1 3	7 2.1

Cardiovascular System

NONE

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

X ..Lesion present

I ..Insufficient tissue

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Lab: BAT

F 344/N Rat Male
2.5%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	3	3	3	3	3	3	3	3	3	4
	1	2	3	4	5	6	7	8	9	0

*TOTALS

NONE
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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First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
5.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
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	
	4	4	4	4	4	4	4	4	4	5	
	1	2	3	4	5	6	7	8	9	0	*TOTALS

Alimentary System

Liver				+	+	+		+	+	+	6	
Inflammation, Chronic				1	1	1		1	1	1	6	1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Epithelium, Hyperplasia, Squamous	4	4	2	3	3	4	3	4	4	3	10	3.4
Epithelium, Ulcer				4							1	4.0
Inflammation, Chronic Active				2		1		1			3	1.3
Stomach, Glandular						+					1	

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary 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

Experiment Number: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
5.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	4	4	4	4	4	4	4	4	4	5
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

NONE
Musculoskeletal System

NONE
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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
10.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Parasite Metazoan									X		1
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic	1						1				2 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Epithelium, Hyperplasia, Squamous	4	4	4	4	4	4	4	4	4	4	10 4.0
Epithelium, Ulcer						4					1 4.0
Inflammation, Chronic Active	1	1	1	1		3		1	1		7 1.3
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10
Mineralization						2					1 2.0

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Date Report Requested: 10/19/2014

Test Type: 90-DAY

Test Compound: trans-Cinnamaldehyde

Time Report Requested: 07:16:43

Route: DOSED FEED

CAS Number: 14371-10-9

First Dose M/F: NA / NA

Species/Strain: Rat/F 344/N

Lab: BAT

F 344/N Rat Male
10.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
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	
	5	5	5	5	5	5	5	5	5	6	
	1	2	3	4	5	6	7	8	9	0	
	*TOTALS										
Cardiomyopathy, Chronic			1	1				1			3 1.0

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	M	+	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10

General Body System

NONE

Genital System

Epididymis	+	+	+	+	+	+	+	+	+	+	10
Atypia Cellular				3							1 3.0
Preputial Gland	+	+	+	+	+	+	+	+	+	+	10
Prostate	+	+	+	+	+	+	+	+	+	+	10
Atrophy				3							1 3.0
Inflammation, Chronic Active					1						1 1.0
Seminal Vesicle	+	+	+	+	+	+	+	+	+	+	10
Atrophy				2							1 2.0
Testes	+	+	+	+	+	+	+	+	+	+	10
Germinal Epith, Degeneration				3							1 3.0

* ..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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
10.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	5	5	5	5	5	5	5	5	5	6
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Hematopoietic System

Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10

Integumentary System

Mammary Gland	+	M	+	+	M	+	+	+	+	M	7
Skin	+	+	+	+	+	+	+	+	+	+	10

Musculoskeletal System

Bone	+	+	+	+	+	+	+	+	+	+	10
------	---	---	---	---	---	---	---	---	---	---	----

Nervous System

Brain	+	+	+	+	+	+	+	+	+	+	10
-------	---	---	---	---	---	---	---	---	---	---	----

Respiratory System

Lung	+	+	+	+	+	+	+	+	+	+	10
Alveolus, Infiltration Cellular, Histiocyte							1				1 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10

Special Senses 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

Experiment Number: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Male
10.0%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
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	
	5	5	5	5	5	5	5	5	5	6	
	1	2	3	4	5	6	7	8	9	0	*TOTALS

NONE
Urinary System

Kidney	+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	10

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

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: 56111-01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde
 CAS Number: 14371-10-9

Date Report Requested: 10/19/2014
 Time Report Requested: 07:16:43
 First Dose M/F: NA / NA
 Lab: BAT

**F 344/N Rat Female
 UNTREATDCONTROL**

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	6	6	6	6	6	6	6	6	6	7
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Parasite Metazoan									X		1
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Hepatodiaphragmatic Nodule				X		X		X			3
Inflammation, Chronic	1	1	1	1	1	1	1	1	1	1	10 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Cardiomyopathy, Chronic									1		1 1.0

