

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

**C Number:** C50000

**Cage Range:** All

**Date Range:** All

**Reasons For Removal:** All

**Removal Date Range:** All

**Treatment Groups:** All

**Study Gender:** Male

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_001

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_002

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung		Pneumonia, Chronic Murine
Testis		Interstitial-Cell Tumor
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_003

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_004

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pancreas

Testis

Islets

Inflammation, Chronic

Islet-Cell Adenoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_006

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_007

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_008

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Spleen

Testis

Hemangiosarcoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_009

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_010

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Pheochromocytoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_011

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Mammary gland

Thyroid

Inflammation, Chronic

Fibroadenoma

Hyperplasia, Follicular Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_012

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_013

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_014

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Atrophy, Nos

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_015

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pancreas

Testis

Inflammation, Chronic

Periarteritis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_016

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Amyloidosis

Prostate

Inflammation, Chronic

Testis

Inflammation, Nos

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_018

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Natural Death

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Testis

Thyroid

Pheochromocytoma

Interstitial-Cell Tumor

C-Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_019

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Unspecified

Tail

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

Squamous Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_020

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_021

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Skin

Testis

Inflammation, Chronic

Cyst, Epidermal Inclusion

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_022

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Preputial gland

Carcinoma, Nos

Skin

Axilla

Metaplasia, Squamous

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_023

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

Testis

Interstitial-Cell Tumor

Unspecified

Flank

Fibrosarcoma

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_024

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Inflammation, Chronic Thrombosis, Nos
Liver	Centrilobular	Necrosis, Nos
Prostate		Inflammation, Suppurative

---

**PRIMARY CAUSE OF DEATH**

-

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\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_025

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Epididymis

Lung

Testis

Interstitial-Cell Tumor, Invasive

Pneumonia, Chronic Murine

Interstitial-Cell Tumor, Malignant

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_026

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Pancreas  
Pituitary gland  
Testis

Islets

Hyperplasia, Nos  
Chromophobe Adenoma  
Atrophy, Nos  
Interstitial-Cell Tumor  
Follicular-Cell Carcinoma

Thyroid

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_027

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_028

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Testis

Unspecified

Multiple Organs Nos

Pheochromocytoma

Interstitial-Cell Tumor

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_029

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Preputial gland

Carcinoma, Nos

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_030

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Lung		Hemangiopericytoma, Metastatic
Testis		Interstitial-Cell Tumor
Unspecified	Neck	Hemangiopericytoma, Malignant

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_031

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Bone

Pituitary gland

Skeletal muscle

Testis

Unspecified

Multiple Organs Nos

Pheochromocytoma

Osteosarcoma

Chromophobe Adenoma

Osteosarcoma, Invasive

Interstitial-Cell Tumor

Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_032

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Large

Colon

Parasitism

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_033

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pyelonephritis, Nos

Testis

Atrophy, Nos

Unspecified

Multiple Organs Nos

Interstitial-Cell Tumor

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_034

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Pituitary gland

Testis

Chromophobe Adenoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_035

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_036

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Liver

Testis

Thyroid

Inflammation, Chronic

Neoplastic Nodule

Interstitial-Cell Tumor

C-Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_037

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Large

Colon

Parasitism

Kidney

Inflammation, Chronic

Pancreas

Periarteritis

Testis

Interstitial-Cell Tumor

Thyroid

C-Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_038

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_039

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Degeneration, Nos
	Pericardium Nos	Inflammation, Nos
	Mesentery Nos	Inflammation, Nos
Intestine Small		Periarteritis
Kidney		Inflammation, Chronic
Liver		Peliosis Hepatis
Pituitary gland		Chromophobe Adenoma
Testis		Interstitial-Cell Tumor
Thyroid		C-Cell Carcinoma
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_040

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Cortex Nos

Degeneration, Nos

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_041

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_042

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Pancreas

Skin

Testis

Unspecified

Multiple Organs Nos

Atrophy, Nos

Squamous Cell Carcinoma

Interstitial-Cell Tumor

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_043

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_044

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_045

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Degeneration, Nos

Fibrosis

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_046

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Large

Colon

Parasitism

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Inflammation, Chronic

Pituitary gland

Chromophobe Adenoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_047

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_048

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Liver		Metamorphosis, Fatty
Lung		Pneumonia, Chronic Murine
Testis		Interstitial-Cell Tumor
Unspecified	Multiple Organs Nos	Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_049

