

Experiment Number: 976591

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

G06: Ames Summary Data

Test Compound: **Dimethylnaphthalene**

CAS Number: **28804-88-8**

Date Report Requested: **09/18/2018**

Time Report Requested: **02:54:05**

NTP Study Number:

976591

Study Result:

Equivocal

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Test Compound: Dimethylnaphthalene

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Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 5% Rat S9	With 10% Rat S9
Vehicle Control ¹	124 ± 3.4	110 ± 12.7	102 ± 3.2	142 ± 6.5	109 ± 1.0
0.3	130 ± 5.6	124 ± 8.7	102 ± 5.1		
1.0	128 ± 2.0	104 ± 10.4	96 ± 5.6		
3.0	118 ± 6.7	109 ± 8.5	99 ± 0.9	163 ± 11.0	
10.0	126 ± 7.7	100 ± 5.8	79 ± 3.8	158 ± 23.1	145 ± 3.9
16.0	81 ± 4.2 ^s		77 ± 4.6 ^s		
33.0		0 ± 0.0 ^s		158 ± 21.9	143 ± 5.9
100.0				155 ± 13.0	121 ± 3.0
166.0				152 ± 14.5	
333.0					111 ± 18.4
666.0					35 ± 5.4 ^s
1000.0					
1666.0					
Trial Summary	Negative	Negative	Negative	Negative	Equivocal
Positive Control ²					
Positive Control ³				796 ± 41.6	
Positive Control ⁴	370 ± 18.4	284 ± 13.8	413 ± 7.3		447 ± 73.7
Positive Control ⁵					

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Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	148 ± 9.8	142 ± 11.7	130 ± 4.2	145 ± 6.8	181 ± 3.8
0.3					
1.0					
3.0	151 ± 7.9	149 ± 9.3			183 ± 4.4
10.0	162 ± 8.1	158 ± 2.6	141 ± 9.3		167 ± 3.7
16.0					
33.0	179 ± 5.5	166 ± 13.5	167 ± 8.5	175 ± 12.0	179 ± 1.8
100.0	186 ± 7.8	133 ± 11.4	153 ± 3.6	185 ± 9.0	196 ± 8.9
166.0		142 ± 15.6	148 ± 1.5		
333.0	168 ± 4.9		147 ± 6.4	119 ± 12.1	159 ± 13.3
666.0					
1000.0				4 ± 1.9 ^s	
1666.0				0 ± 0.0 ^s	
Trial Summary	Equivocal	Negative	Equivocal	Equivocal	Negative
Positive Control ²					
Positive Control ³	456 ± 11.4	485 ± 5.0			
Positive Control ⁴					
Positive Control ⁵			383 ± 13.7	439 ± 9.0	541 ± 29.4

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Strain: TA100

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	138 ± 18.4	126 ± 1.0	140 ± 5.8	149 ± 6.6	138 ± 6.4
0.3					
1.0					
3.0	162 ± 4.6				
10.0	183 ± 7.2	107 ± 9.5	124 ± 10.5		129 ± 0.3
16.0					
33.0	176 ± 3.7	115 ± 5.6	123 ± 3.4	158 ± 4.6	147 ± 7.8
100.0	152 ± 10.7	119 ± 5.1	144 ± 3.0	170 ± 5.0	160 ± 10.6
166.0	166 ± 11.3				
333.0		106 ± 4.7	144 ± 11.8	198 ± 10.9	193 ± 7.7
666.0		20 ± 9.9 ^s	55 ± 2.8		147 ± 23.0
1000.0				0 ± 0.0 ^s	
1666.0				0 ± 0.0 ^s	
Trial Summary	Equivocal	Negative	Negative	Equivocal	Equivocal
Positive Control ²		785 ± 28.8			
Positive Control ³			558 ± 32.7	541 ± 17.0	845 ± 18.8
Positive Control ⁴					
Positive Control ⁵	533 ± 21.7				

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Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	143 ± 10.3
0.3	
1.0	
3.0	142 ± 10.3
10.0	152 ± 1.9
16.0	
33.0	170 ± 4.0
100.0	176 ± 9.3
166.0	176 ± 9.2
333.0	
666.0	
1000.0	
1666.0	
Trial Summary	Equivocal
Positive Control ²	
Positive Control ³	804 ± 22.0
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	21 ± 2.9	19 ± 1.0	9 ± 2.6	14 ± 1.5	10 ± 0.9
0.3	21 ± 1.5	14 ± 0.9			
1.0	17 ± 0.9	17 ± 4.0			
3.0	16 ± 0.6	18 ± 1.3			
10.0	13 ± 1.8	15 ± 1.5	9 ± 1.5	11 ± 2.0	8 ± 0.6
16.0	6 ± 0.9	13 ± 2.7 ^s			
33.0			9 ± 2.7	15 ± 1.5	6 ± 1.9
100.0			8 ± 0.7	16 ± 4.1	7 ± 1.9
333.0			8 ± 0.7	9 ± 2.2	6 ± 1.2
666.0			7 ± 0.3 ^s	9 ± 2.6	4 ± 0.9 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					288 ± 7.8
Positive Control ⁴	350 ± 9.0	354 ± 13.5			
Positive Control ⁵			165 ± 3.2		
Positive Control ⁶				193 ± 9.5	