Endocrine 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

Experiment Number: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female UNTREATDCONTROL	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	+	+	+	+	+	M	+	+	+	9
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
General Body System											
NONE											
Genital System											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Ovary	+	+	+	+	+	+	+	+	+	+	10
Cyst	2							2	2		3 2.0
Uterus	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic System											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Integumentary System											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female UNTREATDCONTROL	DAY ON TEST	0	0	0	0	0	0	0	0	0	0	*TOTALS
	ANIMAL ID	0	0	0	0	0	0	0	0	0	0	
		9	9	9	9	9	9	9	9	9	9	
		2	2	2	2	2	2	2	2	2	2	
		0	0	0	0	0	0	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	6	6	6	6	6	6	6	6	7	
		1	2	3	4	5	6	7	8	9	0	
Mammary Gland		+	+	+	+	+	+	+	+	+	+	10
Skin		+	+	+	+	+	+	+	+	+	+	10
Musculoskeletal System												
Bone		+	+	+	+	+	+	+	+	+	+	10
Nervous System												
Brain		+	+	+	+	+	+	+	+	+	+	10
Respiratory System												
Lung		+	+	+	+	+	+	+	+	+	+	10
Nose		+	+	+	+	+	+	+	+	+	+	10
Trachea		+	+	+	+	+	+	+	+	+	+	10
Special Senses System												
NONE												
Urinary System												
Kidney		+	+	+	+	+	+	+	+	+	+	10
Urinary Bladder		+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde
 CAS Number: 14371-10-9

Date Report Requested: 10/19/2014
 Time Report Requested: 07:16:43
 First Dose M/F: NA / NA
 Lab: BAT

**F 344/N Rat Female
 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
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	7	7	7	7	7	7	7	7	7	8
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10
Liver	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic	1	1	1		1	1	1			1	7 1.0
Pancreas	+	+	+	+	+	+	+	+	+	+	10
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10

Endocrine System

Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:43

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
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
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	7	7	7	7	7	7	7	7	7	8
	1	2	3	4	5	6	7	8	9	0

*TOTALS

Parathyroid Gland	+	+	+	M	M	+	+	+	+	+	8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
General Body System											
NONE											
Genital System											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Inflammation, Chronic Active			1						1		2 1.0
Ovary	+	+	+	+	+	+	+	+	+	+	10
Cyst					2		2				2 2.0
Uterus	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic System											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mandibular	+	+	+	+	M	+	+	+	+	+	9
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Integumentary System											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL
 Test Compound: trans-Cinnamaldehyde
 CAS Number: 14371-10-9

Date Report Requested: 10/19/2014
 Time Report Requested: 07:16:44
 First Dose M/F: NA / NA
 Lab: BAT

**F 344/N Rat Female
 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
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	7	7	7	7	7	7	7	7	7	8
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Musculoskeletal System

Bone + + + + + + + + + + 10

Nervous System

Brain + + + + + + + + + + 10

Respiratory System

Lung + + + + + + + + + + 10

Alveolus, Infiltration Cellular, Histiocyte 1 1 2 1.0

Nose + + + + + + + + + + 10

Trachea + + + + + + + + + + 10

Special Senses System

NONE

Urinary System

Kidney + + + + + + + + + + 10

Urinary Bladder + + + + + + + + + + 10

* ..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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
1.25%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	8	8	8	8	8	8	8	8	8	9
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Alimentary System

Liver	+		+	+	+	+	+		+	+	8
Hepatodiaphragmatic Nodule							X				1
Inflammation, Chronic	1		1	1	1	1			1	1	7 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

Ovary	+			+					+		3
Cyst	3			3					2		3 2.7

Hematopoietic System

NONE

Integumentary 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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
1.25%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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
	8	8	8	8	8	8	8	8	8	9
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Musculoskeletal System

NONE

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

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Experiment Number: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
2.5%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
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	1	
	9	9	9	9	9	9	9	9	9	0	
	1	2	3	4	5	6	7	8	9	0	*TOTALS

Alimentary System

Liver	+	+	+	+	+			+	+	+	8	
Inflammation, Chronic	1	1	1	1	1			1	1	1	8	1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Epithelium, Hyperplasia, Squamous	3	3	3	4	2	3	4	4	4	4	10	3.4

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

Ovary	+										1	
Cyst	3										1	3.0

Hematopoietic System

NONE

Integumentary 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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
2.5%

DAY ON TEST	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2
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	1
	9	9	9	9	9	9	9	9	9	0
	1	2	3	4	5	6	7	8	9	0
	*TOTALS									

Musculoskeletal System

NONE

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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
5.0%

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

*TOTALS

Alimentary System

Liver	+					+	+	+			4
Inflammation, Chronic	1					1	1	1			4 1.0
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10
Epithelium, Hyperplasia, Squamous	4	4	4	4	4	4	4	4	4	3	10 3.9
Inflammation, Chronic Active		1	2	1	1	1	1		1	1	8 1.1

Cardiovascular System

NONE

Endocrine System

NONE

General Body System

NONE

Genital System

NONE

Hematopoietic System

NONE

Integumentary 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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
5.0%

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

*TOTALS

Musculoskeletal System

NONE

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

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Experiment Number: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
10.0%