**TRT#:** 1

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 0

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Unspecified

Groin

Multiple Organs Nos

Interstitial-Cell Tumor

Fibroma

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 1\_050

**TRT#:** 1

**DOSE:** 0

**SEX:** Male

**DISP:** Scheduled Sacrifice

**DAY ON TEST:**

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_001

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Pituitary gland

Skin

Testis

Unspecified

Pheochromocytoma

Inflammation, Chronic

Chromophobe Adenoma

Angioma

Interstitial-Cell Tumor

Granuloma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_002

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_003

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Degeneration, Nos
	Myocardium Nos	Fibrosis
Kidney		Inflammation, Chronic
		Pigmentation, Nos
Lung		Pneumonia, Chronic Murine
Testis		Interstitial-Cell Tumor
Unspecified	Multiple Organs Nos	Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_004

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart

Myocardium Nos

Degeneration, Nos

Myocardium Nos

Fibrosis

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_005

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Lung

Testis

Pheochromocytoma

Inflammation, Chronic

Alveolar/Bronchiolar Carcinoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_006

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_007

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Degeneration, Nos
	Myocardium Nos	Fibrosis
Intestine Small	Ileum	Adenocarcinoma, Nos
Kidney		Inflammation, Chronic
Pancreas		Adenocarcinoma, Nos, Metastatic
Testis		Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_008

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Skin

Testis

Unspecified

Face

Multiple Organs Nos

Back

Inflammation, Chronic

Cyst, Epidermal Inclusion

Interstitial-Cell Tumor

Leukemia, Monocytic

Squamous Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_009

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Hepatocellular Carcinoma

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_010

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Unspecified

Cheek

Abscess, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_011

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Inflammation, Chronic

Pituitary gland

Chromophobe Adenoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_012

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye  
Intestine Small  
Kidney  
Testis

Mesentery Nos

Opacities  
Necrosis, Fat  
Inflammation, Chronic  
Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_013

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Brain		Astrocytoma
Epididymis		Granuloma, Spermatic
Kidney		Inflammation, Chronic
Liver		Angiectasis
	Bile Duct	Hyperplasia, Nos
Testis		Interstitial-Cell Tumor
Unspecified	Diaphragm Nos	Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_014

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Mammary gland

Testis

Inflammation, Chronic

Fibroadenoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_015

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_016

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Pancreas

Periarteritis

Testis

Interstitial-Cell Tumor

Unspecified

Neck

Fibrosarcoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_017

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pancreas

Testis

Inflammation, Chronic

Periarteritis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_018

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Liver

Centrilobular

Necrosis, Nos

Unspecified

Abdominal Cavity

Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_019

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Testis

Unspecified

Diaphragm Nos

Pheochromocytoma

Interstitial-Cell Tumor

Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_020

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Hepatocellular Carcinoma

Mammary gland

Fibroadenoma

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_021

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Degeneration, Nos
	Myocardium Nos	Fibrosis
Kidney		Inflammation, Chronic
Liver		Hepatocellular Carcinoma
Pancreas		Periarteritis
Testis		Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_022

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Heart	Myocardium Nos	Degeneration, Nos
	Myocardium Nos	Fibrosis
Kidney		Tubular-Cell Adenoma
Pituitary gland		Chromophobe Adenoma
Testis		Atrophy, Nos
	Scrotum Nos	Cyst, Epidermal Inclusion
		Interstitial-Cell Tumor
Unspecified	Abdominal Cavity	Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_023

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_024

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pancreas

Testis

Islets

Inflammation, Chronic

Islet-Cell Adenoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_025

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye

Cataract

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Cyst, Epidermal Inclusion

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_026

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Brain		Hydrocephalus, Nos
Intestine Small	Mesentery Nos	Periarteritis
Kidney		Inflammation, Chronic
Mammary gland		Galactocele
		Lactation
Pituitary gland		Chromophobe Adenoma
Testis		Interstitial-Cell Tumor
Thyroid		Follicular-Cell Carcinoma

---

**PRIMARY CAUSE OF DEATH**

-

---

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_027

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Mammary gland

Testis

Adenocarcinoma, Nos

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_028

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney  
Preputial gland  
Testis

Inflammation, Chronic  
Carcinoma, Nos  
Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_029

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart

Thrombus, Organized

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_030

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Pituitary gland

Chromophobe Adenoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_031

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Preputial gland

Testis

Unspecified

Abdominal Cavity

Inflammation, Chronic

Carcinoma, Nos

Interstitial-Cell Tumor

Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_032

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_033

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Unspecified

Multiple Organs Nos

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_034

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye

Synechia, Posterior

Pancreas

Islets

Islet-Cell Adenoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_035

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Atrophy, Nos  
Inflammation, Chronic  
Nephrosis, Hydro  
Transitional-Cell Carcinoma

