

Experiment Number: 027403

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

**G06: Ames Summary Data**

Test Compound: 4-Amino-4'-hydroxy-3-methyl-diphenylamine

CAS Number: 6219-89-2

Date Report Requested: 09/14/2018

Time Report Requested: 13:38:56

**NTP Study Number:**

027403

**Study Result:**

Positive

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## Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 5% Rat S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	138 ± 5.2	87 ± 4.8	71 ± 5.6	90 ± 8.7	77 ± 8.6
1.0	116 ± 6.7	81 ± 13.4			
3.3	135 ± 6.8	79 ± 3.2			
10.0	108 ± 4.6	86 ± 8.6	94 ± 8.4		92 ± 4.3
33.0	121 ± 7.9	88 ± 10.4	89 ± 3.2	128 ± 9.5	84 ± 2.0
100.0	129 ± 9.0	105 ± 9.8 <sup>s</sup>	97 ± 11.5	122 ± 10.3	93 ± 4.6
333.0			128 ± 3.2	182 ± 10.2	133 ± 11.6
1000.0			Toxic	198 ± 4.5 <sup>p</sup>	132 ± 3.2
2000.0				0 ± 0.0	
3333.0					
Trial Summary	Negative	Negative	Equivocal	Weakly Positive	Equivocal
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>	225 ± 34.7	397 ± 10.2			
Positive Control <sup>4</sup>			651 ± 27.9	923 ± 35.5	422 ± 15.1
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>					

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## Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 5% Hamster S9	With 5% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	94 ± 7.2	105 ± 8.1	92 ± 3.5	75 ± 4.3	102 ± 2.4
1.0					
3.3					
10.0	85 ± 6.8	98 ± 7.0	99 ± 6.2	85 ± 5.0	
33.0	89 ± 2.3	89 ± 4.0	102 ± 4.7	92 ± 8.6	107 ± 2.6
100.0	102 ± 3.8	102 ± 7.5	121 ± 8.3	118 ± 7.2	134 ± 10.1
333.0	123 ± 5.2	119 ± 7.0	96 ± 4.0	120 ± 6.9	165 ± 8.3
1000.0	119 ± 3.5 <sup>p</sup>	136 ± 4.4 <sup>p</sup>	Toxic	Toxic	154 ± 2.9 <sup>p</sup>
2000.0					
3333.0					0 ± 0.0
Trial Summary	Negative	Negative	Negative	Equivocal	Equivocal
Positive Control <sup>2</sup>				547 ± 36.8	516 ± 25.7
Positive Control <sup>3</sup>					
Positive Control <sup>4</sup>	341 ± 5.2				
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>		271 ± 5.2			

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## Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	76 ± 5.0	100 ± 5.6	99 ± 2.7
1.0			
3.3			
10.0	81 ± 9.0	101 ± 5.5	124 ± 4.6
33.0	81 ± 3.2	104 ± 3.9	104 ± 3.8
100.0	113 ± 7.8	134 ± 8.4	137 ± 14.0
333.0	97 ± 4.5	132 ± 7.1	188 ± 6.8
1000.0	99 ± 2.7	104 ± 4.3 <sup>s</sup>	158 ± 12.3 <sup>p</sup>
2000.0			
3333.0			
Trial Summary	Equivocal	Equivocal	Weakly Positive
Positive Control <sup>2</sup>	279 ± 19.5	379 ± 19.0	
Positive Control <sup>3</sup>			
Positive Control <sup>4</sup>			
Positive Control <sup>5</sup>			314 ± 8.9
Positive Control <sup>6</sup>			

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## Strain: TA1535

Dose (ug/Plate)	Without S9	With 5% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	29 ± 3.7	7 ± 0.3	14 ± 1.7	10 ± 0.9	8 ± 1.7
1.0	23 ± 4.1				
3.3	26 ± 3.8				
10.0	26 ± 1.3	8 ± 1.0		11 ± 1.7	8 ± 2.0
33.0	26 ± 4.1	11 ± 1.5	13 ± 1.8	14 ± 1.3	7 ± 2.4
100.0	22 ± 1.2	16 ± 3.7	26 ± 0.9	15 ± 3.5	10 ± 3.3
333.0		23 ± 4.8	33 ± 3.0	26 ± 0.3	14 ± 2.6
1000.0		Toxic	46 ± 1.0 <sup>p</sup>	22 ± 1.3	10 ± 2.6 <sup>s</sup>
2000.0					
3333.0			0 ± 0.0		
Trial Summary	Negative	Weakly Positive	Positive	Weakly Positive	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>	141 ± 7.1				
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>		104 ± 6.4	262 ± 6.9	158 ± 10.4	120 ± 2.9

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## Strain: TA1535

Dose (ug/Plate)	With 30% Rat S9	With 5% Hamster S9	With 10% Hamster S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	8 ± 0.7	13 ± 2.7	12 ± 2.9	9 ± 1.7	16 ± 4.2
1.0					
3.3					
10.0	13 ± 0.9	19 ± 4.0		11 ± 1.2	11 ± 1.9
33.0	9 ± 2.1	53 ± 13.9	15 ± 2.3	13 ± 1.5	12 ± 2.0
100.0	10 ± 1.5	38 ± 5.5	23 ± 4.2	20 ± 1.8	29 ± 2.7
333.0	13 ± 2.3	36 ± 6.4	37 ± 1.2	21 ± 3.3	22 ± 1.9
1000.0	21 ± 2.5 <sup>p</sup>	Toxic	36 ± 4.9 <sup>p</sup>	18 ± 3.7	13 ± 2.7 <sup>s</sup>
2000.0					
3333.0			0 ± 0.0		
Trial Summary	Equivocal	Weakly Positive	Positive	Equivocal	Equivocal
Positive Control <sup>2</sup>		90 ± 0.7	76 ± 3.4	38 ± 4.5	58 ± 7.8
Positive Control <sup>3</sup>					
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>	66 ± 6.3				

