

Experiment Number: **A60806**

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

G06: Ames Summary Data

Test Compound: **Piperine**

CAS Number: **94-62-2**

Date Report Requested: **09/17/2018**

Time Report Requested: **09:03:49**

NTP Study Number:

A60806

Study Result:

Negative

Experiment Number: A60806

G06: Ames Summary Data

Date Report Requested: 09/17/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Piperine

Time Report Requested: 09:03:49

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	117 ± 14.4	163 ± 11.3	147 ± 8.4	112 ± 16.3	141 ± 2.3
3.3		139 ± 7.3			
10.0	96 ± 4.7	127 ± 7.8			
33.0	92 ± 6.2	137 ± 6.4		124 ± 4.9	
100.0	97 ± 5.5	122 ± 15.5	125 ± 1.2	127 ± 3.4	126 ± 9.3
333.0	30 ± 9.7 ^s	4 ± 1.7 ^s	82 ± 15.6 ^s	124 ± 2.6	85 ± 7.5 ^x
1000.0	11 ± 6.0 ^x		92 ± 4.5 ^p	85 ± 5.0 ^p	65 ± 16.2 ^x
3333.0			106 ± 8.4 ^x	110 ± 4.5 ^x	77 ± 6.6 ^x
10000.0			109 ± 2.8 ^x	112 ± 5.5 ^x	78 ± 1.5 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					550 ± 25.2
Positive Control ³	506 ± 39.1	700 ± 56.5			
Positive Control ⁴			655 ± 56.3		
Positive Control ⁵					
Positive Control ⁶				877 ± 53.2	

Experiment Number: A60806
Test Type: Genetic Toxicology - Bacterial
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G06: Ames Summary Data
Test Compound: Piperine
CAS Number: 94-62-2

Date Report Requested: 09/17/2018
Time Report Requested: 09:03:49

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	103 ± 7.8
3.3	
10.0	
33.0	109 ± 5.8
100.0	108 ± 2.2
333.0	94 ± 7.2
1000.0	69 ± 3.5 ^p
3333.0	63 ± 6.4 ^p
10000.0	77 ± 0.3 ^x
Trial Summary	Negative
Positive Control ²	
Positive Control ³	
Positive Control ⁴	
Positive Control ⁵	774 ± 58.4
Positive Control ⁶	

Experiment Number: A60806

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

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CAS Number: 94-62-2

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	8 ± 2.0	12 ± 2.2	10 ± 2.5	7 ± 0.3	14 ± 2.3
3.3	7 ± 0.6	12 ± 3.3			
10.0	11 ± 2.6	11 ± 2.3			
33.0	7 ± 1.0	10 ± 1.2			
100.0	5 ± 1.5	5 ± 0.7	7 ± 0.9	8 ± 1.9	9 ± 1.2
333.0	0 ± 0.0 ^s	2 ± 0.3 ^s	9 ± 0.9	8 ± 1.5 ^p	5 ± 0.9 ^p
1000.0			5 ± 0.6 ^p	7 ± 2.2 ^x	6 ± 3.2 ^x
3333.0			6 ± 1.2 ^x	7 ± 2.2 ^x	4 ± 0.6 ^x
10000.0			8 ± 2.0 ^x	5 ± 0.0 ^x	7 ± 1.2 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					44 ± 4.3
Positive Control ³	242 ± 7.1	416 ± 7.6			
Positive Control ⁵					
Positive Control ⁶			174 ± 43.4	226 ± 15.5	

Experiment Number: A60806

Test Type: Genetic Toxicology - Bacterial
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G06: Ames Summary Data

Test Compound: Piperine

CAS Number: 94-62-2

Date Report Requested: 09/17/2018

Time Report Requested: 09:03:49

Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	8 ± 1.2
3.3	
10.0	
33.0	
100.0	8 ± 1.8
333.0	9 ± 0.6
1000.0	8 ± 0.9 ^x
3333.0	5 ± 0.9 ^x
10000.0	5 ± 1.5 ^x
Trial Summary	Negative
Positive Control ²	
Positive Control ³	
Positive Control ⁵	93 ± 1.8
Positive Control ⁶	

