

Experiment Number: 663295

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

G06: Ames Summary Data

Test Compound: **beta-Caryophyllene**

CAS Number: 87-44-5

Date Report Requested: 09/11/2018

Time Report Requested: 11:47:36

NTP Study Number:

663295

Study Result:

Negative

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Test Compound: beta-Caryophyllene

CAS Number: 87-44-5

Date Report Requested: 09/11/2018

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Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	103 ± 1.8	139 ± 2.4	160 ± 7.5	155 ± 3.0	136 ± 5.8
1.0			167 ± 14.7		
3.3	85 ± 5.2	144 ± 3.8	172 ± 4.9		
10.0	103 ± 2.3	149 ± 4.9	158 ± 13.4		126 ± 10.9
33.0	102 ± 9.6	145 ± 11.5	158 ± 3.5		119 ± 10.1
100.0	93 ± 3.8	110 ± 19.6 ^p	182 ± 9.0	172 ± 0.7	140 ± 11.9
333.0	94 ± 2.0 ^p	147 ± 10.4 ^p		182 ± 10.2	133 ± 5.4 ^p
667.0					93 ± 6.6 ^p
1000.0				143 ± 4.3	
3333.0				157 ± 5.2	
10000.0				149 ± 3.1	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	401 ± 5.4	321 ± 6.8			
Positive Control ⁴			478 ± 32.5	734 ± 22.5	
Positive Control ⁵					
Positive Control ⁶					674 ± 24.5

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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
Vehicle Control ¹	139 ± 5.1	179 ± 8.7	127 ± 4.7	134 ± 5.3
1.0	143 ± 4.9	139 ± 9.9		123 ± 10.3
3.3	138 ± 5.0	162 ± 6.9		135 ± 5.7
10.0	151 ± 4.3	149 ± 3.5	126 ± 4.8	134 ± 1.8
33.0	139 ± 3.6	144 ± 5.6	107 ± 10.7	142 ± 5.9
100.0	136 ± 8.2	132 ± 17.3	109 ± 6.2	140 ± 4.7 ^P
333.0			120 ± 9.4 ^P	
667.0			127 ± 0.9 ^P	
1000.0				
3333.0				
10000.0				
Trial Summary	Negative	Negative	Negative	Negative
Positive Control ²		504 ± 17.2		
Positive Control ³				
Positive Control ⁴				
Positive Control ⁵			1173 ± 33.5	1231 ± 238.3
Positive Control ⁶	518 ± 19.9			

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	7 ± 2.3	8 ± 2.2	8 ± 0.3	10 ± 1.2	13 ± 0.7
1.0			10 ± 0.3		10 ± 1.3
3.3	7 ± 1.2	7 ± 2.0	7 ± 0.9		11 ± 2.3
10.0	15 ± 3.4	11 ± 3.2	11 ± 1.5		14 ± 2.0
33.0	11 ± 2.6	9 ± 3.2	7 ± 1.5		12 ± 0.0
100.0	7 ± 2.2	8 ± 0.9 ^p	10 ± 1.7	12 ± 1.2	14 ± 1.8 ^p
333.0	10 ± 1.5 ^p	6 ± 2.3 ^p		10 ± 2.4	
1000.0				13 ± 1.7 ^p	
3333.0				10 ± 2.1 ^p	
10000.0				11 ± 2.3 ^p	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	263 ± 5.9	180 ± 8.6			
Positive Control ⁵					
Positive Control ⁶			88 ± 9.6	117 ± 7.5	145 ± 13.2

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Test Compound: beta-Caryophyllene

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Strain: TA1535

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	14 ± 3.5	12 ± 3.8	9 ± 1.5	14 ± 1.5	13 ± 2.1
1.0		10 ± 3.1		13 ± 1.5	
3.3		13 ± 3.7		15 ± 1.5	
10.0	12 ± 0.6	11 ± 0.3		11 ± 1.5	10 ± 3.7
33.0	14 ± 2.9	10 ± 2.2		12 ± 1.5	11 ± 2.0
100.0	13 ± 0.7	14 ± 1.5	12 ± 1.7	13 ± 2.9 ^p	9 ± 1.2
333.0	10 ± 1.8		12 ± 0.6		15 ± 3.9
1000.0	11 ± 3.1 ^p		12 ± 0.3 ^p		12 ± 1.5 ^p
3333.0			15 ± 1.8 ^p		
10000.0			10 ± 1.2 ^p		
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²		62 ± 5.5	44 ± 3.2		
Positive Control ³					
Positive Control ⁵				137 ± 0.3	60 ± 2.2
Positive Control ⁶	91 ± 14.0				