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**Strain: TA1535**

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<b>Dose (ug/Plate)</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	10 ± 0.7
1.0	
3.3	
10.0	13 ± 0.3
33.0	10 ± 0.3
100.0	16 ± 2.2
333.0	28 ± 1.5
1000.0	23 ± 2.6 <sup>p</sup>
2000.0	
3333.0	
Trial Summary	Equivocal
Positive Control <sup>2</sup>	
Positive Control <sup>3</sup>	
Positive Control <sup>5</sup>	76 ± 5.3
Positive Control <sup>6</sup>	

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## Strain: TA97

Dose (ug/Plate)	Without S9	With 5% Rat S9	With 5% Rat S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	75 ± 5.7	103 ± 6.8	119 ± 11.7	182 ± 4.7	130 ± 4.7
1.0	57 ± 4.6				
3.3	68 ± 0.3				
10.0	65 ± 2.6	103 ± 4.8	109 ± 7.8		128 ± 1.9
33.0	65 ± 5.4	135 ± 10.8	122 ± 8.3	169 ± 11.4	137 ± 7.0
100.0	83 ± 0.3	179 ± 3.5	168 ± 8.7	223 ± 26.1	165 ± 10.0
333.0		278 ± 8.9	229 ± 8.1	482 ± 37.4	220 ± 9.9
1000.0		Toxic	74 ± 3.0 <sup>p</sup>	516 ± 25.0 <sup>p</sup>	249 ± 12.7 <sup>p</sup>
2000.0					
3333.0				0 ± 0.0	
Trial Summary	Negative	Positive	Weakly Positive	Positive	Weakly Positive
Positive Control <sup>4</sup>					
Positive Control <sup>6</sup>			1244 ± 28.7	1588 ± 101.0	435 ± 66.5
Positive Control <sup>7</sup>					
Positive Control <sup>8</sup>	331 ± 27.1				



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## Strain: TA97

Dose (ug/Plate)	With 30% Rat S9	With 5% Hamster S9	With 10% Hamster S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	163 ± 1.9	123 ± 11.7	183 ± 19.9	99 ± 3.8	142 ± 2.2
1.0					
3.3					
10.0	132 ± 10.8	120 ± 12.9		111 ± 9.4	127 ± 1.7
33.0	120 ± 6.4	139 ± 6.0	215 ± 9.1	116 ± 4.9	140 ± 10.7
100.0	153 ± 6.2	177 ± 13.7	253 ± 24.5	171 ± 6.1	175 ± 10.8
333.0	197 ± 9.0	115 ± 3.8	378 ± 44.1	201 ± 17.1	190 ± 1.8
1000.0	203 ± 7.0 <sup>p</sup>	77 ± 8.1 <sup>s</sup>	242 ± 16.2 <sup>p</sup>	Toxic	160 ± 2.3 <sup>s</sup>
2000.0					
3333.0			0 ± 0.0		
Trial Summary	Equivocal	Equivocal	Weakly Positive	Weakly Positive	Equivocal
Positive Control <sup>4</sup>		746 ± 30.8	560 ± 27.4		592 ± 15.6
Positive Control <sup>6</sup>					
Positive Control <sup>7</sup>	292 ± 11.9				
Positive Control <sup>8</sup>					

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**Strain: TA97**

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<b>Dose (ug/Plate)</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	150 ± 2.4
1.0	
3.3	
10.0	157 ± 9.8
33.0	145 ± 5.0
100.0	167 ± 8.1
333.0	240 ± 19.6
1000.0	257 ± 20.9 <sup>p</sup>
2000.0	
3333.0	
Trial Summary	Equivocal
Positive Control <sup>4</sup>	
Positive Control <sup>6</sup>	
Positive Control <sup>7</sup>	451 ± 30.5
Positive Control <sup>8</sup>	

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**Strain: TA98**

Dose (ug/Plate)	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	30 ± 4.7	56 ± 2.4	30 ± 5.0	44 ± 3.2	31 ± 0.6
1.0	31 ± 5.8				
3.3	26 ± 4.2				
10.0	23 ± 0.9		35 ± 0.3		30 ± 1.2
33.0	38 ± 13.0	61 ± 5.8	44 ± 4.9	58 ± 2.1	41 ± 4.6
100.0	25 ± 0.9	103 ± 1.3	91 ± 2.6	115 ± 3.8	86 ± 1.7
333.0		237 ± 2.6	214 ± 3.6	213 ± 8.0	62 ± 6.0
1000.0		199 ± 52.1 <sup>p</sup>	69 ± 5.5	33 ± 0.7 <sup>p</sup>	22 ± 2.6
2000.0					
3333.0		0 ± 0.0		9 ± 9.3	
Trial Summary	Negative	Positive	Positive	Positive	Positive
Positive Control <sup>9</sup>				155 ± 7.7	95 ± 3.6
Positive Control <sup>2</sup>		268 ± 10.6	174 ± 5.0		
Positive Control <sup>10</sup>	188 ± 25.7				

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**LEGEND**

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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: 2.5 ug/Plate 2-Aminoanthracene

8: 3.5 ug/Plate 9-Aminoacridine

9: 0.2 ug/Plate 2-Aminoanthracene

10: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine

p: Precipitate

s: Slight Toxicity

**\*\* END OF REPORT \*\***