

Experiment Number: A41673

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

G06: Ames Summary Data

Test Compound: **Milk thistle extract**

CAS Number: **84604-20-6**

Date Report Requested: **09/16/2018**

Time Report Requested: **23:58:25**

NTP Study Number:

A41673

Study Result:

Negative

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G06: Ames Summary Data

Test Compound: Milk thistle extract

CAS Number: 84604-20-6

Date Report Requested: 09/16/2018

Time Report Requested: 23:58:25

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	95 ± 7.2	85 ± 2.3	104 ± 2.7	128 ± 4.7	109 ± 4.8
100.0	97 ± 4.9	84 ± 3.9	102 ± 3.0	120 ± 2.6	90 ± 4.2
333.0	99 ± 5.5	90 ± 2.3	111 ± 6.9	107 ± 4.5	95 ± 2.6
1000.0	110 ± 8.1	91 ± 2.9	99 ± 8.0	95 ± 8.5	95 ± 4.8
3333.0	102 ± 8.7	97 ± 6.9	98 ± 0.3	112 ± 10.1	90 ± 6.7
10000.0	108 ± 4.4	98 ± 5.2	88 ± 3.0	95 ± 7.9	85 ± 7.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					621 ± 49.0
Positive Control ³			549 ± 22.0		
Positive Control ⁴	878 ± 50.0	895 ± 21.9			
Positive Control ⁵				525 ± 17.2	

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Test Compound: Milk thistle extract
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Date Report Requested: 09/16/2018
Time Report Requested: 23:58:25

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	101 ± 3.4
100.0	101 ± 5.2
333.0	104 ± 6.4
1000.0	131 ± 6.4
3333.0	129 ± 6.8
10000.0	98 ± 10.1
Trial Summary	Negative
Positive Control ²	
Positive Control ³	1439 ± 51.9
Positive Control ⁴	
Positive Control ⁵	

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	13 ± 0.9	8 ± 0.7	8 ± 1.0	16 ± 3.2	9 ± 0.7
100.0	14 ± 1.2	11 ± 1.2	9 ± 1.3	16 ± 0.9	7 ± 0.7
333.0	20 ± 2.2	10 ± 2.5	8 ± 0.3	13 ± 0.9	8 ± 0.7
1000.0	15 ± 1.2	10 ± 1.9	10 ± 0.7	12 ± 1.7	10 ± 1.5
3333.0	17 ± 1.3	9 ± 1.5	8 ± 1.3	11 ± 1.5	9 ± 0.3
10000.0	12 ± 0.9	7 ± 0.3	6 ± 0.6	9 ± 0.7	8 ± 1.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					138 ± 2.3
Positive Control ⁴	835 ± 7.5	846 ± 20.2			
Positive Control ⁵			100 ± 18.9		
Positive Control ⁶				127 ± 2.6	

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G06: Ames Summary Data
Test Compound: Milk thistle extract
CAS Number: 84604-20-6

Date Report Requested: 09/16/2018
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Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	15 ± 2.6
100.0	10 ± 1.2
333.0	12 ± 1.3
1000.0	12 ± 1.5
3333.0	13 ± 0.3
10000.0	9 ± 2.6
Trial Summary	Negative
Positive Control ³	
Positive Control ⁴	
Positive Control ⁵	236 ± 11.3
Positive Control ⁶	

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Date Report Requested: 09/16/2018
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Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	89 ± 2.0	104 ± 2.7	121 ± 10.9	141 ± 0.3	102 ± 10.2
100.0	90 ± 2.6	99 ± 1.5	126 ± 4.4	134 ± 5.2	112 ± 2.9
333.0	84 ± 7.1	89 ± 2.6	131 ± 3.3	152 ± 6.8	114 ± 4.1
1000.0	90 ± 8.2	116 ± 3.7	138 ± 2.7	143 ± 4.0	129 ± 12.3
3333.0	94 ± 8.7	105 ± 3.4	117 ± 2.1	149 ± 11.5	115 ± 7.4
10000.0	103 ± 2.3	97 ± 9.8	101 ± 3.0	156 ± 7.4	96 ± 12.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					514 ± 16.1
Positive Control ³			470 ± 25.4		
Positive Control ⁵				390 ± 12.7	
Positive Control ⁷	541 ± 16.6	502 ± 48.2			

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Test Compound: Milk thistle extract

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Date Report Requested: 09/16/2018

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Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	121 ± 5.9
100.0	99 ± 9.3
333.0	109 ± 5.5
1000.0	118 ± 5.9
3333.0	125 ± 5.3
10000.0	114 ± 10.3
Trial Summary	Negative
Positive Control ²	
Positive Control ³	455 ± 8.1
Positive Control ⁵	
Positive Control ⁷	

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Date Report Requested: 09/16/2018