Experiment Number: A60806

G06: Ames Summary Data

Date Report Requested: 09/17/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Piperine

Time Report Requested: 09:03:49

CAS Number: 94-62-2

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	90 ± 4.8	115 ± 4.3	153 ± 16.2	149 ± 5.5	113 ± 6.6
3.3	89 ± 5.4	101 ± 5.6			
10.0	90 ± 5.2	120 ± 12.9			
33.0	72 ± 14.7	133 ± 8.2			
100.0	90 ± 3.7	128 ± 5.8	154 ± 17.8	143 ± 9.0	155 ± 2.3
333.0	12 ± 1.9 ^s	35 ± 16.7 ^s	114 ± 15.3 ^p	122 ± 4.6 ^p	133 ± 6.9 ^p
1000.0			162 ± 27.2 ^p	88 ± 6.1 ^x	133 ± 7.8 ^p
3333.0			179 ± 6.9 ^x	92 ± 2.2 ^x	114 ± 9.8 ^x
10000.0			128 ± 4.1 ^x	74 ± 5.7 ^x	83 ± 4.5 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴					443 ± 7.1
Positive Control ⁶			1709 ± 214.1	643 ± 3.1	
Positive Control ⁷	356 ± 5.3	175 ± 87.5			

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G06: Ames Summary Data

Test Compound: Piperine

CAS Number: 94-62-2

Date Report Requested: 09/17/2018

Time Report Requested: 09:03:49

Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	103 ± 16.0
3.3	
10.0	
33.0	
100.0	99 ± 9.5
333.0	105 ± 11.2 ^p
1000.0	70 ± 2.7 ^x
3333.0	74 ± 6.9 ^x
10000.0	54 ± 3.9 ^x
Trial Summary	Negative
Positive Control ⁴	
Positive Control ⁶	804 ± 35.4
Positive Control ⁷	

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G06: Ames Summary Data

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Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Piperine

Time Report Requested: 09:03:49

Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	10 ± 0.3	17 ± 0.3	16 ± 1.2	14 ± 2.0	29 ± 3.4
3.3		14 ± 1.2			
10.0	12 ± 0.9	14 ± 0.6			
33.0	9 ± 1.2	11 ± 0.3		12 ± 0.7	
100.0	10 ± 0.6	12 ± 1.3	22 ± 2.8	13 ± 2.1	20 ± 1.2
333.0	8 ± 1.5 ^s	11 ± 0.7 ^s	13 ± 1.8	11 ± 1.8	13 ± 1.9
1000.0	4 ± 0.9 ^x		14 ± 2.6 ^p	9 ± 1.0 ^p	15 ± 3.8 ^p
3333.0			9 ± 1.8 ^x	5 ± 1.0 ^p	10 ± 0.6 ^x
10000.0			10 ± 0.0 ^x	8 ± 0.0 ^x	10 ± 0.9 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			258 ± 7.2		109 ± 7.7
Positive Control ⁵				346 ± 69.1	
Positive Control ⁸	99 ± 6.3	102 ± 9.6			

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Mutagenicity

G06: Ames Summary Data

Test Compound: Piperine

CAS Number: 94-62-2

Date Report Requested: 09/17/2018

Time Report Requested: 09:03:49

Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	12 ± 1.7
3.3	
10.0	
33.0	11 ± 1.9
100.0	12 ± 1.0
333.0	11 ± 0.9
1000.0	11 ± 1.5 ^P
3333.0	9 ± 1.5 ^P
10000.0	8 ± 0.6 ^X
Trial Summary	Negative
Positive Control ²	
Positive Control ⁵	858 ± 65.6
Positive Control ⁸	

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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

p: Precipitate

s: Slight Toxicity

x: Slight Toxicity and Precipitate

**** END OF REPORT ****