

Experiment Number: 913369

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Carbazole

CAS Number: 86-74-8

Date Report Requested: 09/17/2018

Time Report Requested: 02:13:05

NTP Study Number:

913369

Study Result:

Negative

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G06: Ames Summary Data
 Test Compound: Carbazole
 CAS Number: 86-74-8

Date Report Requested: 09/17/2018
 Time Report Requested: 02:13:05

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	Without S9
Vehicle Control ¹	111 ± 3.1	115 ± 4.7	90 ± 2.5	102 ± 7.5	142 ± 4.5
0.3		97 ± 4.1	120 ± 9.4		
1.0		106 ± 9.7	92 ± 9.0		
3.3	108 ± 6.5	95 ± 3.6	107 ± 7.7		
10.0	107 ± 5.9	107 ± 14.6	80 ± 7.4		
33.0	101 ± 5.6	90 ± 4.0	102 ± 7.5		
67.0					
100.0	90 ± 6.7 ^P			80 ± 7.8 ^P	123 ± 7.7 ^P
333.0	89 ± 2.3 ^P			91 ± 1.2 ^P	117 ± 8.9 ^P
667.0					
1000.0				81 ± 8.4 ^P	116 ± 6.1 ^P
3333.0				75 ± 11.1 ^P	104 ± 6.9 ^P
6667.0					
10000.0				64 ± 1.5 ^P	101 ± 10.1 ^P
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	496 ± 2.3	464 ± 34.3	609 ± 9.0	343 ± 13.1	484 ± 15.6
Positive Control ⁴					
Positive Control ⁵					
Positive Control ⁶					
Positive Control ⁷					

Experiment Number: 913369

G06: Ames Summary Data

Date Report Requested: 09/17/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Carbazole

Time Report Requested: 02:13:05

Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	136 ± 6.2	109 ± 4.7	179 ± 5.5	111 ± 8.4	142 ± 3.0
0.3		113 ± 5.6			
1.0		116 ± 3.5			
3.3	120 ± 9.5	120 ± 4.8		156 ± 9.7	
10.0	120 ± 7.9	118 ± 10.7		126 ± 13.6	
33.0	114 ± 12.4	108 ± 5.5		108 ± 2.0	
67.0					
100.0	99 ± 11.5 ^p		167 ± 8.8 ^p	123 ± 3.3	115 ± 8.3 ^p
333.0	89 ± 7.7 ^p		180 ± 5.2 ^p	99 ± 5.8 ^p	120 ± 11.9 ^p
667.0					
1000.0			164 ± 4.2 ^p		115 ± 8.3 ^p
3333.0			173 ± 3.2 ^p		88 ± 1.9 ^p
6667.0					
10000.0			163 ± 9.6 ^p		77 ± 12.0 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³					
Positive Control ⁴	1002 ± 158.2	1063 ± 21.1	592 ± 7.5		
Positive Control ⁵					
Positive Control ⁶				1053 ± 31.2	457 ± 30.3
Positive Control ⁷					

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 Test Compound: Carbazole
 CAS Number: 86-74-8

Date Report Requested: 09/17/2018
 Time Report Requested: 02:13:05

Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	131 ± 6.2	173 ± 4.8	114 ± 7.2	133 ± 14.5
0.3				
1.0				
3.3	133 ± 6.4		107 ± 3.5	
10.0	135 ± 6.5		108 ± 6.1	
33.0	124 ± 12.3		120 ± 5.2	
67.0				
100.0	125 ± 8.7	135 ± 7.4	131 ± 4.7	96 ± 6.1 ^P
333.0	128 ± 12.7 ^P	149 ± 6.9 ^P	117 ± 6.4	107 ± 4.6 ^P
667.0				
1000.0		149 ± 7.3 ^P		91 ± 5.5 ^P
3333.0		162 ± 11.5 ^P		79 ± 10.5 ^P
6667.0				
10000.0		129 ± 7.4 ^P		69 ± 4.9 ^P
Trial Summary	Negative	Negative	Negative	Negative
Positive Control ²	397 ± 10.4	533 ± 16.9		
Positive Control ³				
Positive Control ⁴				
Positive Control ⁵			698 ± 32.6	748 ± 13.0
Positive Control ⁶				
Positive Control ⁷				

Experiment Number: 913369

Test Type: Genetic Toxicology - Bacterial
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G06: Ames Summary Data

