

Experiment Number: 170311

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

G06: Ames Summary Data

Test Compound: **Choline chloride**

CAS Number: **67-48-1**

Date Report Requested: **09/13/2018**

Time Report Requested: **03:08:04**

NTP Study Number:

170311

Study Result:

Negative

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Test Compound: Choline chloride

CAS Number: 67-48-1

Date Report Requested: 09/13/2018

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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	84 ± 2.3	102 ± 5.3	115 ± 8.2	111 ± 8.1	112 ± 1.7
100.0	86 ± 6.9	105 ± 6.5	83 ± 11.1	89 ± 6.1	111 ± 3.6
333.3	99 ± 3.8	118 ± 7.2	74 ± 2.9	90 ± 10.7	93 ± 9.7
1000.0	108 ± 4.5	110 ± 2.6	84 ± 5.9	86 ± 3.2	104 ± 8.0
3333.3	103 ± 7.3	111 ± 4.3	83 ± 3.1	85 ± 2.9	92 ± 11.3
10000.0	92 ± 4.1	113 ± 8.2	89 ± 5.2	85 ± 5.4	118 ± 4.9
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²	519 ± 14.7	526 ± 12.0			
Positive Control ³			593 ± 4.4	627 ± 18.2	1006 ± 58.0

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Strain: TA100

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	108 ± 9.7
100.0	110 ± 9.8
333.3	124 ± 10.2
1000.0	113 ± 5.2
3333.3	120 ± 8.9
10000.0	120 ± 5.4
Trial Summary	Negative
Positive Control ²	
Positive Control ³	1278 ± 34.7

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Test Compound: Choline chloride

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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	20 ± 2.6	25 ± 3.1	9 ± 2.9	9 ± 0.3	13 ± 2.0
100.0	21 ± 4.4	24 ± 2.3	15 ± 1.8	7 ± 0.9	12 ± 2.0
333.3	18 ± 0.3	23 ± 2.8	10 ± 1.7	9 ± 2.0	14 ± 2.3
1000.0	16 ± 1.2	26 ± 3.5	14 ± 3.8	6 ± 1.3	12 ± 2.7
3333.3	19 ± 3.6	20 ± 2.5	8 ± 2.3	12 ± 3.6	12 ± 2.3
10000.0	20 ± 3.8	23 ± 4.1	11 ± 1.7	4 ± 1.0	12 ± 1.9
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²	512 ± 18.9	444 ± 17.0			
Positive Control ⁴			311 ± 6.4	374 ± 12.8	400 ± 19.3

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G06: Ames Summary Data

Test Compound: **Choline chloride**

CAS Number: 67-48-1

Date Report Requested: 09/13/2018

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Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	10 ± 0.7
100.0	9 ± 1.5
333.3	12 ± 3.4
1000.0	11 ± 2.7
3333.3	11 ± 2.3
10000.0	12 ± 1.3
Trial Summary	Negative
Positive Control ²	
Positive Control ⁴	300 ± 6.3

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

Test Compound: Choline chloride

CAS Number: 67-48-1

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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	8 ± 1.0	16 ± 1.5	13 ± 3.2	24 ± 4.3	15 ± 1.2
100.0	8 ± 2.7	19 ± 1.2	14 ± 0.3	17 ± 2.1	20 ± 2.2
333.3	5 ± 0.7	25 ± 3.2	11 ± 2.2	11 ± 1.0	19 ± 0.9
1000.0	7 ± 0.0	26 ± 0.6	11 ± 1.5	15 ± 1.2	19 ± 1.0
3333.3	5 ± 1.9	24 ± 2.6	14 ± 0.3	12 ± 1.7	16 ± 0.6
10000.0	7 ± 0.6	18 ± 1.0	11 ± 1.3	6 ± 1.5	26 ± 3.9
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ⁴			493 ± 132.1	238 ± 45.9	376 ± 12.0
Positive Control ⁵	119 ± 22.5	166 ± 5.6			

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Test Compound: Choline chloride
CAS Number: 67-48-1

Date Report Requested: 09/13/2018
Time Report Requested: 03:08:04

Strain: TA1537

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	41 ± 1.2
100.0	37 ± 2.6
333.3	41 ± 6.1
1000.0	34 ± 1.9
3333.3	40 ± 2.0
10000.0	31 ± 1.0
Trial Summary	Negative
Positive Control ⁴	358 ± 6.0
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	23 ± 2.3	46 ± 2.4	34 ± 3.1	60 ± 5.0	29 ± 0.6
100.0	24 ± 3.0	47 ± 3.6	31 ± 5.1	53 ± 0.3	31 ± 3.9
333.3	24 ± 2.8	46 ± 4.5	31 ± 3.6	59 ± 4.7	35 ± 3.5
1000.0	24 ± 2.4	49 ± 4.3	34 ± 5.2	54 ± 6.2	36 ± 2.0
3333.3	24 ± 0.9	44 ± 5.4	31 ± 1.2	58 ± 5.0	35 ± 4.1
10000.0	26 ± 3.0	47 ± 3.5	29 ± 4.9	47 ± 2.8	36 ± 0.9
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³			798 ± 62.0	509 ± 20.5	1496 ± 106.4
Positive Control ⁶	685 ± 17.8	850 ± 18.0			

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Test Compound: Choline chloride
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Strain: TA98

Dose (ug/Plate)	With 10% Hamster S9
Vehicle Control ¹	53 ± 3.4
100.0	33 ± 3.6
333.3	34 ± 2.8
1000.0	36 ± 4.0
3333.3	24 ± 2.7
10000.0	28 ± 0.3
Trial Summary	Negative
Positive Control ³	1170 ± 9.5
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: Water

2: 1.0 ug/Plate Sodium Azide

3: 1.0 ug/Plate 2-Aminoanthracene

4: 2.5 ug/Plate 2-Aminoanthracene

5: 50.0 ug/Plate 9-Aminoacridine

6: 5.0 ug/Plate 4-Nitro-O-Phenylenediamine

**** END OF REPORT ****