

Experiment Number: 979281

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

**G06: Ames Summary Data**

Test Compound: 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester

CAS Number: 5493-45-8

Date Report Requested: 09/18/2018

Time Report Requested: 03:05:57

**NTP Study Number:**

979281

**Study Result:**

Positive

Experiment Number: 979281

## G06: Ames Summary Data

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial  
MutagenicityTest Compound: 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

## Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 30% Rat S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	143 ± 8.5	96 ± 1.9	153 ± 7.4	102 ± 8.3	154 ± 9.1
33.0		133 ± 0.7		145 ± 4.2	
100.0	190 ± 11.9	175 ± 6.3	209 ± 3.5	193 ± 5.6	258 ± 1.5
333.0	298 ± 0.9	358 ± 16.4	404 ± 9.6	361 ± 13.3	375 ± 17.8
1000.0	526 ± 23.0	921 ± 41.6	894 ± 21.5	824 ± 8.9	886 ± 9.2
3333.0	1038 ± 39.8 <sup>s</sup>	1288 ± 6.3 <sup>s</sup>	1154 ± 21.1 <sup>s</sup>	1126 ± 6.4 <sup>s</sup>	1431 ± 2.8 <sup>s</sup>
6666.0	1023 ± 87.7 <sup>s</sup>		1391 ± 29.1 <sup>s</sup>		1463 ± 15.6 <sup>s</sup>
Trial Summary	Positive	Positive	Positive	Positive	Positive
Positive Control <sup>2</sup>	373 ± 10.3	259 ± 4.8			
Positive Control <sup>3</sup>					324 ± 5.1
Positive Control <sup>4</sup>			374 ± 12.5	392 ± 19.1	

Experiment Number: 979281

**G06: Ames Summary Data**

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

Test Compound: 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

---

**Strain: TA100**

---

<b>Dose (ug/Plate)</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	142 ± 1.8
33.0	141 ± 2.9
100.0	193 ± 5.2
333.0	329 ± 11.1
1000.0	886 ± 12.8
3333.0	1773 ± 7.1 <sup>s</sup>
6666.0	
Trial Summary	Positive
Positive Control <sup>2</sup>	
Positive Control <sup>3</sup>	353 ± 16.6
Positive Control <sup>4</sup>	

Experiment Number: 979281

## G06: Ames Summary Data

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial  
MutagenicityTest Compound: 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

## Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 30% Rat S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	31 ± 6.0	25 ± 5.2	22 ± 2.2	10 ± 1.9	28 ± 2.5
33.0		25 ± 1.5		33 ± 4.2	
100.0	34 ± 1.7	22 ± 1.0	77 ± 5.5	50 ± 0.3	94 ± 3.9
333.0	45 ± 1.7	47 ± 0.5	263 ± 3.2	224 ± 80.0	217 ± 11.9
1000.0	78 ± 8.1 <sup>s</sup>	84 ± 5.1	539 ± 22.1	464 ± 43.0	523 ± 27.2
3333.0	134 ± 5.6 <sup>s</sup>	160 ± 9.4	721 ± 15.5 <sup>p</sup>	771 ± 38.8	1094 ± 35.6 <sup>p</sup>
6666.0	176 ± 32.4 <sup>s</sup>		804 ± 14.4 <sup>s</sup>		1133 ± 32.8 <sup>s</sup>
Trial Summary	Positive	Positive	Positive	Positive	Positive
Positive Control <sup>2</sup>	167 ± 4.2	115 ± 6.4			
Positive Control <sup>3</sup>					56 ± 1.3
Positive Control <sup>4</sup>			85 ± 8.1	76 ± 4.4	

Experiment Number: 979281

**G06: Ames Summary Data**

Date Report Requested: 09/18/2018

Test Type: **Genetic Toxicology - Bacterial Mutagenicity**

Test Compound: **1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester**  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

---

**Strain: TA1535**

---

<b>Dose (ug/Plate)</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	13 ± 2.4
33.0	36 ± 2.0
100.0	70 ± 4.5
333.0	210 ± 12.0
1000.0	492 ± 18.9
3333.0	933 ± 60.0
6666.0	
Trial Summary	Positive
Positive Control <sup>2</sup>	
Positive Control <sup>3</sup>	108 ± 6.2
Positive Control <sup>4</sup>	

Experiment Number: 979281

**G06: Ames Summary Data**

Date Report Requested: 09/18/2018

Test Type: **Genetic Toxicology - Bacterial Mutagenicity**

Test Compound: **1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester**  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

---

**Strain: TA1537**

---

<b>Dose (ug/Plate)</b>	<b>Without S9</b>	<b>With 30% Rat S9</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	5 ± 0.7	10 ± 2.3	11 ± 1.0
100.0	5 ± 0.9	13 ± 2.1	10 ± 0.6
333.0	3 ± 0.0	10 ± 1.0	7 ± 0.9
1000.0	6 ± 0.7	11 ± 5.1	10 ± 0.9
3333.0	7 ± 1.2 <sup>s</sup>	12 ± 2.6	14 ± 0.9
6666.0	Toxic	12 ± 2.2 <sup>s</sup>	14 ± 2.5 <sup>s</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>4</sup>		34 ± 4.2	111 ± 11.8
Positive Control <sup>5</sup>	404 ± 17.5		

Experiment Number: 979281

**G06: Ames Summary Data**

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

Test Compound: 1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester  
CAS Number: 5493-45-8

Time Report Requested: 03:05:57

---

**Strain: TA98**

---

<b>Dose (ug/Plate)</b>	<b>Without S9</b>	<b>With 30% Rat S9</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	30 ± 7.0	39 ± 3.2	47 ± 4.7
100.0	38 ± 2.9	40 ± 2.3	48 ± 3.7
333.0	37 ± 6.1	41 ± 3.5	41 ± 3.2
1000.0	43 ± 4.7	42 ± 2.3	47 ± 5.5
3333.0	42 ± 4.9 <sup>s</sup>	47 ± 4.5	60 ± 0.6
6666.0	20 ± 4.3 <sup>s</sup>	42 ± 1.2 <sup>s</sup>	42 ± 4.1 <sup>s</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>6</sup>			117 ± 4.4
Positive Control <sup>3</sup>		140 ± 15.0	
Positive Control <sup>7</sup>	185 ± 13.6		

Experiment Number: 979281

**G06: Ames Summary Data**

Date Report Requested: 09/18/2018

Test Type: **Genetic Toxicology - Bacterial  
Mutagenicity**

Test Compound: **1,2-Cyclohexanedicarboxylic acid, bis(oxiranylmethyl) ester**

Time Report Requested: 03:05:57

CAS Number: 5493-45-8

**LEGEND**

---

Values given as Mean or Mean  $\pm$  Standard Error Mean

The number of samples = 3, unless samples marked toxic or contaminated were excluded from mean and SEM calculations

CAS Number = Chemical Abstracts Service registry number

1: Vehicle Control: Dimethyl Sulfoxide

2: 0.5 ug/Plate Sodium Azide

3: 1.0 ug/Plate 2-Aminoanthracene

4: 2.0 ug/Plate 2-Aminoanthracene

5: 4.0 ug/Plate 9-Aminoacridine

6: 0.4 ug/Plate 2-Aminoanthracene

7: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine

p: Precipitate

s: Slight Toxicity

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