Stomach

Acanthosis  
Hyperkeratosis

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic  
Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_036

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Kupffer-Cell Sarcoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_037

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Prostate

Inflammation, Nos

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_038

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Mammary gland

Testis

Thyroid

Pheochromocytoma

Inflammation, Chronic

Fibroadenoma

Interstitial-Cell Tumor

C-Cell Adenoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_039

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Mesentery Nos

Periarteritis

Testis

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_040

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney  
Salivary gland  
Stomach

Inflammation, Chronic  
Hemangiosarcoma, Invasive  
Acanthosis  
Hyperkeratosis

Testis  
Unspecified

Neck

Interstitial-Cell Tumor  
Hemangiosarcoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_041

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Heart	Auricular Appendage Nos	Thrombosis, Nos
Kidney		Inflammation, Chronic
	Pelvis	Mineralization
Testis		Interstitial-Cell Tumor
Unspecified	Multiple Organs Nos	Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_042

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Thyroid

Inflammation, Chronic

Interstitial-Cell Tumor

Hyperplasia, Follicular Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_043

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Skin

Flank

Basal-Cell Carcinoma

Stomach

Ulcer, Focal

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_044

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Stomach

Ulcer, Focal

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Abdominal Cavity

Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_045

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Pituitary gland

Testis

Inflammation, Chronic

Chromophobe Adenoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_046

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_047

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

Multiple Organs Nos

Mesothelioma, Malignant

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_048

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Mesothelioma, Malignant

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_049

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Heart

Kidney

Mammary gland

Testis

Zymbal gland

Myocardium Nos

Myocardium Nos

Pheochromocytoma

Degeneration, Nos

Fibrosis

Inflammation, Chronic

Fibroadenoma

Interstitial-Cell Tumor

Carcinoma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 2\_050

**TRT#:** 2

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 3750 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Pituitary gland

Chromophobe Adenoma

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_001

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Hepatocellular Carcinoma

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_002

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Moribund Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_003

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Preputial gland

Testis

Unspecified

Abdominal Cavity

Inflammation, Chronic

Carcinoma, Nos

Interstitial-Cell Tumor

Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_004

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Diaphragm Nos

Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_005

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_006

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Liver

Testis

Bile Duct

Pheochromocytoma

Hyperplasia, Nos

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_007

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Mammary gland

Prostate

Testis

Thyroid

Pheochromocytoma

Inflammation, Chronic

Fibroadenoma

Inflammation, Nos

Interstitial-Cell Tumor

Hyperplasia, Follicular Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_008

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_009

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_010

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Periarteritis

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_011

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Thyroid

Inflammation, Chronic

Interstitial-Cell Tumor

Cystic Follicles

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_012

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Hemangiosarcoma

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_013

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Lymphoma, Lymphocytic-Malignant Type

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_014

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Pancreas

Islets

Islet-Cell Carcinoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_015

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Abdominal Cavity

Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_016

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Harderian gland  
Kidney

Hardarian Gland

Hyperplasia, Nos  
Inflammation, Chronic  
Mineralization  
Interstitial-Cell Tumor  
Follicular-Cell Adenoma  
Leukemia, Monocytic

Testis  
Thyroid  
Unspecified

Multiple Organs Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_017

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland  
Kidney  
Pituitary gland  
Testis  
Thyroid

Cortex Nos

Hyperplasia, Nos  
Inflammation, Chronic  
Chromophobe Adenoma  
Interstitial-Cell Tumor  
Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_018

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye

Cataract

Synechia, Anterior

Synechia, Posterior

Kidney

Inflammation, Chronic

Lung

Alveolar/Bronchiolar Carcinoma

Spleen

Hemangiosarcoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_019

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye

Cornea

Cataract

Cornea

Pannus

Cornea

Vascularization

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Diaphragm Nos

Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_020

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Prostate

Inflammation, Nos

Stomach

Calcium Deposit

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_021

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney		Inflammation, Chronic
Lung		Hemangiopericytoma, Metastatic
Lymph node	Cervical Lymph Node Nos	Hemangiopericytoma, Metastatic
Salivary gland		Hemangiopericytoma, Metastatic
Testis		Interstitial-Cell Tumor
Unspecified	Ear	Hemangiopericytoma, Malignant

