Test Type: 18-33 DAYS

Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

C Number: C20101

Lock Date: 01/25/2006

Cage Range: All

Date Range: All

Reasons For Removal:

Removal Date Range: All

Treatment Groups: All

Study Gender: Both

PWG Approval Date NONE

Species/Strain: Mouse/P53(C57BL/6)

Test Type: 18-33 DAYS

Route: DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Male MOUSE
FIRST TERMINAL SACRIFICE AT 29 DAYS
INDIVIDIAL SURVIVAL TIMES (DAYS)

| | IND | IVIDUAL SURVIVAL TIMES (DAY | S) | |
|-----------------------|---------------------|-----------------------------|------------|--|
| DOSE = 0 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 625 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 1250 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 2500 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Species/Strain: Mouse/P53(C57BL/6)

Test Type: 18-33 DAYS **Route:** DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Male MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 5000 ppm

TOTAL 5

UNCENSORED DEATHS 0

CENSORED DEATHS 0

TERMINAL 5

UNCENSORED DEATH DAYS

none

CENSORED DEATH DAYS

none

DOSE = 10,000 ppm

TOTAL 5

UNCENSORED DEATHS 0

CENSORED DEATHS 0

TERMINAL 5

UNCENSORED DEATH DAYS

none

CENSORED DEATH DAYS

none

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS

Route: DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Fir

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

Date Report Requested: 10/22/2014

Time Report Requested: 22:36:02

Species/Strain: Mouse/P53(C57BL/6)

Male MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)

| DOSE | | | | | TIME | (DAYS) | | | | |
|------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 29(A) |
| 0 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 625 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1250 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2500 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 5000 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 10,000 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS
Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Male MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

| DOSE | 0 ppm | 625 ppm | 1250 ppm | 2500 ppm | |
|--------------------------------|--------|---------|----------|----------|--|
| SURVIVAL AT END OF STUDY | 100.0% | 100.0% | 100.0% | 100.0% | |
| (KAPLAN-MEIER) | | | | | |
| SIGNIFICANCE (B) | | | | | |
| (LIFE TABLE) | | | | | |
| MEAN DAY OF NATURAL DEATHS (C) | | | | | |
| (STANDARD ERROR) | (.) | (.) | (.) | (.) | |
| MEAN LIFE SPAN (D) | 29.0 | 29.0 | 29.0 | 29.0 | |
| (STANDARD ERROR) | (0.0) | (0.0) | (0.0) | (0.0) | |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS

Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Male MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

| DOSE | 5000 ppm | 10,000 ppm |
|--------------------------------|----------|------------|
| SURVIVAL AT END OF STUDY | 100.0% | 100.0% |
| (KAPLAN-MEIER) | | |
| SIGNIFICANCE (B) | | |
| (LIFE TABLE) | | |
| MEAN DAY OF NATURAL DEATHS (C) | | |
| (STANDARD ERROR) | (.) | (.) |
| MEAN LIFE SPAN (D) | 29.0 | 29.0 |
| (STANDARD ERROR) | (0.0) | (0.0) |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Species/Strain: Mouse/P53(C57BL/6)

Test Type: 18-33 DAYS

Route: DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

FEMALE MOUSE
FIRST TERMINAL SACRIFICE AT 29 DAYS
INDIVIDUAL SURVIVAL TIMES (DAYS)

| | IND | IVIDUAL SURVIVAL TIMES (DAY | ১) | |
|-----------------------|---------------------|-----------------------------|------------|--|
| DOSE = 0 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 625 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 1250 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |
| DOSE = 2500 ppm | | | | |
| TOTAL 5 | UNCENSORED DEATHS 0 | CENSORED DEATHS 0 | TERMINAL 5 | |
| UNCENSORED DEATH DAYS | | | | |
| none | | | | |
| CENSORED DEATH DAYS | | | | |
| none | | | | |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Species/Strain: Mouse/P53(C57BL/6)

Test Type: 18-33 DAYS Route: DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)

CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Female MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS INDIVIDUAL SURVIVAL TIMES (DAYS)

DOSE = 5000 ppm

TOTAL 5 UNC

UNCENSORED DEATHS 0 CENSORED DEATHS 0

TERMINAL 5

UNCENSORED DEATH DAYS

none

CENSORED DEATH DAYS

none

DOSE = 10,000 ppm

TOTAL 5 UNCENSORED DEATHS 0

CENSORED DEATHS 0

TERMINAL 5

UNCENSORED DEATH DAYS

none

CENSORED DEATH DAYS

none

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS

Route: DOSED FEED

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Species/Strain: Mouse/P53(C57BL/6)

Female MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

KAPLAN-MEIER SURVIVAL PROBABILITY ESTIMATES (%)

| DOSE | | | | | TIME | (DAYS) | | | | |
|------------|-------|-------|-------|-------|-------|--------|-------|-------|-------|-------|
| | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 | 29(A) |
| 0 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 625 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 1250 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 2500 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 5000 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| 10,000 ppm | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS
Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Female MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

| DOSE | 0 ppm | 625 ppm | 1250 ppm | 2500 ppm | |
|--------------------------------|--------|---------|----------|----------|--|
| SURVIVAL AT END OF STUDY | 100.0% | 100.0% | 100.0% | 100.0% | |
| (KAPLAN-MEIER) | | | | | |
| SIGNIFICANCE (B) | | | | | |
| (LIFE TABLE) | | | | | |
| MEAN DAY OF NATURAL DEATHS (C) | | | | | |
| (STANDARD ERROR) | (.) | (.) | (.) | (.) | |
| MEAN LIFE SPAN (D) | 29.0 | 29.0 | 29.0 | 29.0 | |
| (STANDARD ERROR) | (0.0) | (0.0) | (0.0) | (0.0) | |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS
Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

Female MOUSE FIRST TERMINAL SACRIFICE AT 29 DAYS

| DOSE | 5000 ppm | 10,000 ppm |
|--------------------------------|----------|------------|
| SURVIVAL AT END OF STUDY | 100.0% | 100.0% |
| (KAPLAN-MEIER) | | |
| SIGNIFICANCE (B) | | |
| (LIFE TABLE) | | |
| MEAN DAY OF NATURAL DEATHS (C) | | |
| (STANDARD ERROR) | (.) | (.) |
| MEAN LIFE SPAN (D) | 29.0 | 29.0 |
| (STANDARD ERROR) | (0.0) | (0.0) |

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)

Test Type: 18-33 DAYS Route: DOSED FEED

Species/Strain: Mouse/P53(C57BL/6)

P11: STATISTICAL ANALYSIS OF SURVIVAL DATA

Test Compound: Senna (powdered)
CAS Number: 8013-11-4

Date Report Requested: 10/22/2014 Time Report Requested: 22:36:02

First Dose M/F: NA / NA

Lab: BAT

** END OF REPORT **

⁽A) FIRST TERMINAL SACRIFICE

⁽B) THE FIRST ENTRY IS THE TREND TEST (TARONE, 1975) RESULT. SUBSEQUENT ENTRIES ARE THE RESULTS OF PAIRWISE TESTS (COX, 1972). NEGATIVE TRENDS ARE INDICATED BY "N".

⁽C) MEAN OF ALL UNCENSORED DEATHS PRIOR TO TERMINAL SACRIFICE

⁽D) MEAN OF ALL DEATHS (UNCENSORED, CENSORED, TERMINAL SACRIFICE)