Test Compound: Carbazole

CAS Number: 86-74-8

Date Report Requested: 09/17/2018

Time Report Requested: 02:13:05

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	10 ± 2.4	11 ± 0.3	11 ± 2.3	13 ± 2.6	12 ± 0.9
0.3	11 ± 1.9	13 ± 1.2			
1.0	11 ± 1.2	9 ± 0.7			
3.3	8 ± 3.5	17 ± 1.7			10 ± 2.0
10.0	7 ± 1.2	11 ± 0.0			9 ± 1.7
33.0	7 ± 1.0	16 ± 1.2			14 ± 0.6
100.0			11 ± 2.6 ^p	12 ± 0.6 ^p	10 ± 0.3 ^p
333.0			7 ± 2.0 ^p	11 ± 1.3 ^p	14 ± 2.9 ^p
1000.0			7 ± 0.6 ^p	9 ± 0.3 ^p	
3333.0			6 ± 1.2 ^p	10 ± 1.8 ^p	
10000.0			5 ± 1.0 ^p	6 ± 1.5 ^p	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	314 ± 21.5	373 ± 19.8	271 ± 13.9	265 ± 6.9	
Positive Control ⁵					
Positive Control ⁶					189 ± 19.2

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G06: Ames Summary Data

Date Report Requested: 09/17/2018

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

Test Compound: Carbazole

Time Report Requested: 02:13:05

CAS Number: 86-74-8

Strain: TA1535

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	7 ± 0.9	12 ± 1.2	12 ± 3.1	10 ± 2.6	12 ± 2.3
0.3	8 ± 0.6				
1.0	9 ± 1.9				
3.3	7 ± 0.9		9 ± 2.4		14 ± 1.2
10.0	9 ± 2.1		11 ± 1.3		17 ± 0.7
33.0	9 ± 1.7		10 ± 1.2		11 ± 3.8
100.0		7 ± 0.9 ^p	12 ± 2.2	12 ± 0.9 ^p	11 ± 1.9
333.0		12 ± 1.5 ^p	9 ± 0.7	9 ± 1.3 ^p	11 ± 4.1 ^p
1000.0		8 ± 1.7 ^p		9 ± 2.3 ^p	
3333.0		12 ± 2.1 ^p		6 ± 0.3 ^p	
10000.0		11 ± 1.9 ^p		10 ± 2.6 ^p	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					46 ± 1.2
Positive Control ³					
Positive Control ⁵					
Positive Control ⁶	145 ± 8.4	136 ± 7.1	128 ± 4.8	134 ± 10.5	

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Test Compound: Carbazole
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Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	10 ± 2.0	11 ± 2.7	20 ± 1.2
0.3			
1.0			
3.3		12 ± 2.6	
10.0		12 ± 2.6	
33.0		11 ± 0.0	
100.0	13 ± 2.3	10 ± 1.2	13 ± 2.0 ^P
333.0	12 ± 2.9 ^P	12 ± 2.1	19 ± 3.0 ^P
1000.0	8 ± 1.8 ^P		19 ± 1.2 ^P
3333.0	10 ± 0.6 ^P		15 ± 2.3 ^P
10000.0	14 ± 1.7 ^P		11 ± 1.7 ^P
Trial Summary	Negative	Negative	Negative
Positive Control ²	46 ± 1.0		
Positive Control ³			
Positive Control ⁵		195 ± 37.6	59 ± 6.4
Positive Control ⁶			

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Test Compound: Carbazole

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Date Report Requested: 09/17/2018

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Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	134 ± 16.5	108 ± 2.9	191 ± 17.6	173 ± 6.5	129 ± 4.7
0.3	126 ± 6.8	107 ± 7.5			
1.0	122 ± 10.7	104 ± 4.1			
3.3	111 ± 6.4	118 ± 3.5			133 ± 5.8
10.0	133 ± 8.5	107 ± 0.9			128 ± 2.9
33.0	122 ± 10.3	105 ± 3.2			142 ± 0.6
100.0			175 ± 3.3 ^p	180 ± 5.8 ^p	132 ± 10.3 ^p
333.0			168 ± 4.6 ^p	168 ± 4.7 ^p	122 ± 9.1 ^p
1000.0			153 ± 8.7 ^p	170 ± 1.8 ^p	
3333.0			139 ± 5.2 ^p	180 ± 6.0 ^p	
10000.0			131 ± 3.0 ^p	146 ± 8.0 ^p	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴					
Positive Control ⁶					1665 ± 49.4
Positive Control ⁸	367 ± 6.4	273 ± 13.1	538 ± 9.6	366 ± 20.9	

Experiment Number: 913369

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Carbazole

CAS Number: 86-74-8

Date Report Requested: 09/17/2018

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Strain: TA97

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	122 ± 9.1	239 ± 13.6	177 ± 1.8	151 ± 75.7	154 ± 5.5
0.3	133 ± 9.2				
1.0	135 ± 2.6				
3.3	109 ± 2.6		163 ± 7.4		138 ± 9.1
10.0	116 ± 5.0		148 ± 7.0		163 ± 4.9
33.0	114 ± 9.6		158 ± 3.9		146 ± 5.4
100.0		215 ± 7.9	132 ± 1.3	185 ± 5.2 ^P	128 ± 5.8
333.0		219 ± 12.2 ^P	135 ± 3.5	208 ± 22.0 ^P	113 ± 5.5 ^P
1000.0		209 ± 2.3 ^P		269 ± 12.3 ^P	
3333.0		213 ± 3.6 ^P		230 ± 17.6 ^P	
10000.0		196 ± 13.4 ^P		169 ± 5.8 ^P	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴					932 ± 15.1
Positive Control ⁶	1130 ± 24.5	1753 ± 25.7	860 ± 9.3	1020 ± 52.3	
Positive Control ⁸					

