

Experiment Number: **A90068**

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

G06: Ames Summary Data

Test Compound: **Lime oil**

CAS Number: **8008-26-2**

Date Report Requested: **09/18/2018**

Time Report Requested: **05:14:04**

NTP Study Number:

A90068

Study Result:

Negative

Experiment Number: A90068
 Test Type: Genetic Toxicology - Bacterial
 Mutagenicity

G06: Ames Summary Data
 Test Compound: Lime oil
 CAS Number: 8008-26-2

Date Report Requested: 09/18/2018
 Time Report Requested: 05:14:04

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	156 ± 4.9	149 ± 15.0	180 ± 13.7	145 ± 5.2	175 ± 3.5
0.33	167 ± 4.9	155 ± 7.0			
1.0	174 ± 3.3	157 ± 12.1			
3.3	164 ± 4.9	167 ± 13.1		139 ± 8.7	
10.0	136 ± 20.0	127 ± 3.7	153 ± 16.2	152 ± 9.5	162 ± 7.5
33.0	103 ± 9.3 ^s	97 ± 7.6 ^s	157 ± 6.1	172 ± 3.4	174 ± 4.0
100.0			130 ± 19.3	150 ± 4.4	155 ± 7.4
333.0			4 ± 3.7 ^s	115 ± 17.3 ^s	53 ± 16.3 ^s
500.0			3 ± 0.3 ^s		7 ± 3.2 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					1355 ± 108.8
Positive Control ³	547 ± 60.6	643 ± 26.4			
Positive Control ⁴			1186 ± 126.1		
Positive Control ⁵					
Positive Control ⁶				770 ± 46.5	

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Mutagenicity

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Test Compound: Lime oil
CAS Number: 8008-26-2

Date Report Requested: 09/18/2018
Time Report Requested: 05:14:04

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	152 ± 8.7
0.33	
1.0	
3.3	159 ± 3.2
10.0	134 ± 15.0
33.0	148 ± 9.8
100.0	155 ± 12.7
333.0	105 ± 8.1 ^s
500.0	
Trial Summary	Negative
Positive Control ²	
Positive Control ³	
Positive Control ⁴	
Positive Control ⁵	1403 ± 68.6
Positive Control ⁶	

Experiment Number: A90068

G06: Ames Summary Data

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Lime oil

Time Report Requested: 05:14:04

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control ¹	13 ± 1.0	16 ± 1.7	10 ± 0.9	11 ± 2.4	10 ± 2.7
0.33		15 ± 3.2			
1.0	17 ± 0.3	14 ± 2.9	13 ± 2.8		
3.3	15 ± 0.3	16 ± 2.8	11 ± 2.2		13 ± 1.5
10.0	15 ± 0.7	18 ± 2.8	12 ± 4.4	18 ± 0.7	14 ± 2.0
33.0	13 ± 1.3 ^s	19 ± 2.3	9 ± 0.9 ^s	13 ± 2.3	16 ± 0.3
50.0					13 ± 2.7
100.0	0 ± 0.0 ^s		0 ± 0.0 ^s	6 ± 0.9 ^s	13 ± 2.7
333.0				0 ± 0.0 ^s	
500.0				2 ± 1.5 ^s	
1000.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	373 ± 58.0	284 ± 26.0	185 ± 8.0		
Positive Control ⁵					
Positive Control ⁶				363 ± 25.7	156 ± 19.0

Experiment Number: A90068
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 Mutagenicity

G06: Ames Summary Data
 Test Compound: Lime oil
 CAS Number: 8008-26-2

Date Report Requested: 09/18/2018
 Time Report Requested: 05:14:04

Strain: TA1535

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	14 ± 1.2	10 ± 0.9	15 ± 1.2	13 ± 1.7
0.33				
1.0				
3.3			12 ± 1.9	14 ± 0.6
10.0	16 ± 0.3	13 ± 2.1	13 ± 2.2	13 ± 0.9
33.0	16 ± 2.5	15 ± 1.0	17 ± 2.2	12 ± 1.5
50.0			12 ± 0.6	
100.0	13 ± 2.4	9 ± 0.6 ^s	12 ± 1.8	14 ± 0.3
333.0	0 ± 0.0 ^s	1 ± 0.9 ^s		9 ± 2.5 ^s
500.0		2 ± 1.2 ^s		
1000.0	0 ± 0.0 ^s			
Trial Summary	Negative	Negative	Negative	Negative
Positive Control ²		196 ± 6.7	104 ± 42.7	
Positive Control ³				
Positive Control ⁵				253 ± 18.6
Positive Control ⁶	561 ± 174.9			

