

Experiment Number: 105455

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

G06: Ames Summary Data

Test Compound: **Benzonitrile**

CAS Number: **100-47-0**

Date Report Requested: **09/11/2018**

Time Report Requested: **14:13:26**

NTP Study Number:

105455

Study Result:

Negative

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Test Compound: Benzonitrile
CAS Number: 100-47-0

Date Report Requested: 09/11/2018
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Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	141 ± 20.2	104 ± 4.0	157 ± 7.7	168 ± 1.5	132 ± 13.6
33.0	152 ± 1.0	111 ± 2.3	157 ± 7.8	144 ± 9.9	140 ± 1.5
100.0	157 ± 3.3	98 ± 7.5	151 ± 8.6	131 ± 8.4	151 ± 1.5
333.0	158 ± 4.4	102 ± 1.8	160 ± 4.4	137 ± 6.2	143 ± 4.9
1000.0	137 ± 17.9	92 ± 2.7	147 ± 3.8	111 ± 12.7	127 ± 7.9
1666.0		87 ± 11.8			
3333.0	34 ± 34.0 ^s		99 ± 8.7	97 ± 15.6 ^s	85 ± 11.2
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			661 ± 31.8	229 ± 13.6	1595 ± 32.0
Positive Control ³	355 ± 38.7	274 ± 18.1			

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Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	108 ± 9.4
33.0	112 ± 12.5
100.0	121 ± 8.6
333.0	117 ± 4.6
1000.0	112 ± 7.9
1666.0	
3333.0	96 ± 10.0
Trial Summary	Negative
Positive Control ²	411 ± 25.1
Positive Control ³	

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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	28 ± 1.3	14 ± 0.9	10 ± 3.7	10 ± 1.2	10 ± 2.3
33.0	30 ± 2.1	17 ± 0.9	7 ± 0.3	14 ± 0.3	9 ± 2.7
100.0	27 ± 0.9	20 ± 3.5	9 ± 2.7	10 ± 4.2	11 ± 1.8
333.0	23 ± 2.2	19 ± 0.9	6 ± 0.3	10 ± 0.6	8 ± 3.8
1000.0	24 ± 3.2	17 ± 3.0	11 ± 3.8	10 ± 2.3	10 ± 2.0
1666.0		12 ± 4.4			
3333.0	11 ± 1.9 ^s		7 ± 0.7	7 ± 2.6	6 ± 2.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³	497 ± 15.2	198 ± 6.9			
Positive Control ⁴			210 ± 0.3	93 ± 4.1	549 ± 18.2

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Test Compound: Benzonitrile

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Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	9 ± 2.0
33.0	10 ± 2.8
100.0	8 ± 0.7
333.0	11 ± 0.9
1000.0	9 ± 5.0
1666.0	
3333.0	5 ± 1.7
Trial Summary	Negative
Positive Control ³	
Positive Control ⁴	571 ± 14.5

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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	158 ± 7.9	166 ± 6.5	190 ± 9.4	216 ± 15.8	140 ± 8.0
33.0	167 ± 4.3	161 ± 8.5	214 ± 28.3	210 ± 16.5	171 ± 16.7
100.0	170 ± 12.9	166 ± 6.4	252 ± 3.8	213 ± 13.8	175 ± 16.6
333.0	173 ± 7.2	155 ± 13.8	239 ± 8.7	206 ± 14.7	177 ± 13.2
1000.0	155 ± 9.3	157 ± 10.1	220 ± 15.8	195 ± 8.7	171 ± 8.8
1666.0		118 ± 9.9			
3333.0	9 ± 9.0 ^s		180 ± 7.0	167 ± 19.4	133 ± 12.3
Trial Summary	Negative	Negative	Equivocal	Negative	Negative
Positive Control ⁴			1018 ± 14.3	416 ± 34.9	1418 ± 26.0
Positive Control ⁵	642 ± 54.0	564 ± 48.7			

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Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	157 ± 15.5
33.0	180 ± 18.5
100.0	171 ± 9.5
333.0	180 ± 12.4
1000.0	160 ± 10.9
1666.0	
3333.0	140 ± 7.1
Trial Summary	Negative
Positive Control ⁴	950 ± 10.3
Positive Control ⁵	

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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	20 ± 1.9	15 ± 2.3	25 ± 2.6	24 ± 1.2	27 ± 3.7
33.0	20 ± 0.7	13 ± 0.9	25 ± 5.8	30 ± 2.9	20 ± 0.9
100.0	22 ± 1.5	17 ± 3.6	17 ± 0.3	25 ± 0.9	29 ± 1.2
333.0	19 ± 3.0	15 ± 3.1	24 ± 3.3	26 ± 5.3	27 ± 6.4
1000.0	16 ± 2.3	14 ± 0.7	20 ± 0.3	26 ± 3.3	25 ± 3.0
1666.0		12 ± 1.2			
3333.0	6 ± 6.0 ^s		5 ± 3.9 ^s	12 ± 6.4	29 ± 5.2
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			235 ± 7.5	116 ± 21.6	761 ± 15.3
Positive Control ⁶	883 ± 60.5	512 ± 23.4			

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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	26 ± 2.5
33.0	30 ± 1.5
100.0	24 ± 5.0
333.0	21 ± 5.2
1000.0	22 ± 1.5
1666.0	
3333.0	22 ± 3.7
Trial Summary	Negative
Positive Control ²	350 ± 50.3
Positive Control ⁶	

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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: 1.0 ug/Plate Sodium Azide

4: 2.5 ug/Plate 2-Aminoanthracene

5: 50.0 ug/Plate 9-Aminoacridine

6: 5.0 ug/Plate 4-Nitro-O-Phenylenediamine

s: Slight Toxicity

**** END OF REPORT ****