

Experiment Number: 373864

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Benzonitrile

CAS Number: 100-47-0

Date Report Requested: 09/14/2018

Time Report Requested: 03:00:18

NTP Study Number:

373864

Study Result:

Negative

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G06: Ames Summary Data

Date Report Requested: 09/14/2018

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

Time Report Requested: 03:00:18

CAS Number: 100-47-0

Strain: TA100

Dose (ug/Plate)	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	104 ± 7.8	112 ± 6.4	124 ± 4.8	102 ± 9.0	111 ± 4.4
33.0	105 ± 7.4	100 ± 6.4	128 ± 13.4	98 ± 2.4	116 ± 5.5
100.0	96 ± 3.6	101 ± 5.4	111 ± 5.1	92 ± 6.2	126 ± 5.5
333.0	94 ± 0.7	104 ± 6.7	106 ± 3.6	100 ± 4.3	101 ± 2.1
1000.0	96 ± 10.0	106 ± 6.6	105 ± 3.5 ^s	90 ± 6.7	100 ± 6.7
2000.0	64 ± 0.6 ^s	77 ± 0.5 ^s	75 ± 5.8 ^s	73 ± 11.4 ^s	92 ± 1.5 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³				936 ± 12.7	
Positive Control ⁴					335 ± 14.5
Positive Control ⁵		2000 ± 12.2			
Positive Control ⁶			756 ± 56.2		
Positive Control ⁷	1391 ± 47.4				

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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	20 ± 4.7	30 ± 3.2	10 ± 1.9	10 ± 1.5	11 ± 1.9
33.0	21 ± 0.7	24 ± 1.8	13 ± 1.2	9 ± 0.6	9 ± 0.9
100.0	20 ± 4.1	24 ± 2.0	11 ± 2.6	15 ± 2.6	9 ± 0.9
333.0	17 ± 4.3	24 ± 4.6	10 ± 2.0	14 ± 1.9	6 ± 1.5
1000.0	25 ± 5.7	26 ± 6.7 ^s	6 ± 1.0	14 ± 0.9	8 ± 2.2
2000.0	Toxic	Toxic	6 ± 1.2 ^s	8 ± 2.5 ^s	6 ± 0.6 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²		51 ± 2.6			
Positive Control ³					67 ± 7.1
Positive Control ⁴					
Positive Control ⁵			92 ± 4.3	84 ± 6.5	
Positive Control ⁷	825 ± 27.9				

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Test Compound: Benzonitrile

CAS Number: 100-47-0

Date Report Requested: 09/14/2018

Time Report Requested: 03:00:18

Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	13 ± 1.5
33.0	12 ± 2.0
100.0	11 ± 0.9
333.0	11 ± 0.7
1000.0	11 ± 1.5
2000.0	10 ± 1.2
Trial Summary	Negative
Positive Control ²	
Positive Control ³	
Positive Control ⁴	69 ± 2.0
Positive Control ⁵	
Positive Control ⁷	

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Date Report Requested: 09/14/2018

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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	80 ± 11.0	110 ± 12.9	134 ± 5.9	159 ± 8.7	116 ± 5.2
33.0	63 ± 15.8	110 ± 3.2	122 ± 6.3	183 ± 14.8	111 ± 7.9
100.0	89 ± 8.3	101 ± 9.4	136 ± 4.7	196 ± 1.0	112 ± 4.4
333.0	85 ± 4.5	103 ± 6.4	119 ± 3.6	200 ± 10.5	109 ± 2.3
1000.0	90 ± 0.6	98 ± 2.1 ^s	118 ± 1.7 ^s	172 ± 4.4 ^s	100 ± 5.6
2000.0	56 ± 7.6 ^s	Toxic	Toxic	107 ± 10.9 ^s	87 ± 1.5 ^s
Trial Summary	Negative	Negative	Negative	Equivocal	Negative
Positive Control ³					681 ± 21.4
Positive Control ⁴					
Positive Control ⁵			1103 ± 31.0		
Positive Control ⁶				466 ± 16.8	
Positive Control ⁸		781 ± 46.1			
Positive Control ⁹	320 ± 30.6				

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

Date Report Requested: 09/14/2018
Time Report Requested: 03:00:18

Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	160 ± 10.4
33.0	161 ± 7.8
100.0	155 ± 9.9
333.0	150 ± 6.4
1000.0	141 ± 13.8
2000.0	100 ± 2.0 ^s
Trial Summary	Negative
Positive Control ³	
Positive Control ⁴	260 ± 17.4
Positive Control ⁵	
Positive Control ⁶	
Positive Control ⁸	
Positive Control ⁹	

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Test Compound: Benzonitrile

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Date Report Requested: 09/14/2018

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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	30 ± 3.2	23 ± 2.6	46 ± 1.9	32 ± 5.2	43 ± 3.9
33.0	36 ± 5.8	24 ± 1.7	49 ± 6.2	37 ± 6.4	37 ± 0.9
100.0	27 ± 1.7	23 ± 2.0	46 ± 2.6	26 ± 3.5	47 ± 1.5
333.0	28 ± 4.1	20 ± 0.9	42 ± 1.5	36 ± 2.3	46 ± 3.3
1000.0	26 ± 0.7	13 ± 0.9	45 ± 3.6	26 ± 2.9	39 ± 0.0
2000.0	10 ± 0.0 ^s	16 ± 2.0 ^s	23 ± 3.0 ^s	24 ± 4.1 ^s	20 ± 1.9 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ¹⁰					
Positive Control ³					744 ± 57.1
Positive Control ⁴				185 ± 8.8	
Positive Control ¹¹		190 ± 4.6			
Positive Control ⁵			1210 ± 26.7		
Positive Control ¹²	1837 ± 22.4				

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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	27 ± 2.9
33.0	30 ± 1.7
100.0	30 ± 1.9
333.0	30 ± 2.2
1000.0	24 ± 2.1
2000.0	25 ± 4.1 ^s
Trial Summary	Negative
Positive Control ¹⁰	63 ± 3.8
Positive Control ³	
Positive Control ⁴	
Positive Control ¹¹	
Positive Control ⁵	
Positive Control ¹²	

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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: 0.25 ug/Plate Sodium Azide
- 3: 0.75 ug/Plate 2-Aminoanthracene
- 4: 1.0 ug/Plate 2-Aminoanthracene
- 5: 1.5 ug/Plate 2-Aminoanthracene
- 6: 2.0 ug/Plate 2-Aminoanthracene
- 7: 2.5 ug/Plate Sodium Azide
- 8: 3.5 ug/Plate 9-Aminoacridine
- 9: 4.0 ug/Plate 9-Aminoacridine
- 10: 0.4 ug/Plate 2-Aminoanthracene
- 11: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine
- 12: 12.0 ug/Plate 4-Nitro-O-Phenylenediamine
- s: Slight Toxicity

** END OF REPORT **