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	18 ± 0.9	13 ± 3.5	18 ± 1.8	22 ± 3.5	24 ± 2.4
100.0	15 ± 2.0	12 ± 1.0	15 ± 2.2	18 ± 2.9	22 ± 3.5
333.0	14 ± 4.9	14 ± 0.9	20 ± 5.2	15 ± 1.9	25 ± 3.6
1000.0	18 ± 0.9	14 ± 0.9	23 ± 3.8	20 ± 1.7	17 ± 1.7
3333.0	19 ± 2.1	11 ± 1.5	15 ± 2.9	20 ± 3.3	21 ± 2.3
10000.0	16 ± 2.2	5 ± 1.0	12 ± 2.1	16 ± 1.3	12 ± 2.1
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					674 ± 9.9
Positive Control ³			358 ± 35.4		
Positive Control ⁸	498 ± 12.9	378 ± 11.1			
Positive Control ⁵				391 ± 28.6	

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G06: Ames Summary Data
Test Compound: Milk thistle extract
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Date Report Requested: 09/16/2018
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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	20 ± 1.7
100.0	25 ± 3.5
333.0	18 ± 5.2
1000.0	19 ± 1.3
3333.0	20 ± 4.8
10000.0	25 ± 2.2
Trial Summary	Negative
Positive Control ²	
Positive Control ³	469 ± 13.1
Positive Control ⁸	
Positive Control ⁵	

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Mutagenicity**G06: Ames Summary Data**

Test Compound: Milk thistle extract

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Date Report Requested: 09/16/2018

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Strain: TA102

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	262 ± 6.8	238 ± 12.1	314 ± 14.8	330 ± 12.2	280 ± 1.7
100.0	278 ± 11.0	262 ± 20.0	315 ± 5.7	307 ± 5.5	283 ± 6.9
333.0	269 ± 12.6	254 ± 19.5	327 ± 22.9	352 ± 3.4	317 ± 8.5
1000.0	249 ± 25.5	245 ± 8.4	300 ± 5.0	320 ± 3.2	307 ± 15.5
3333.0	205 ± 7.0	231 ± 11.6	265 ± 9.8	346 ± 20.0	291 ± 7.4
10000.0	169 ± 16.2	156 ± 10.7	212 ± 29.5	283 ± 9.1	226 ± 12.0
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁹	893 ± 11.3	746 ± 26.4			
Positive Control ⁶			762 ± 25.6	530 ± 12.5	783 ± 35.7

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Date Report Requested: 09/16/2018
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Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	332 ± 17.8
100.0	337 ± 10.5
333.0	323 ± 4.8
1000.0	322 ± 24.9
3333.0	337 ± 8.3
10000.0	289 ± 22.5
Trial Summary	Negative
Positive Control ⁹	
Positive Control ⁶	837 ± 6.5

Experiment Number: A41673

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Test Compound: Milk thistle extract

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Date Report Requested: 09/16/2018

Time Report Requested: 23:58:25

Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	237 ± 5.4	208 ± 4.7	247 ± 10.1	310 ± 4.4	286 ± 5.0
100.0	262 ± 1.2	211 ± 4.3	278 ± 8.7	316 ± 6.2	310 ± 12.8
333.0	261 ± 12.8	243 ± 7.3	301 ± 14.5	343 ± 10.7	306 ± 17.2
1000.0	243 ± 12.9	212 ± 1.2	284 ± 20.6	309 ± 11.2	318 ± 12.7
3333.0	247 ± 3.0	149 ± 19.3	264 ± 10.1	316 ± 32.6	256 ± 8.4
10000.0	222 ± 12.4	113 ± 13.4	177 ± 7.9	250 ± 42.6	190 ± 11.6
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁶			788 ± 23.9	630 ± 5.4	848 ± 28.8
Positive Control ¹⁰	545 ± 25.9	770 ± 28.2			

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Date Report Requested: 09/16/2018
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Strain: TA104

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	356 ± 20.3
100.0	348 ± 13.0
333.0	333 ± 5.0
1000.0	329 ± 26.5
3333.0	351 ± 24.9
10000.0	237 ± 10.5
Trial Summary	Negative
Positive Control ⁶	646 ± 5.8
Positive Control ¹⁰	

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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: 1.0 ug/Plate 2-Aminoanthracene

3: 2.0 ug/Plate 2-Aminoanthracene

4: 5.0 ug/Plate Sodium Azide

5: 5.0 ug/Plate 2-Aminoanthracene

6: 10.0 ug/Plate 2-Aminoanthracene

7: 50.0 ug/Plate 9-Aminoacridine

8: 2.5 ug/Plate 4-Nitro-O-Phenylenediamine

9: 0.5 ug/Plate Mitomycin-C

10: 250.0 ug/Plate Methyl Methane Sulfonate

**** END OF REPORT ****