

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

NTP Study Number:

489345

Study Result:

Negative

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	142 ± 4.6	107 ± 4.0			154 ± 6.7
Vehicle Control ²			129 ± 1.2	112 ± 7.1	
1.0		109 ± 10.6		109 ± 10.3	
3.0	140 ± 7.2	122 ± 6.1	96 ± 6.4	99 ± 3.1	
10.0	137 ± 7.1	94 ± 4.4	93 ± 4.7	87 ± 3.6	103 ± 13.9
33.0	97 ± 1.0	34 ± 1.7 ^s	62 ± 4.3	99 ± 5.6	107 ± 10.2
100.0	0 ± 0.0 ^s	0 ± 0.0 ^s	17 ± 9.5 ^s	99 ± 7.2	105 ± 3.9
333.0	0 ± 0.0 ^s		2 ± 1.7 ^s		88 ± 7.1
1000.0					63 ± 5.0 ^s
3333.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	268 ± 19.3	407 ± 18.7	397 ± 20.2	395 ± 12.2	
Positive Control ⁴					761 ± 11.3

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	150 ± 5.5			153 ± 8.1	120 ± 12.1
Vehicle Control ²		115 ± 4.3	129 ± 3.2		
1.0					111 ± 1.5
3.0					112 ± 7.2
10.0	151 ± 7.0		123 ± 4.7	151 ± 1.5	108 ± 4.0
33.0	160 ± 2.8	106 ± 4.5	124 ± 6.9	167 ± 3.3	86 ± 3.6 ^s
100.0	149 ± 5.1	113 ± 12.3	126 ± 9.1	157 ± 3.8	89 ± 5.8 ^s
333.0	100 ± 5.6	80 ± 6.2 ^p	127 ± 8.5 ^p	127 ± 6.9	
1000.0	0 ± 0.0 ^s	53 ± 12.3 ^p	104 ± 3.0 ^p	123 ± 9.7	
3333.0		16 ± 8.2 ^p			
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					
Positive Control ⁴	742 ± 48.2	690 ± 18.0	623 ± 22.2	1832 ± 56.7	1353 ± 54.6

Experiment Number: 489345
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Curcumin
CAS Number: 458-37-7

Date Report Requested: 09/11/2018
Time Report Requested: 22:55:53

Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	115 ± 2.9	107 ± 9.3
1.0		
3.0		
10.0		
33.0	105 ± 7.8	111 ± 4.6
100.0	106 ± 5.2	110 ± 8.1
333.0	80 ± 2.7 ^P	112 ± 7.8 ^P
1000.0	87 ± 7.8 ^P	113 ± 18.4 ^P
3333.0	12 ± 6.7 ^S	26 ± 15.6 ^S
Trial Summary	Negative	Negative
Positive Control ³		
Positive Control ⁴	792 ± 20.3	1863 ± 34.6

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	9 ± 1.3	35 ± 7.0			34 ± 3.3
Vehicle Control ²			17 ± 2.8	27 ± 1.2	
1.0		35 ± 1.8			
3.0	38 ± 0.9	36 ± 6.0	12 ± 1.5	15 ± 2.5	
10.0	31 ± 3.5	37 ± 5.5	23 ± 1.2	14 ± 3.3	41 ± 1.7
33.0	31 ± 2.5	26 ± 17.6 ^S	13 ± 2.0	15 ± 2.1	49 ± 1.9
100.0	11 ± 3.4	0 ± 0.0 ^S	16 ± 3.4	14 ± 0.9	38 ± 1.2
333.0	3 ± 3.3 ^S		16 ± 2.1 ^P	19 ± 1.5 ^P	18 ± 3.0
1000.0					19 ± 1.5
3333.0					
10000.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	175 ± 23.2	456 ± 5.5	359 ± 15.0	441 ± 5.2	
Positive Control ⁵					225 ± 19.9