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Strain: TA97

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	183 ± 11.8	164 ± 5.9	219 ± 21.7
0.3			
1.0			
3.3		172 ± 2.0	
10.0		178 ± 9.0	
33.0		177 ± 13.6	
100.0	186 ± 4.9	148 ± 6.7	236 ± 10.3 ^P
333.0	178 ± 8.2 ^P	130 ± 7.4	200 ± 10.7 ^P
1000.0	152 ± 23.1 ^P		236 ± 37.2 ^P
3333.0	199 ± 8.1 ^P		247 ± 17.2 ^P
10000.0	174 ± 1.2 ^P		197 ± 4.5 ^P
Trial Summary	Negative	Negative	Negative
Positive Control ⁴	1528 ± 44.3		
Positive Control ⁶		1147 ± 81.9	1124 ± 28.1
Positive Control ⁸			

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Test Compound: Carbazole

CAS Number: 86-74-8

Date Report Requested: 09/17/2018

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	Without S9
Vehicle Control ¹	13 ± 2.9	18 ± 2.1	14 ± 1.5	12 ± 2.0	34 ± 2.9
0.3		14 ± 1.0	18 ± 3.8		
1.0		11 ± 0.3	15 ± 2.6		
3.3	12 ± 1.5	13 ± 1.2	9 ± 2.4		
10.0	18 ± 0.3	13 ± 1.3	13 ± 0.7		
33.0	16 ± 2.3	12 ± 1.8	13 ± 2.6		
100.0	16 ± 4.2 ^p			12 ± 1.7 ^p	21 ± 2.1 ^p
333.0	11 ± 1.2 ^p			13 ± 0.3 ^p	22 ± 1.5 ^p
1000.0				9 ± 2.8 ^p	20 ± 2.4 ^p
3333.0				7 ± 0.9 ^p	16 ± 1.0 ^p
10000.0				3 ± 0.9 ^p	15 ± 1.2 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ⁹	327 ± 11.8	555 ± 5.0	389 ± 26.3	314 ± 6.2	415 ± 9.8
Positive Control ⁵					

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CAS Number: 86-74-8

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Strain: TA98

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	18 ± 1.9	22 ± 2.7	42 ± 2.0	28 ± 3.3	17 ± 3.2
0.3		17 ± 2.6			
1.0		18 ± 2.3			
3.3	21 ± 4.7	23 ± 1.8		27 ± 0.9	
10.0	17 ± 2.8	19 ± 2.0		25 ± 3.8	
33.0	16 ± 3.2	17 ± 1.8		25 ± 1.0	
100.0	19 ± 1.9 ^P		37 ± 1.0 ^P	20 ± 2.9	18 ± 0.9 ^P
333.0	21 ± 2.7 ^P		31 ± 2.4 ^P	24 ± 3.5	20 ± 3.7 ^P
1000.0			33 ± 6.6 ^P		16 ± 2.7 ^P
3333.0			31 ± 2.0 ^P		9 ± 0.6 ^P
10000.0			27 ± 1.5 ^P		4 ± 2.1 ^P
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²	335 ± 37.5	295 ± 13.2	138 ± 5.5		
Positive Control ⁹					
Positive Control ⁵				422 ± 14.1	376 ± 22.6

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Test Compound: Carbazole

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Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	21 ± 2.4	36 ± 2.9	21 ± 0.9	21 ± 0.9
0.3				
1.0				
3.3	22 ± 2.3		20 ± 0.9	
10.0	29 ± 0.6		17 ± 1.2	
33.0	21 ± 1.3		24 ± 4.3	
100.0	25 ± 4.2	24 ± 0.3	22 ± 1.2	16 ± 1.2 ^P
333.0	23 ± 3.2 ^P	33 ± 4.8 ^P	18 ± 3.2	13 ± 0.7 ^P
1000.0		37 ± 4.1 ^P		10 ± 4.2 ^P
3333.0		24 ± 0.7 ^P		9 ± 1.8 ^P
10000.0		18 ± 1.2 ^P		5 ± 1.2 ^P
Trial Summary	Negative	Negative	Negative	Negative
Positive Control ²	307 ± 8.4	528 ± 62.4		
Positive Control ⁹				
Positive Control ⁵			698 ± 33.1	811 ± 24.6

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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: 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: 10.0 ug/Plate Solvent
- 8: 24.0 ug/Plate 9-Aminoacridine
- 9: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine
- p: Precipitate

** END OF REPORT **