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_022

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Inflammation, Chronic

Preputial gland

Carcinoma, Nos

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_023

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Lung

Testis

Pheochromocytoma

Inflammation, Chronic

Pneumonia, Chronic Murine

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_024

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Thyroid

Unspecified

Shoulder

Inflammation, Chronic

Interstitial-Cell Tumor

Follicular-Cell Carcinoma

Fibroma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_025

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Lung

Testis

Inflammation, Chronic

Pneumonia, Chronic Murine

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_026

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Unspecified

Pelvis

Back

Pheochromocytoma

Inflammation, Chronic

Mineralization

Interstitial-Cell Tumor

Liposarcoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_027

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

Pituitary gland

Chromophobe Adenoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_028

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_029

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Parathyroid gland

Testis

Pheochromocytoma

Inflammation, Chronic

Hyperplasia, Nos

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_030

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Hepatocellular Carcinoma

Lung

Pneumonia, Chronic Murine

Testis

Interstitial-Cell Tumor

Thyroid

Hyperplasia, C Cell

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_031

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Pancreas

Testis

Thyroid

Unspecified

Shoulder

Periarteritis

Interstitial-Cell Tumor

Follicular-Cell Carcinoma

Cyst, Epidermal Inclusion

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_032

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_033

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Pheochromocytoma

Inflammation, Chronic

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_034

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney		Inflammation, Chronic
Lung		Pneumonia, Chronic Murine
Prostate		Inflammation, Nos
Stomach		Ulcer, Focal
Testis		Interstitial-Cell Tumor
Unspecified	Abdominal Cavity	Necrosis, Fat
	Leg	Osteosarcoma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_035

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Eye

Crystalline Lens

Cataract

Kidney

Rupture

Testis

Inflammation, Chronic

Unspecified

Multiple Organs Nos

Interstitial-Cell Tumor

Abdominal Cavity

Leukemia, Monocytic

Mesothelioma, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_036

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Liver

Focal Cellular Change

Mammary gland

Fibroadenoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_037

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Intestine Small

Mesentery Nos

Necrosis, Fat

Kidney

Mesentery Nos

Periarteritis

Testis

Inflammation, Chronic

Unspecified

Multiple Organs Nos

Mineralization

Pigmentation, Nos

Interstitial-Cell Tumor

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_038

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Adrenal gland

Kidney

Testis

Angiectasis

Inflammation, Chronic

Mineralization

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_039

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_040

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Tubular-Cell Adenoma

Testis

Interstitial-Cell Tumor

Unspecified

Diaphragm Nos

Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_041

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_042

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Lung

Pneumonia, Chronic Murine

Testis

Interstitial-Cell Tumor

Unspecified

Fibroma

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_043

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Epididymis

Kidney

Lung

Skin

Testis

Back

Necrosis, Fat

Inflammation, Chronic

Pneumonia, Chronic Murine

Squamous Cell Carcinoma

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_044

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney		Inflammation, Chronic
Pancreas	Islets	Islet-Cell Adenoma
Preputial gland		Carcinoma, Nos
Testis		Interstitial-Cell Tumor
Thyroid		C-Cell Carcinoma
Unspecified	Diaphragm Nos	Hernia, Nos

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_045

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Mineralization

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE



**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_046

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Preputial gland

Carcinoma, Nos

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_047

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Inflammation, Chronic

Testis

Interstitial-Cell Tumor

Unspecified

Multiple Organs Nos

Leukemia, Monocytic

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_048

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Scheduled Sacrifice

**HISTO:**

---

**OBSERVATIONS**

Kidney

Skin

Testis

Back

Inflammation, Chronic

Cyst, Epidermal Inclusion

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_049

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Brain

Astrocytoma

Testis

Interstitial-Cell Tumor

---

**PRIMARY CAUSE OF DEATH**

-

---

\* PROTOCOL REQUIRED TISSUE

**Experiment Number:** C50000

**Test Type:** Long-Term

**Route:** Dosed-Feed

**Species/Strain:** Rat/F344

**P14: INDIVIDUAL ANIMAL PATHOLOGY DATA**

**Test Compound:** DL-menthol

**Date Report Requested:** 10/26/2014

**Time Report Requested:** 13:15:48

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

**Lab:** NA

---

**ANIMAL ID:** 3\_050

**TRT#:** 3

**SEX:** Male

**DAY ON TEST:**

**DOSE:** 7500 PPM

**DISP:** Natural Death

**HISTO:**

---

**OBSERVATIONS**

Kidney

Testis

Unspecified

Multiple Organs Nos

Abdominal Cavity

Inflammation, Chronic

Interstitial-Cell Tumor

Leukemia, Monocytic

Necrosis, Fat

---

**PRIMARY CAUSE OF DEATH**

-

---

**\*\* END OF REPORT \*\***

\* PROTOCOL REQUIRED TISSUE