Experiment Number: 489345

G06: Ames Summary Data

Date Report Requested: 09/11/2018

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

Time Report Requested: 22:55:53

Strain: TA1535

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	29 ± 1.5			34 ± 2.4	24 ± 3.5
Vehicle Control ²		7 ± 1.9	6 ± 0.9		
1.0					
3.0					
10.0	36 ± 3.5			35 ± 4.0	
33.0	37 ± 3.5	9 ± 2.1	7 ± 0.3	38 ± 7.0	
100.0	33 ± 7.2	10 ± 1.7	6 ± 1.2	38 ± 9.4	35 ± 3.1
333.0	33 ± 2.6	7 ± 0.9 ^p	8 ± 1.8 ^p	30 ± 1.3	26 ± 3.7
1000.0	26 ± 1.5	9 ± 1.7 ^p	9 ± 2.6 ^p	22 ± 4.0	21 ± 2.8
3333.0		6 ± 1.2 ^p	6 ± 1.2 ^p		17 ± 0.3
10000.0					11 ± 1.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					
Positive Control ⁵	114 ± 6.1	114 ± 14.3	141 ± 6.1	505 ± 12.5	326 ± 15.2

Experiment Number: 489345
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Curcumin
CAS Number: 458-37-7

Date Report Requested: 09/11/2018
Time Report Requested: 22:55:53

Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	11 ± 1.0	9 ± 2.6
1.0		
3.0		
10.0		
33.0	8 ± 1.8	7 ± 0.9
100.0	13 ± 2.2	7 ± 2.4
333.0	7 ± 1.0 ^p	7 ± 0.6 ^p
1000.0	8 ± 2.0 ^p	9 ± 1.3 ^p
3333.0	5 ± 2.0 ^p	7 ± 1.2 ^p
10000.0		
Trial Summary	Negative	Negative
Positive Control ³		
Positive Control ⁵	213 ± 8.8	446 ± 35.9

Experiment Number: 489345

G06: Ames Summary Data

Date Report Requested: 09/11/2018

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

Time Report Requested: 22:55:53

Strain: TA1537

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	7 ± 2.9	6 ± 1.5			12 ± 2.4
Vehicle Control ²			4 ± 0.6	4 ± 1.5	
1.0		6 ± 0.6			
3.0	11 ± 3.8	5 ± 1.2	5 ± 0.0	5 ± 1.2	
10.0	8 ± 2.3	7 ± 1.5	5 ± 1.0	4 ± 0.3	11 ± 3.4
33.0	5 ± 2.2	5 ± 1.7	5 ± 0.6	4 ± 0.7	11 ± 1.5
100.0	0 ± 0.0 ^s	4 ± 2.1 ^s	5 ± 1.2	3 ± 0.9	8 ± 0.6
333.0	0 ± 0.0 ^s		5 ± 0.3 ^p	5 ± 1.2 ^p	8 ± 2.6 ^s
1000.0					4 ± 2.0 ^s
3333.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁵					172 ± 17.9
Positive Control ⁶	109 ± 8.7	391 ± 11.3	78 ± 3.8	82 ± 8.1	

Experiment Number: 489345

G06: Ames Summary Data

Date Report Requested: 09/11/2018

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

Time Report Requested: 22:55:53

Strain: TA1537

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	12 ± 3.2			7 ± 1.2	6 ± 0.6
Vehicle Control ²		6 ± 1.2	7 ± 1.3		
1.0					4 ± 1.9
3.0					4 ± 0.0
10.0	17 ± 1.2		6 ± 0.6	8 ± 0.6	4 ± 0.0
33.0	18 ± 1.8	13 ± 3.3	8 ± 0.7	9 ± 0.3	10 ± 2.8 ^s
100.0	17 ± 0.6	7 ± 0.6	10 ± 1.7	14 ± 1.2	0 ± 0.0 ^s
333.0	9 ± 0.9 ^s	5 ± 2.5 ^p	5 ± 0.9 ^p	6 ± 1.9	
1000.0	3 ± 2.7 ^s	1 ± 1.3 ^s	8 ± 1.2 ^p	6 ± 0.9	
3333.0		Toxic			
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁵	197 ± 7.6	234 ± 15.6	110 ± 3.6	480 ± 5.5	308 ± 17.1
Positive Control ⁶					

Experiment Number: 489345
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Curcumin
CAS Number: 458-37-7