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Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	84 ± 2.9	195 ± 13.0	119 ± 19.5	234 ± 15.2	237 ± 14.2
1.0			111 ± 4.6 ^S		244 ± 11.4
3.3	76 ± 3.8	185 ± 14.1	89 ± 5.2 ^S		241 ± 0.9
10.0	73 ± 4.4	170 ± 1.3	85 ± 8.3 ^S		253 ± 6.1
33.0	83 ± 6.4	183 ± 5.2	140 ± 39.0 ^S		256 ± 11.3
100.0	72 ± 3.0	159 ± 11.7 ^P	82 ± 13.3 ^S	266 ± 10.3	232 ± 8.9 ^P
333.0	53 ± 5.0 ^S	159 ± 5.3 ^P		227 ± 9.2	
1000.0				206 ± 7.4 ^P	
3333.0				198 ± 5.8 ^P	
10000.0				207 ± 5.2 ^P	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴					
Positive Control ⁶			1434 ± 85.4	1839 ± 97.7	720 ± 29.3
Positive Control ⁷	557 ± 30.0	397 ± 3.3			

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Test Compound: beta-Caryophyllene

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Strain: TA97

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	192 ± 13.1	223 ± 9.6	225 ± 7.2	187 ± 4.5	225 ± 6.8
1.0		213 ± 14.4		213 ± 3.8	
3.3		227 ± 6.4		174 ± 4.8	
10.0	182 ± 8.5	230 ± 11.3		161 ± 13.8	233 ± 6.4
33.0	180 ± 6.3	267 ± 2.6		197 ± 4.6	238 ± 6.7
100.0	183 ± 5.2	256 ± 8.2 ^P	221 ± 13.3	193 ± 5.0	247 ± 14.3
333.0	166 ± 3.0 ^P		222 ± 9.1		214 ± 3.8
1000.0	150 ± 24.7 ^P		156 ± 27.2		176 ± 3.5
3333.0			188 ± 2.1 ^P		
10000.0			199 ± 2.3 ^P		
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴		1262 ± 29.4	1568 ± 11.3		
Positive Control ⁶	890 ± 40.7			1881 ± 98.0	1838 ± 47.8
Positive Control ⁷					

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	17 ± 3.5	20 ± 2.0	21 ± 4.6	45 ± 2.0	22 ± 1.2
1.0			24 ± 3.1		
3.3	17 ± 1.2	17 ± 2.7	24 ± 1.5		
10.0	15 ± 4.1	21 ± 1.7	19 ± 4.2		25 ± 2.6
33.0	18 ± 0.3	21 ± 1.9	20 ± 1.8		29 ± 1.5
100.0	13 ± 1.5	17 ± 1.8 ^p	21 ± 2.5	44 ± 2.6	16 ± 2.4
333.0	13 ± 0.3	20 ± 2.2 ^p		40 ± 4.9	28 ± 4.8 ^p
667.0					26 ± 0.0 ^p
1000.0				30 ± 2.3	
3333.0				31 ± 4.3 ^p	
10000.0				37 ± 3.9 ^p	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			148 ± 6.1	185 ± 17.2	
Positive Control ⁵					326 ± 9.7
Positive Control ⁸	455 ± 15.9	275 ± 10.3			

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Strain: TA98

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	29 ± 2.7	28 ± 1.8	39 ± 0.3	24 ± 2.0
1.0	31 ± 2.8	21 ± 1.5		
3.3	37 ± 3.8	24 ± 3.8		
10.0	32 ± 1.2	27 ± 3.0		27 ± 1.8
33.0	25 ± 3.6	21 ± 3.3		20 ± 1.7
100.0	29 ± 1.9	21 ± 4.4	36 ± 6.0	22 ± 2.7
333.0			34 ± 2.0	16 ± 2.1
667.0				22 ± 3.4 ^p
1000.0			28 ± 2.0 ^p	
3333.0			31 ± 1.5 ^p	
10000.0			31 ± 3.2 ^p	
Trial Summary	Negative	Negative	Negative	Negative
Positive Control ²		369 ± 12.0	379 ± 18.3	
Positive Control ⁵	458 ± 30.6			953 ± 7.0
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: 100% Ethanol

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

**** END OF REPORT ****