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G06: Ames Summary Data

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Lime oil

Time Report Requested: 05:14:04

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	97 ± 6.4	139 ± 4.5	134 ± 11.7	162 ± 17.1	177 ± 6.5
0.33		134 ± 10.1			
1.0	109 ± 7.4	149 ± 2.6			
3.3	105 ± 5.8	149 ± 8.2		130 ± 23.8	
10.0	107 ± 8.1	153 ± 5.0	134 ± 4.7	170 ± 11.5	145 ± 5.7
33.0	0 ± 0.0 ^s	96 ± 5.1 ^s	163 ± 7.4	169 ± 11.8	137 ± 5.0
50.0				149 ± 8.0	
100.0	0 ± 0.0 ^s		126 ± 3.5 ^s	150 ± 7.8	150 ± 9.3
333.0			3 ± 1.7 ^s		0 ± 0.0 ^s
500.0			34 ± 31.5 ^s		
1000.0					0 ± 0.0 ^s
Trial Summary	Negative	Negative	Equivocal	Negative	Negative
Positive Control ⁴					
Positive Control ⁶			1799 ± 117.9	683 ± 58.5	821 ± 206.8
Positive Control ⁷	400 ± 145.1	642 ± 26.3			

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Test Type: Genetic Toxicology - Bacterial
Mutagenicity

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Test Compound: Lime oil

CAS Number: 8008-26-2

Date Report Requested: 09/18/2018

Time Report Requested: 05:14:04

Strain: TA97

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	139 ± 6.7	117 ± 3.2	138 ± 7.5
0.33			
1.0			
3.3		129 ± 9.8	
10.0	144 ± 9.6	127 ± 7.1	139 ± 10.7
33.0	155 ± 8.1	123 ± 4.3	126 ± 7.2
50.0		114 ± 11.3	
100.0	150 ± 4.1 ^s	116 ± 10.5	133 ± 9.1
333.0	18 ± 12.5 ^s		110 ± 5.7 ^s
500.0	76 ± 37.1 ^s		
1000.0			0 ± 0.0 ^s
Trial Summary	Negative	Negative	Negative
Positive Control ⁴	933 ± 22.8	1111 ± 46.1	
Positive Control ⁶			1110 ± 41.6
Positive Control ⁷			

Experiment Number: A90068

G06: Ames Summary Data

Date Report Requested: 09/18/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Lime oil

Time Report Requested: 05:14:04

Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	18 ± 3.4	14 ± 2.2	27 ± 2.3	22 ± 3.5	19 ± 2.0
0.33	16 ± 1.0	16 ± 2.2			
1.0	16 ± 2.4	14 ± 1.2			
3.3	15 ± 1.5	18 ± 5.3		17 ± 1.3	19 ± 0.7
10.0	15 ± 0.9	18 ± 1.7	22 ± 3.0	15 ± 2.3	21 ± 1.2
33.0	13 ± 0.3 ^s	4 ± 2.1 ^s	20 ± 2.0	18 ± 1.5	19 ± 0.3
50.0				21 ± 1.5	
100.0			22 ± 2.2 ^s	16 ± 0.6	18 ± 1.2
333.0			2 ± 1.0 ^s		16 ± 0.3
500.0			4 ± 2.0 ^s		
1000.0					
3333.0					
10000.0					
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			810 ± 145.0	226 ± 11.6	
Positive Control ⁸	108 ± 11.7	106 ± 6.1			
Positive Control ⁵					243 ± 36.6

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Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Lime oil

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CAS Number: 8008-26-2

Strain: TA98

Dose (ug/Plate)	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	25 ± 4.2	19 ± 5.7	21 ± 2.0	18 ± 1.2	29 ± 0.7
0.33					
1.0					
3.3				21 ± 2.7	
10.0			22 ± 2.0	19 ± 1.2	
33.0		16 ± 1.5	21 ± 2.9	19 ± 1.0	
50.0					
100.0	24 ± 3.1	22 ± 3.8	17 ± 2.4	16 ± 0.3	29 ± 4.4
333.0	16 ± 1.5	17 ± 0.9	4 ± 3.7 ^s	16 ± 0.7	36 ± 2.6
500.0		18 ± 4.5 ^s	3 ± 1.5 ^s		
1000.0	0 ± 0.3 ^s	11 ± 3.5 ^s			5 ± 2.3 ^s
3333.0	0 ± 0.0 ^s				1 ± 0.7 ^s
10000.0	Toxic				Toxic
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			1354 ± 69.3		
Positive Control ⁸					
Positive Control ⁵	251 ± 16.9	285 ± 32.6		987 ± 446.8	669 ± 33.4

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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	27 ± 1.2
0.33	
1.0	
3.3	
10.0	
33.0	26 ± 4.9
50.0	
100.0	26 ± 1.5
333.0	27 ± 4.3
500.0	18 ± 4.3
1000.0	5 ± 2.6 ^s
3333.0	
10000.0	
Trial Summary	Negative
Positive Control ²	
Positive Control ⁸	
Positive Control ⁵	841 ± 56.4

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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: 0.4 ug/Plate 2-Aminoanthracene
- 3: 0.5 ug/Plate Sodium Azide
- 4: 0.75 ug/Plate 2-Aminoanthracene
- 5: 1.0 ug/Plate 2-Aminoanthracene
- 6: 2.0 ug/Plate 2-Aminoanthracene
- 7: 24.0 ug/Plate 9-Aminoacridine
- 8: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine
- s: Slight Toxicity

** END OF REPORT **