

Experiment Number: 683471

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Boric acid

CAS Number: 10043-35-3

Date Report Requested: 09/12/2018

Time Report Requested: 07:23:16

NTP Study Number:

683471

Study Result:

Negative

Experiment Number: 683471

G06: Ames Summary Data

Date Report Requested: 09/12/2018

Test Type: **Genetic Toxicology - Bacterial Mutagenicity**Test Compound: **Boric acid**

Time Report Requested: 07:23:16

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹			85 ± 7.0	96 ± 5.8	144 ± 7.5
Vehicle Control ²	113 ± 15.5	107 ± 3.3			
3.3	145 ± 9.1	116 ± 10.4			
10.0	150 ± 7.0	118 ± 12.0			
33.0	107 ± 15.7	113 ± 7.3	72 ± 2.3	83 ± 9.6	159 ± 0.7
100.0	116 ± 5.2	129 ± 10.5	79 ± 7.0	90 ± 2.3	165 ± 6.9
240.0	126 ± 5.6	127 ± 9.7			
333.0			75 ± 3.4	90 ± 9.2	165 ± 0.9
1000.0			101 ± 3.5	101 ± 11.7	155 ± 2.9
1820.0			106 ± 3.1	121 ± 7.3	141 ± 0.9
Trial Summary	Equivocal	Negative	Negative	Equivocal	Negative
Positive Control ³					2089 ± 49.8
Positive Control ⁴	648 ± 28.5	712 ± 65.3	381 ± 21.5	292 ± 7.7	

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Time Report Requested: 07:23:16

Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	116 ± 5.2			123 ± 10.2	122 ± 8.9
Vehicle Control ²		139 ± 5.7	126 ± 6.4		
3.3		145 ± 3.1	147 ± 8.1		
10.0		143 ± 7.0	151 ± 11.0		
33.0	133 ± 3.7	148 ± 6.2	180 ± 38.2	140 ± 4.1	116 ± 12.3
100.0	132 ± 3.8	173 ± 9.0	151 ± 3.3	145 ± 8.5	127 ± 10.5
240.0		150 ± 1.2	146 ± 7.2		
333.0	127 ± 3.2			158 ± 4.7	131 ± 14.2
1000.0	139 ± 8.7			159 ± 6.8	137 ± 13.1
1820.0	127 ± 6.9			170 ± 5.5	158 ± 6.1
Trial Summary	Negative	Equivocal	Negative	Equivocal	Negative
Positive Control ³	1239 ± 45.7	1322 ± 394.5	1083 ± 118.9	1822 ± 14.6	1272 ± 15.5
Positive Control ⁴					

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Test Compound: Boric acid
CAS Number: 10043-35-3

Date Report Requested: 09/12/2018
Time Report Requested: 07:23:16

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	145 ± 6.5	151 ± 4.6
3.3	136 ± 1.7	166 ± 12.3
10.0	141 ± 2.5	161 ± 7.4
33.0	165 ± 2.3	183 ± 5.7
100.0	151 ± 2.8	161 ± 9.5
240.0	166 ± 2.5	181 ± 16.3
333.0		
1000.0		
1820.0		
Trial Summary	Negative	Negative
Positive Control ³	1636 ± 55.7	1758 ± 84.6
Positive Control ⁴		

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Test Compound: Boric acid

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Date Report Requested: 09/12/2018

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹			8 ± 4.5	5 ± 0.6	4 ± 1.8
Vehicle Control ²	6 ± 0.7	5 ± 2.3			
3.3	6 ± 1.2	8 ± 1.7			
10.0	4 ± 0.6	5 ± 1.3			
33.0	9 ± 1.5	8 ± 0.5	3 ± 0.9	6 ± 0.9	6 ± 1.3
100.0	10 ± 1.5	5 ± 2.1	3 ± 0.3	6 ± 1.2	10 ± 3.0
240.0	8 ± 1.7	6 ± 0.6			
333.0			1 ± 0.0	5 ± 1.9	3 ± 0.9
1000.0			2 ± 0.3	5 ± 1.5	1 ± 0.7
1820.0			3 ± 1.5	7 ± 2.1	4 ± 1.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					77 ± 3.8
Positive Control ⁴	446 ± 31.0	1199 ± 17.8	177 ± 16.5	438 ± 16.0	