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Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	9 ± 1.5
0.3	
1.0	
3.0	
10.0	9 ± 2.0
16.0	
33.0	8 ± 0.7
100.0	8 ± 0.9
333.0	6 ± 1.0
666.0	5 ± 1.2
Trial Summary	Negative
Positive Control ³	
Positive Control ⁴	
Positive Control ⁵	508 ± 33.7
Positive Control ⁶	

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Strain: TA1537

Dose (ug/Plate)	Without S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control ¹	9 ± 1.2	12 ± 2.0	13 ± 3.5
0.3	10 ± 3.0		
1.0	9 ± 2.0		
3.0	8 ± 0.6		
10.0	8 ± 0.7	16 ± 1.9	9 ± 2.8
16.0	6 ± 2.6		
33.0		14 ± 1.0	10 ± 2.8
100.0		12 ± 1.7	5 ± 2.2
333.0		12 ± 2.0	6 ± 1.5
666.0		14 ± 1.8	7 ± 0.9
Trial Summary	Negative	Negative	Negative
Positive Control ³			78 ± 6.8
Positive Control ⁵		64 ± 1.5	
Positive Control ⁷	307 ± 72.7		

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Test Compound: Dimethylnaphthalene

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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	179 ± 15.0	127 ± 10.9	140 ± 13.7	217 ± 1.2	137 ± 11.7
0.3	187 ± 14.3				
1.0	201 ± 1.9	122 ± 5.6			
3.0	187 ± 11.0	137 ± 6.4			
10.0	190 ± 17.7	154 ± 7.5	152 ± 6.1	226 ± 0.7	142 ± 7.5
16.0	158 ± 4.3	151 ± 6.1			
33.0		48 ± 8.5 ^s	167 ± 15.0	206 ± 4.6	137 ± 13.3
100.0			153 ± 7.2	155 ± 10.9	130 ± 2.9
333.0			150 ± 5.8	189 ± 7.8	159 ± 12.8
666.0			87 ± 9.5	160 ± 8.7	159 ± 18.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					455 ± 42.2
Positive Control ³			454 ± 8.5		
Positive Control ⁵				503 ± 20.4	
Positive Control ⁷	582 ± 61.7	333 ± 7.0			

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Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	188 ± 8.3
0.3	
1.0	
3.0	
10.0	210 ± 0.6
16.0	
33.0	221 ± 0.6
100.0	201 ± 6.7
333.0	187 ± 12.8
666.0	164 ± 6.7
Trial Summary	Negative
Positive Control ²	
Positive Control ³	558 ± 29.4
Positive Control ⁵	
Positive Control ⁷	

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	14 ± 2.0	12 ± 1.5	28 ± 3.4	24 ± 3.2	27 ± 1.8
0.3	13 ± 2.3	14 ± 2.9			
1.0	14 ± 2.0	13 ± 2.6			
3.0	14 ± 0.6	13 ± 1.9			
10.0	13 ± 2.5	11 ± 1.7	32 ± 0.6	25 ± 0.3	
16.0	10 ± 1.8				
33.0		0 ± 0.0 ^s	34 ± 4.4	42 ± 6.4	28 ± 3.5
100.0			32 ± 2.0	28 ± 1.5	30 ± 1.2
166.0				33 ± 3.5	
333.0			32 ± 4.1	28 ± 2.5	32 ± 1.5
666.0					
1000.0			9 ± 5.8 ^s		15 ± 1.8
1666.0					6 ± 1.2 ^s
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³			503 ± 5.9	122 ± 5.8	94 ± 6.6
Positive Control ⁸	540 ± 11.6	477 ± 9.8			

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Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	33 ± 1.8	34 ± 3.1	26 ± 2.0
0.3			
1.0			
3.0			
10.0	34 ± 3.0	20 ± 2.1	
16.0			
33.0	38 ± 1.2	30 ± 2.8	19 ± 0.9
100.0	33 ± 2.3	36 ± 1.7	23 ± 1.5
166.0			
333.0	24 ± 2.8	30 ± 1.7	23 ± 2.2
666.0	18 ± 1.7 ^s	31 ± 3.2	
1000.0			9 ± 2.5 ^s
1666.0			0 ± 0.0 ^s
Trial Summary	Negative	Negative	Negative
Positive Control ²	786 ± 46.0		
Positive Control ³		438 ± 12.6	273 ± 4.0
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: 0.5 ug/Plate 2-Aminoanthracene

3: 1.0 ug/Plate 2-Aminoanthracene

4: 1.0 ug/Plate Sodium Azide

5: 2.5 ug/Plate 2-Aminoanthracene

6: 5.0 ug/Plate 2-Aminoanthracene

7: 50.0 ug/Plate 9-Aminoacridine

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

s: Slight Toxicity

**** END OF REPORT ****