Date Report Requested: 09/11/2018
Time Report Requested: 22:55:53

Strain: TA1537

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	9 ± 1.5	6 ± 1.8
1.0		
3.0		
10.0		
33.0	8 ± 3.1	5 ± 0.6
100.0	8 ± 1.5	5 ± 1.0
333.0	5 ± 0.7 ^P	5 ± 0.6 ^P
1000.0	5 ± 1.5 ^P	3 ± 2.7 ^S
3333.0	5 ± 1.7 ^P	0 ± 0.0 ^S
Trial Summary	Negative	Negative
Positive Control ⁵	383 ± 15.5	413 ± 22.7
Positive Control ⁶		

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	25 ± 0.0	21 ± 2.0			27 ± 5.2
Vehicle Control ²			14 ± 2.1	18 ± 1.5	
1.0		19 ± 2.6			
3.0	28 ± 4.9	22 ± 2.3	14 ± 1.0	12 ± 2.7	
10.0	30 ± 2.8	21 ± 3.5	13 ± 1.2	11 ± 2.4	39 ± 1.0
33.0	23 ± 1.3	13 ± 1.9	15 ± 2.8	12 ± 2.1	45 ± 5.1
100.0	27 ± 0.3	17 ± 2.2	12 ± 3.5	12 ± 2.1	45 ± 4.6
333.0	21 ± 1.8		13 ± 0.3 ^p	14 ± 2.6 ^p	28 ± 2.5 ^s
1000.0					28 ± 6.1 ^s
3333.0					
10000.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴					671 ± 51.3
Positive Control ⁷	793 ± 25.9	724 ± 34.0	373 ± 15.6	779 ± 76.6	

Experiment Number: 489345

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Curcumin

CAS Number: 458-37-7

Date Report Requested: 09/11/2018

Time Report Requested: 22:55:53

Strain: TA98

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	30 ± 3.5			33 ± 3.1	32 ± 0.9
Vehicle Control ²		16 ± 1.2	28 ± 2.6		
1.0					
3.0					
10.0	45 ± 1.9			42 ± 1.2	
33.0	41 ± 7.2	18 ± 4.3	29 ± 2.6	47 ± 4.4	
100.0	43 ± 3.5	18 ± 2.3	24 ± 3.5	42 ± 5.7	34 ± 3.4
333.0	34 ± 1.0	16 ± 1.7 ^p	25 ± 0.6 ^p	43 ± 0.3	32 ± 0.9
1000.0	34 ± 2.6	18 ± 1.5 ^p	24 ± 2.0 ^p	42 ± 1.2	31 ± 3.5
3333.0		14 ± 3.1 ^p	19 ± 4.3 ^p		0 ± 0.0 ^s
10000.0					Toxic
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴	556 ± 36.2	325 ± 23.3	562 ± 7.8	1718 ± 14.1	1385 ± 100.5
Positive Control ⁷					

Experiment Number: 489345
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Curcumin
CAS Number: 458-37-7

Date Report Requested: 09/11/2018
Time Report Requested: 22:55:53

Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	19 ± 0.9	23 ± 4.1
1.0		
3.0		
10.0		
33.0	23 ± 3.8	24 ± 3.7
100.0	21 ± 3.7	20 ± 2.3
333.0	22 ± 3.2 ^p	22 ± 3.2 ^p
1000.0	24 ± 1.5 ^p	19 ± 0.9 ^p
3333.0	12 ± 2.7 ^p	10 ± 1.5 ^p
10000.0		
Trial Summary	Negative	Negative
Positive Control ⁴	383 ± 22.4	1570 ± 33.4
Positive Control ⁷		

Experiment Number: 489345
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Curcumin
CAS Number: 458-37-7

Date Report Requested: 09/11/2018
Time Report Requested: 22:55:53

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: 95% Ethanol

2: Vehicle Control: Dimethyl Sulfoxide

3: 1.0 ug/Plate Sodium Azide

4: 1.0 ug/Plate 2-Aminoanthracene

5: 2.5 ug/Plate 2-Aminoanthracene

6: 50.0 ug/Plate 9-Aminoacridine

7: 5.0 ug/Plate 4-Nitro-O-Phenylenediamine

p: Precipitate

s: Slight Toxicity

** END OF REPORT **