

Experiment Number: 632106

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

**G06: Ames Summary Data**

Test Compound: **Pentabromochlorocyclohexane**

CAS Number: **87-84-3**

Date Report Requested: **09/10/2018**

Time Report Requested: **22:20:16**

**NTP Study Number:**

632106

**Study Result:**

Equivocal

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## G06: Ames Summary Data

Test Compound: Pentabromochlorocyclohexane

CAS Number: 87-84-3

Date Report Requested: 09/10/2018

Time Report Requested: 22:20:16

## Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	117 ± 2.2	95 ± 14.0	123 ± 1.2	92 ± 2.1	133 ± 10.3
1.0					
3.3					
10.0					
33.0					
100.0	134 ± 12.4	96 ± 6.4 <sup>p</sup>		101 ± 3.3 <sup>p</sup>	
333.0	143 ± 4.9 <sup>p</sup>	78 ± 1.3 <sup>p</sup>		90 ± 3.8 <sup>p</sup>	
667.0			125 ± 5.0 <sup>p</sup>		140 ± 11.2 <sup>p</sup>
1000.0	135 ± 5.1 <sup>p</sup>	80 ± 1.5 <sup>p</sup>	128 ± 6.4 <sup>p</sup>	106 ± 4.9 <sup>p</sup>	168 ± 5.5 <sup>p</sup>
3333.0	168 ± 10.3 <sup>p</sup>	72 ± 1.7 <sup>p</sup>	132 ± 4.2 <sup>p</sup>	109 ± 8.9 <sup>p</sup>	162 ± 8.1 <sup>p</sup>
6667.0			151 ± 14.7 <sup>p</sup>		160 ± 3.8 <sup>p</sup>
10000.0	154 ± 5.9 <sup>p</sup>	72 ± 14.5 <sup>p</sup>	151 ± 10.9 <sup>p</sup>	136 ± 8.4 <sup>p</sup>	189 ± 3.4 <sup>p</sup>
Trial Summary	Equivocal	Negative	Negative	Equivocal	Equivocal
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>	617 ± 13.7	387 ± 5.1	363 ± 27.0		
Positive Control <sup>4</sup>				1053 ± 30.8	1079 ± 35.0
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>					

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## Strain: TA100

Dose (ug/Plate)	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	158 ± 15.8	151 ± 10.7	95 ± 1.5	135 ± 10.3	159 ± 5.4
1.0					
3.3					
10.0					
33.0					
100.0	154 ± 7.2		125 ± 6.9 <sup>p</sup>		171 ± 6.7
333.0	170 ± 6.5 <sup>p</sup>		121 ± 10.0 <sup>p</sup>		194 ± 8.9 <sup>p</sup>
667.0		152 ± 5.0 <sup>p</sup>		144 ± 3.5 <sup>p</sup>	
1000.0	185 ± 4.2 <sup>p</sup>	172 ± 4.0 <sup>p</sup>	98 ± 1.7 <sup>p</sup>	136 ± 9.5 <sup>p</sup>	213 ± 22.6 <sup>p</sup>
3333.0	190 ± 7.5 <sup>p</sup>	164 ± 6.1 <sup>p</sup>	107 ± 1.9 <sup>p</sup>	158 ± 2.9 <sup>p</sup>	223 ± 2.9 <sup>p</sup>
6667.0		154 ± 14.2 <sup>p</sup>		159 ± 4.0 <sup>p</sup>	
10000.0	188 ± 7.7 <sup>p</sup>	159 ± 5.8 <sup>p</sup>	145 ± 23.8 <sup>p</sup>	163 ± 12.2 <sup>p</sup>	208 ± 9.2 <sup>p</sup>
Trial Summary	Negative	Negative	Equivocal	Negative	Equivocal
Positive Control <sup>2</sup>			244 ± 6.1	385 ± 14.5	
Positive Control <sup>3</sup>					
Positive Control <sup>4</sup>					
Positive Control <sup>5</sup>					710 ± 15.4
Positive Control <sup>6</sup>	985 ± 128.8	1821 ± 180.5			

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## G06: Ames Summary Data

Test Compound: Pentabromochlorocyclohexane

CAS Number: 87-84-3

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## Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	137 ± 2.0	126 ± 0.3	105 ± 2.1
1.0		124 ± 2.2	116 ± 3.7
3.3		132 ± 14.4	108 ± 6.7
10.0		121 ± 10.0	112 ± 4.1
33.0		114 ± 2.4	119 ± 5.9
100.0		128 ± 4.3	149 ± 2.2
333.0		149 ± 10.7 <sup>p</sup>	158 ± 11.9 <sup>p</sup>
667.0	156 ± 1.9 <sup>p</sup>		
1000.0	143 ± 8.8 <sup>p</sup>	153 ± 10.3 <sup>p</sup>	167 ± 4.2 <sup>p</sup>
3333.0	145 ± 4.5 <sup>p</sup>	158 ± 11.8 <sup>p</sup>	159 ± 5.8 <sup>p</sup>
6667.0	162 ± 5.2 <sup>p</sup>		
10000.0	156 ± 2.7 <sup>p</sup>	182 ± 3.9 <sup>p</sup>	173 ± 7.4 <sup>p</sup>
Trial Summary	Negative	Equivocal	Weakly Positive
Positive Control <sup>2</sup>			
Positive Control <sup>3</sup>			
Positive Control <sup>4</sup>			
Positive Control <sup>5</sup>	508 ± 11.8	752 ± 51.5	849 ± 59.0
Positive Control <sup>6</sup>			

