

Experiment Number: 599479

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: 5,5-Diphenylhydantoin (phenytoin)

CAS Number: 57-41-0

Date Report Requested: 09/15/2018

Time Report Requested: 00:07:31

NTP Study Number:

599479

Study Result:

Negative

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Test Compound: 5,5-Diphenylhydantoin (phenytoin)

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Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	106 ± 8.7	94 ± 0.7	118 ± 9.2	98 ± 7.2	114 ± 1.7
100.0	105 ± 2.4	87 ± 3.8	94 ± 8.4	97 ± 3.8	110 ± 6.1
333.0	103 ± 5.0	89 ± 7.8	101 ± 4.7	108 ± 4.7	108 ± 9.7
1000.0	81 ± 3.3	84 ± 3.8	93 ± 5.0	107 ± 8.4	99 ± 8.7
3333.0	79 ± 2.9 ^P	86 ± 3.2 ^P	96 ± 12.8 ^P	100 ± 3.3 ^P	90 ± 3.8 ^P
10000.0	73 ± 5.6 ^P	63 ± 6.0 ^P	94 ± 3.1 ^P	95 ± 5.5 ^P	105 ± 2.9 ^P
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					2384 ± 21.1
Positive Control ³			1337 ± 70.0	632 ± 61.1	
Positive Control ⁴	1417 ± 96.6	2161 ± 64.3			

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Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	101 ± 2.4
100.0	103 ± 3.3
333.0	92 ± 3.3
1000.0	102 ± 3.2
3333.0	98 ± 0.6 ^p
10000.0	84 ± 3.5 ^p
Trial Summary	Negative
Positive Control ²	838 ± 80.8
Positive Control ³	
Positive Control ⁴	

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	15 ± 1.5	20 ± 1.5	9 ± 1.3	11 ± 1.9	10 ± 4.0
100.0	14 ± 3.5	24 ± 2.6	11 ± 2.4	8 ± 2.5	8 ± 2.1
333.0	14 ± 1.0	23 ± 2.3	7 ± 1.3	9 ± 2.3	9 ± 1.5
1000.0	21 ± 0.9	24 ± 2.8	7 ± 0.9	6 ± 2.1	10 ± 0.9
3333.0	18 ± 0.3 ^p	18 ± 0.3 ^p	5 ± 1.3 ^p	10 ± 0.9 ^p	10 ± 0.6 ^p
10000.0	15 ± 1.2 ^p	12 ± 2.1 ^p	6 ± 0.3 ^p	9 ± 1.5 ^p	5 ± 0.3 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					117 ± 13.5
Positive Control ³			84 ± 2.9	56 ± 7.2	
Positive Control ⁴	1068 ± 11.4	1496 ± 75.6			

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Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	11 ± 1.5
100.0	11 ± 2.3
333.0	11 ± 2.7
1000.0	8 ± 2.9
3333.0	8 ± 2.3 ^P
10000.0	9 ± 1.5 ^S
Trial Summary	Negative
Positive Control ²	62 ± 12.2
Positive Control ³	
Positive Control ⁴	

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Strain: TA1537

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	7 ± 2.0	4 ± 1.2	6 ± 2.3	9 ± 1.3	8 ± 2.1
100.0	5 ± 0.3	6 ± 2.5	6 ± 1.5	6 ± 0.6	7 ± 0.7
333.0	4 ± 1.5	6 ± 2.2	7 ± 1.2	7 ± 1.2	5 ± 0.6
1000.0	7 ± 2.6	4 ± 0.9	4 ± 0.3	5 ± 0.6	6 ± 0.9
3333.0	5 ± 0.6 ^P	4 ± 0.9 ^P	7 ± 1.5 ^P	5 ± 0.9 ^P	5 ± 1.0 ^P
10000.0	3 ± 0.9 ^P	1 ± 0.7 ^P	5 ± 1.7 ^P	4 ± 0.3 ^P	3 ± 0.7 ^P
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					135 ± 18.2
Positive Control ³			60 ± 4.7	48 ± 10.4	
Positive Control ⁵	936 ± 151.4	287 ± 6.4			

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Strain: TA1537

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	7 ± 2.1
100.0	5 ± 2.0
333.0	7 ± 0.3
1000.0	4 ± 1.2
3333.0	4 ± 0.6 ^P
10000.0	3 ± 1.2 ^P
Trial Summary	Negative
Positive Control ²	92 ± 10.8
Positive Control ³	
Positive Control ⁵	

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control ¹	15 ± 1.5	10 ± 2.1	24 ± 3.0	20 ± 5.2	24 ± 2.2
100.0	23 ± 2.0	14 ± 0.6	16 ± 3.4	27 ± 2.3	24 ± 1.9
333.0	19 ± 1.7	13 ± 2.3	19 ± 1.7	24 ± 0.9	27 ± 2.1
1000.0	14 ± 0.3	17 ± 2.3	25 ± 4.1	22 ± 0.3	22 ± 1.9
3333.0	17 ± 0.7 ^P	13 ± 0.7 ^P	21 ± 2.0 ^P	20 ± 1.9	23 ± 4.5 ^P
10000.0	10 ± 2.9 ^P	8 ± 0.3 ^P	15 ± 2.9 ^P	21 ± 2.5	16 ± 4.2 ^P
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					2027 ± 72.1
Positive Control ³			1029 ± 83.0	361 ± 22.0	
Positive Control ⁶	1449 ± 94.2	1812 ± 30.2			

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Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	25 ± 2.0
100.0	20 ± 1.5
333.0	26 ± 1.9
1000.0	19 ± 0.9
3333.0	22 ± 1.2 ^P
10000.0	18 ± 2.2 ^P
Trial Summary	Negative
Positive Control ²	428 ± 28.5
Positive Control ³	
Positive Control 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: 0.75 ug/Plate 2-Aminoanthracene

3: 1.5 ug/Plate 2-Aminoanthracene

4: 2.5 ug/Plate Sodium Azide

5: 80.0 ug/Plate 9-Aminoacridine

6: 12.0 ug/Plate 4-Nitro-O-Phenylenediamine

p: Precipitate

s: Slight Toxicity

**** END OF REPORT ****