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

Alimentary System

Esophagus	+	+	+	+	+	+	+	+	+	+	10	
Intestine Large, Cecum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Large, Colon	+	+	+	+	+	+	+	+	+	+	10	
Parasite Metazoan						X						1
Intestine Large, Rectum	+	+	+	+	+	+	+	+	+	+	10	
Parasite Metazoan									X			1
Intestine Small, Duodenum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Ileum	+	+	+	+	+	+	+	+	+	+	10	
Intestine Small, Jejunum	+	+	+	+	+	+	+	+	+	+	10	
Liver	+	+	+	+	+	+	+	+	+	+	10	
Hepatodiaphragmatic Nodule							X					1
Inflammation, Chronic			1		1			1		1	4	1.0
Oral Mucosa				+								1
Pancreas	+	+	+	+	+	+	+	+	+	+	10	
Salivary Glands	+	+	+	+	+	+	+	+	+	+	10	
Stomach, Forestomach	+	+	+	+	+	+	+	+	+	+	10	
Epithelium, Hyperplasia, Squamous	3	3	4	3	3	4	4	4	4	4	10	3.6
Epithelium, Ulcer					4		4	4			3	4.0
Inflammation, Chronic Active	1		1		2	1	3	3	1	1	8	1.6
Stomach, Glandular	+	+	+	+	+	+	+	+	+	+	10	

Cardiovascular 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

Experiment Number: 561111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
10.0%

	DAY ON TEST										*TOTALS
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	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	1	1	2	
	1	2	3	4	5	6	7	8	9	0	
Blood Vessel	+	+	+	+	+	+	+	+	+	+	10
Heart	+	+	+	+	+	+	+	+	+	+	10
Endocrine System											
Adrenal Cortex	+	+	+	+	+	+	+	+	+	+	10
Adrenal Medulla	+	+	+	+	+	+	+	+	+	+	10
Islets, Pancreatic	+	+	+	+	+	+	+	+	+	+	10
Parathyroid Gland	+	M	+	+	+	+	+	M	+	+	8
Pituitary Gland	+	+	+	+	+	+	+	+	+	+	10
Thyroid Gland	+	+	+	+	+	+	+	+	+	+	10
General Body System											
NONE											
Genital System											
Clitoral Gland	+	+	+	+	+	+	+	+	+	+	10
Ovary	+	+	+	+	+	+	+	+	+	+	10
Uterus	+	+	+	+	+	+	+	+	+	+	10
Hematopoietic System											
Bone Marrow	+	+	+	+	+	+	+	+	+	+	10
Lymph Node							+				1
Lymph Node, Mandibular	+	+	+	+	+	+	+	+	+	+	10
Lymph Node, Mesenteric	+	+	+	+	+	+	+	+	+	+	10
Spleen	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01

Test Type: 90-DAY

Route: DOSED FEED

Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde

CAS Number: 14371-10-9

Date Report Requested: 10/19/2014

Time Report Requested: 07:16:44

First Dose M/F: NA / NA

Lab: BAT

F 344/N Rat Female
10.0%

	DAY ON TEST										
	0	0	0	0	0	0	0	0	0	0	
	0	0	0	0	0	0	0	0	0	0	
	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	
ANIMAL ID	0	0	0	0	0	0	0	0	0	0	*TOTALS
	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	1	1	2	
	1	2	3	4	5	6	7	8	9	0	
Spleen	+	+	+	+	+	+	+	+	+	+	10
Thymus	+	+	+	+	+	+	+	+	+	+	10
Integumentary System											
Mammary Gland	+	+	+	+	+	+	+	+	+	+	10
Skin	+	+	+	+	+	+	+	+	+	+	10
Musculoskeletal System											
Bone	+	+	+	+	+	+	+	+	+	+	10
Nervous System											
Brain	+	+	+	+	+	+	+	+	+	+	10
Respiratory System											
Lung	+	+	+	+	+	+	+	+	+	+	10
Alveolus, Infiltration Cellular, Histiocyte	1										1 1.0
Inflammation, Chronic			1							1	2 1.0
Nose	+	+	+	+	+	+	+	+	+	+	10
Trachea	+	+	+	+	+	+	+	+	+	+	10
Special Senses System											
NONE											
Urinary System											
Kidney	+	+	+	+	+	+	+	+	+	+	10

* ..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: 56111-01
 Test Type: 90-DAY
 Route: DOSED FEED
 Species/Strain: Rat/F 344/N

P09: NON-NEOPLASTIC LESIONS BY INDIVIDUAL ANIMAL

Test Compound: trans-Cinnamaldehyde
 CAS Number: 14371-10-9

Date Report Requested: 10/19/2014
 Time Report Requested: 07:16:44
 First Dose M/F: NA / NA
 Lab: BAT

**F 344/N Rat Female
 10.0%**

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	
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
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	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	
	1	2	3	4	5	6	7	8	9	0	*TOTALS					
Renal Tubule, Regeneration	1										1	1.0				
Urinary Bladder	+	+	+	+	+	+	+	+	+	+	+	+	+	+	10	

**** END OF REPORT ****

* ..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