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## G06: Ames Summary Data

Test Compound: Pentabromochlorocyclohexane

CAS Number: 87-84-3

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## Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	18 ± 1.2	12 ± 2.1	25 ± 1.9	11 ± 2.3	11 ± 1.8
1.0					
3.3					
10.0					
33.0					
100.0	16 ± 2.9 <sup>p</sup>	15 ± 1.2 <sup>p</sup>		12 ± 0.9 <sup>p</sup>	
333.0	16 ± 0.9 <sup>p</sup>	13 ± 1.9 <sup>p</sup>		15 ± 1.9 <sup>p</sup>	
667.0			29 ± 3.5 <sup>p</sup>		12 ± 2.1 <sup>p</sup>
1000.0	17 ± 2.4 <sup>p</sup>	16 ± 2.8 <sup>p</sup>	22 ± 1.2 <sup>p</sup>	16 ± 2.2 <sup>p</sup>	14 ± 1.2 <sup>p</sup>
3333.0	21 ± 5.2 <sup>p</sup>	12 ± 1.3 <sup>p</sup>	18 ± 4.7 <sup>p</sup>	21 ± 1.2 <sup>p</sup>	12 ± 0.6 <sup>p</sup>
6667.0			22 ± 4.6 <sup>p</sup>		14 ± 1.5 <sup>p</sup>
10000.0	18 ± 2.3 <sup>p</sup>	9 ± 1.3 <sup>p</sup>	21 ± 1.5 <sup>p</sup>	16 ± 2.0 <sup>p</sup>	17 ± 0.9 <sup>p</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>	317 ± 12.5	208 ± 15.5	244 ± 8.1		
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>				218 ± 16.3	391 ± 14.6

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CAS Number: 87-84-3

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## Strain: TA1535

Dose (ug/Plate)	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	13 ± 2.4	11 ± 0.6	10 ± 2.4	14 ± 2.4	17 ± 0.9
1.0					
3.3					
10.0					
33.0					
100.0	15 ± 2.0		18 ± 1.8 <sup>p</sup>		12 ± 0.3
333.0	17 ± 1.2		21 ± 3.2 <sup>p</sup>		35 ± 4.9
667.0		20 ± 0.7 <sup>p</sup>		14 ± 2.1 <sup>p</sup>	
1000.0	20 ± 0.3 <sup>p</sup>	17 ± 2.6 <sup>p</sup>	15 ± 1.5 <sup>p</sup>	22 ± 2.4 <sup>p</sup>	23 ± 2.0 <sup>p</sup>
3333.0	22 ± 2.0 <sup>p</sup>	15 ± 0.9 <sup>p</sup>	17 ± 2.0 <sup>p</sup>	16 ± 1.7 <sup>p</sup>	21 ± 4.7 <sup>p</sup>
6667.0		14 ± 0.7 <sup>p</sup>		17 ± 2.2 <sup>p</sup>	
10000.0	19 ± 1.5 <sup>p</sup>	17 ± 2.6 <sup>p</sup>	22 ± 2.6 <sup>p</sup>	17 ± 1.0 <sup>p</sup>	23 ± 1.0 <sup>p</sup>
Trial Summary	Negative	Negative	Equivocal	Negative	Equivocal
Positive Control <sup>2</sup>			66 ± 2.3	104 ± 8.0	
Positive Control <sup>3</sup>					
Positive Control <sup>5</sup>					190 ± 4.2
Positive Control <sup>6</sup>	275 ± 6.7	301 ± 6.5			

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## Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control <sup>1</sup>	14 ± 4.9	16 ± 4.5	15 ± 1.7
1.0		14 ± 4.4	11 ± 0.6
3.3		17 ± 0.9	15 ± 1.2
10.0		13 ± 1.2	19 ± 4.5
33.0		17 ± 2.0	13 ± 2.0
100.0		20 ± 3.0	18 ± 2.0
333.0		30 ± 4.0 <sup>p</sup>	19 ± 2.3 <sup>p</sup>
667.0	20 ± 2.5 <sup>p</sup>		
1000.0	26 ± 2.4 <sup>p</sup>	23 ± 3.1 <sup>p</sup>	28 ± 1.8 <sup>p</sup>
3333.0	17 ± 0.9 <sup>p</sup>	24 ± 0.6 <sup>p</sup>	24 ± 1.2 <sup>p</sup>
6667.0	15 ± 1.3 <sup>p</sup>		
10000.0	23 ± 1.9 <sup>p</sup>	28 ± 3.4 <sup>p</sup>	21 ± 0.7 <sup>p</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>2</sup>			
Positive Control <sup>3</sup>			
Positive Control <sup>5</sup>	135 ± 3.9	270 ± 12.3	203 ± 29.2
Positive Control <sup>6</sup>			