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Test Compound: Boric acid
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Date Report Requested: 09/12/2018

Time Report Requested: 07:23:16

Strain: TA1535

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	7 ± 0.9			4 ± 0.7	7 ± 2.5
Vehicle Control ²		9 ± 1.5	7 ± 1.2		
3.3		5 ± 1.5	6 ± 1.0		
10.0		6 ± 1.5	8 ± 2.0		
33.0	8 ± 1.9	9 ± 1.8	7 ± 1.7	3 ± 0.7	7 ± 2.3
100.0	13 ± 2.0	8 ± 0.3	8 ± 1.0	5 ± 0.3	10 ± 2.0
240.0		7 ± 1.2	7 ± 1.2		
333.0	8 ± 1.8			2 ± 0.0	5 ± 1.2
1000.0	6 ± 2.1			5 ± 0.5	8 ± 0.3
1820.0	6 ± 0.7			3 ± 0.7	8 ± 1.8
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	89 ± 3.3	94 ± 19.7	72 ± 6.7	60 ± 2.9	64 ± 4.8
Positive Control ⁴					

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Test Compound: Boric acid
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Date Report Requested: 09/12/2018
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Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	10 ± 1.7	12 ± 1.5
3.3	14 ± 1.2	12 ± 2.4
10.0	9 ± 1.9	9 ± 1.2
33.0	11 ± 1.2	10 ± 1.3
100.0	17 ± 3.9	13 ± 3.8
240.0	9 ± 1.5	8 ± 1.7
333.0		
1000.0		
1820.0		
Trial Summary	Negative	Negative
Positive Control ³	126 ± 23.2	133 ± 14.9
Positive Control ⁴		

Experiment Number: 683471

G06: Ames Summary Data

Date Report Requested: 09/12/2018

Test Type: **Genetic Toxicology - Bacterial
Mutagenicity**Test Compound: **Boric acid**

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Strain: TA1537

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹			3 ± 1.2	3 ± 0.3	6 ± 0.5
Vehicle Control ²	4 ± 0.9	5 ± 0.9			
3.3	3 ± 0.0	6 ± 1.2			
10.0	9 ± 2.3	10 ± 1.5			
33.0	6 ± 0.0	7 ± 0.9	5 ± 1.3	4 ± 0.6	6 ± 0.7
100.0	6 ± 0.3	9 ± 0.9	4 ± 0.7	4 ± 0.0	6 ± 0.3
240.0	8 ± 1.2	12 ± 0.7			
333.0			2 ± 0.3	2 ± 0.3	4 ± 0.0
1000.0			2 ± 0.3	3 ± 0.7	3 ± 0.6
1820.0			1 ± 0.7	1 ± 0.3	6 ± 0.3
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					204 ± 12.5
Positive Control ⁵	268 ± 18.0	70 ± 9.9	1634 ± 24.5	678 ± 77.0	

Experiment Number: 683471

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

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Test Compound: Boric acid
CAS Number: 10043-35-3

Date Report Requested: 09/12/2018

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Strain: TA1537

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	6 ± 0.5			5 ± 0.9	6 ± 0.6
Vehicle Control ²		5 ± 0.7	6 ± 0.3		
3.3		6 ± 0.0	5 ± 1.0		
10.0		9 ± 2.0	6 ± 1.9		
33.0	5 ± 0.6	8 ± 2.6	6 ± 1.8	3 ± 0.3	5 ± 0.7
100.0	4 ± 1.2	11 ± 1.2	8 ± 2.2	4 ± 1.2	6 ± 1.0
240.0		4 ± 0.0	6 ± 0.7		
333.0	4 ± 0.3			3 ± 0.3	6 ± 1.5
1000.0	3 ± 1.5			5 ± 0.3	5 ± 0.7
1820.0	5 ± 1.5			3 ± 0.3	3 ± 0.3
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	106 ± 21.6	122 ± 32.4	58 ± 9.3	190 ± 8.8	70 ± 3.2
Positive Control ⁵					