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## G06: Ames Summary Data

Test Compound: Pentabromochlorocyclohexane

CAS Number: 87-84-3

Date Report Requested: 09/10/2018

Time Report Requested: 22:20:16

## Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	113 ± 3.8	84 ± 4.2	92 ± 5.1	177 ± 4.3	80 ± 0.9
100.0	106 ± 6.8 <sup>P</sup>	76 ± 3.8 <sup>P</sup>	78 ± 3.2 <sup>P</sup>	181 ± 7.1	86 ± 0.0 <sup>P</sup>
333.0	126 ± 3.5 <sup>P</sup>	79 ± 4.7 <sup>P</sup>	80 ± 3.5 <sup>P</sup>	184 ± 7.8	85 ± 4.1 <sup>P</sup>
1000.0	129 ± 4.1 <sup>P</sup>	53 ± 6.0 <sup>P</sup>	78 ± 4.2 <sup>P</sup>	178 ± 6.7 <sup>P</sup>	77 ± 2.8 <sup>P</sup>
3333.0	128 ± 5.5 <sup>P</sup>	55 ± 2.7 <sup>P</sup>	86 ± 3.3 <sup>P</sup>	183 ± 13.2 <sup>P</sup>	89 ± 8.7 <sup>P</sup>
10000.0	102 ± 6.4 <sup>P</sup>	22 ± 4.7 <sup>P</sup>	98 ± 2.6 <sup>P</sup>	192 ± 6.4 <sup>P</sup>	96 ± 6.7 <sup>P</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>7</sup>	934 ± 32.3	561 ± 30.4			
Positive Control <sup>4</sup>					1227 ± 25.8
Positive Control <sup>6</sup>			2946 ± 53.2		
Positive Control <sup>8</sup>				1158 ± 15.7	



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Test Compound: Pentabromochlorocyclohexane

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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>	155 ± 6.9
100.0	156 ± 5.5
333.0	210 ± 4.3 <sup>P</sup>
1000.0	192 ± 8.1 <sup>P</sup>
3333.0	189 ± 5.9 <sup>P</sup>
10000.0	181 ± 4.2 <sup>P</sup>
Trial Summary	Equivocal
Positive Control <sup>7</sup>	
Positive Control <sup>4</sup>	
Positive Control <sup>6</sup>	
Positive Control <sup>8</sup>	1292 ± 13.2

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## G06: Ames Summary Data

Test Compound: Pentabromochlorocyclohexane

CAS Number: 87-84-3

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Time Report Requested: 22:20:16

## Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	17 ± 1.9	20 ± 1.2	24 ± 2.4	42 ± 3.1	21 ± 2.4
100.0	19 ± 3.5	19 ± 4.1 <sup>p</sup>	27 ± 2.6 <sup>p</sup>	29 ± 5.1	24 ± 2.0 <sup>p</sup>
333.0	21 ± 2.6 <sup>p</sup>	19 ± 4.0 <sup>p</sup>	30 ± 0.7 <sup>p</sup>	33 ± 0.9 <sup>p</sup>	28 ± 3.7 <sup>p</sup>
1000.0	14 ± 1.8 <sup>p</sup>	16 ± 2.3 <sup>p</sup>	23 ± 2.3 <sup>p</sup>	36 ± 6.2 <sup>p</sup>	24 ± 0.3 <sup>p</sup>
3333.0	24 ± 4.2 <sup>p</sup>	19 ± 1.9 <sup>p</sup>	17 ± 2.0 <sup>p</sup>	28 ± 2.5 <sup>p</sup>	28 ± 2.7 <sup>p</sup>
10000.0	20 ± 2.0 <sup>p</sup>	19 ± 2.9 <sup>p</sup>	26 ± 4.9 <sup>p</sup>	25 ± 1.9 <sup>p</sup>	31 ± 4.2 <sup>p</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>			219 ± 13.2		164 ± 7.2
Positive Control <sup>9</sup>	299 ± 15.0	300 ± 10.1			
Positive Control <sup>5</sup>				369 ± 17.2	

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Mutagenicity

**G06: Ames Summary Data**

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**Strain: TA98**

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<b>Dose (ug/Plate)</b>	<b>With 30% Hamster S9</b>
Vehicle Control <sup>1</sup>	37 ± 6.7
100.0	41 ± 2.3
333.0	36 ± 3.7 <sup>P</sup>
1000.0	38 ± 2.7 <sup>P</sup>
3333.0	27 ± 2.3 <sup>P</sup>
10000.0	36 ± 4.2 <sup>P</sup>
Trial Summary	Negative
Positive Control <sup>2</sup>	
Positive Control <sup>9</sup>	
Positive Control <sup>5</sup>	491 ± 35.2

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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: 0.05 ug/Plate Icr-191

8: 2.5 ug/Plate 2-Aminoanthracene

9: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine

p: Precipitate

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