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Test Compound: Boric acid
CAS Number: 10043-35-3

Date Report Requested: 09/12/2018
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Strain: TA1537

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	3 ± 1.5	6 ± 0.7
3.3	3 ± 0.0	7 ± 1.3
10.0	5 ± 0.3	6 ± 0.3
33.0	4 ± 0.7	7 ± 0.9
100.0	5 ± 1.5	6 ± 0.3
240.0	5 ± 0.3	7 ± 0.3
333.0		
1000.0		
1820.0		
Trial Summary	Negative	Negative
Positive Control ³	133 ± 22.7	95 ± 4.1
Positive Control ⁵		

Experiment Number: 683471

Test Type: Genetic Toxicology - Bacterial
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Test Compound: Boric acid

CAS Number: 10043-35-3

Date Report Requested: 09/12/2018

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹			10 ± 2.3	14 ± 4.6	20 ± 1.2
Vehicle Control ²	11 ± 0.3	14 ± 1.5			
3.3	12 ± 2.0	16 ± 0.9			
10.0	11 ± 2.0	19 ± 3.5			
33.0	11 ± 1.2	17 ± 1.7	10 ± 1.2	13 ± 1.0	24 ± 0.6
100.0	10 ± 2.3	15 ± 1.8	3 ± 0.7	9 ± 3.2	23 ± 1.2
240.0	11 ± 1.2	16 ± 3.9			
333.0			8 ± 0.9	13 ± 1.2	25 ± 0.3
1000.0			8 ± 2.2	14 ± 2.2	24 ± 2.3
1820.0			9 ± 0.9	16 ± 1.5	18 ± 0.3
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					1580 ± 99.6
Positive Control ⁶	411 ± 27.7	472 ± 23.4	165 ± 7.4	206 ± 5.0	

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Mutagenicity

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Test Compound: Boric acid
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Strain: TA98

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	19 ± 3.8			19 ± 1.0	19 ± 2.6
Vehicle Control ²		21 ± 0.7	20 ± 0.9		
3.3		22 ± 2.6	21 ± 2.6		
10.0		19 ± 4.3	19 ± 4.1		
33.0	22 ± 2.3	18 ± 0.3	24 ± 3.5	22 ± 1.8	22 ± 0.9
100.0	24 ± 1.2	24 ± 2.9	20 ± 1.5	26 ± 1.2	21 ± 2.6
240.0		21 ± 2.9	18 ± 1.5		
333.0	28 ± 1.9			18 ± 0.7	21 ± 1.5
1000.0	24 ± 1.2			28 ± 0.9	22 ± 3.3
1820.0	22 ± 3.2			27 ± 2.1	24 ± 2.2
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	1103 ± 174.7	873 ± 185.4	124 ± 3.7	1156 ± 47.2	1237 ± 23.3
Positive Control ⁶					

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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹		
Vehicle Control ²	18 ± 1.2	21 ± 3.5
3.3	18 ± 0.9	24 ± 2.5
10.0	19 ± 3.5	27 ± 2.6
33.0	24 ± 3.5	31 ± 1.8
100.0	19 ± 0.9	25 ± 1.8
240.0	22 ± 0.6	24 ± 1.2
333.0		
1000.0		
1820.0		
Trial Summary	Negative	Negative
Positive Control ³	1476 ± 104.8	132 ± 4.1
Positive Control ⁶		

Experiment Number: 683471

Test Type: **Genetic Toxicology - Bacterial
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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: Vehicle Control: Water

3: 1.0 ug/Plate 2-Aminoanthracene

4: 3.3 ug/Plate Sodium Azide

5: 33.0 ug/Plate 9-Aminoacridine

6: 3.3 ug/Plate 4-Nitro-O-Phenylenediamine

**** END OF REPORT ****