

Experiment Number: 654639

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

G06: Ames Summary Data

Test Compound: **Methanedia mine 2HCl**

CAS Number: 57166-92-4

Date Report Requested: 09/11/2018

Time Report Requested: 06:04:01

NTP Study Number:

654639

Study Result:

Positive

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G06: Ames Summary Data

Test Compound: Methanediamine 2HCl

CAS Number: 57166-92-4

Date Report Requested: 09/11/2018

Time Report Requested: 06:04:01

Strain: TA100

Dose (ug/Plate)	Without S9	With 5% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	145 ± 8.0	119 ± 3.3	122 ± 11.9	172 ± 18.1	107 ± 16.0
3.0	127 ± 0.3				
10.0	150 ± 8.1	133 ± 3.7	118 ± 9.3	191 ± 8.5	113 ± 6.0
33.0	152 ± 6.8	166 ± 11.6	164 ± 4.2	210 ± 4.0	127 ± 11.2
66.0		179 ± 2.5	172 ± 6.0		150 ± 4.0
100.0	148 ± 6.2	171 ± 9.6	171 ± 3.2	249 ± 11.6	160 ± 3.3
166.0	68 ± 14.1	129 ± 2.6	125 ± 25.5		128 ± 18.6
333.0				166 ± 10.6	
666.0				0 ± 0.0 ^s	
Trial Summary	Negative	Equivocal	Equivocal	Equivocal	Equivocal
Positive Control ²					
Positive Control ³		787 ± 29.4	557 ± 4.0		
Positive Control ⁴				474 ± 13.3	587 ± 6.1
Positive Control ⁵	459 ± 39.7				

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Strain: TA100

Dose (ug/Plate)	With 30% Rat S9	With 5% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	120 ± 3.2	114 ± 6.2	95 ± 4.1	154 ± 6.8	113 ± 12.9
3.0					
10.0	120 ± 3.9	118 ± 5.0	106 ± 8.7	150 ± 2.1	111 ± 10.0
33.0	130 ± 4.4	148 ± 6.7	118 ± 10.0	164 ± 6.6	130 ± 6.7
66.0	146 ± 1.5	142 ± 6.7	145 ± 2.6		118 ± 7.4
100.0	158 ± 13.2	172 ± 11.9	146 ± 3.2	212 ± 11.8	136 ± 8.1
166.0	125 ± 23.8 ^s	137 ± 14.2	116 ± 4.1		149 ± 16.5
333.0				217 ± 4.1	
666.0				148 ± 15.7 ^s	
Trial Summary	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
Positive Control ²		1114 ± 19.5	805 ± 38.3		
Positive Control ³				643 ± 32.2	
Positive Control ⁴	377 ± 17.1				1263 ± 226.4
Positive Control ⁵					

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Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	105 ± 8.3
3.0	
10.0	101 ± 1.2
33.0	104 ± 4.3
66.0	130 ± 6.0
100.0	147 ± 5.2
166.0	165 ± 5.6
333.0	
666.0	
Trial Summary	Equivocal
Positive Control ²	
Positive Control ³	393 ± 68.9
Positive Control ⁴	
Positive Control ⁵	

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Strain: TA1535

Dose (ug/Plate)	Without S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control ¹	14 ± 2.3	10 ± 2.2	9 ± 1.8
3.0	15 ± 0.6		
10.0	17 ± 1.0	12 ± 0.9	9 ± 0.9
33.0	9 ± 1.7	11 ± 1.3	12 ± 2.0
66.0	13 ± 2.1	8 ± 0.9	13 ± 2.5
100.0	10 ± 0.7	13 ± 1.0	11 ± 2.2
166.0		11 ± 1.5	9 ± 1.5
Trial Summary	Negative	Negative	Negative
Positive Control ⁴			105 ± 10.3
Positive Control ⁵	860 ± 10.3		
Positive Control ⁶		79 ± 5.3	

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Test Type: **Genetic Toxicology - Bacterial
Mutagenicity**Test Compound: **Methanediamine 2HCl**

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CAS Number: 57166-92-4

Strain: TA97

Dose (ug/Plate)	Without S9	With 30% Rat S9	With 30% Rat S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	193 ± 8.0	215 ± 4.4	240 ± 4.9	163 ± 3.3	175 ± 1.9
3.0	196 ± 2.6	219 ± 8.6	227 ± 3.7	184 ± 5.9	
10.0	196 ± 7.5	224 ± 4.8	255 ± 7.1	181 ± 13.7	
33.0	264 ± 12.9	211 ± 18.8	313 ± 3.3	163 ± 3.6	202 ± 6.9
66.0	266 ± 2.7		316 ± 11.5		
100.0	209 ± 47.5	270 ± 2.5	302 ± 46.9	179 ± 2.8	261 ± 14.2
166.0					187 ± 7.2
333.0		166 ± 32.2		274 ± 21.2	260 ± 8.7
666.0					184 ± 37.8
Trial Summary	Equivocal	Equivocal	Equivocal	Equivocal	Equivocal
Positive Control ³				352 ± 23.9	379 ± 25.8
Positive Control ⁴		366 ± 11.8	344 ± 6.0		
Positive Control ⁷	405 ± 57.0				

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Test Compound: Methanediamine 2HCl

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Strain: TA98

Dose (ug/Plate)	Without S9	With 5% Rat S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	25 ± 3.3	17 ± 2.4	20 ± 1.8	29 ± 1.8	24 ± 1.5
3.0	21 ± 3.6	13 ± 1.5	18 ± 0.7		24 ± 3.0
10.0	21 ± 2.1	15 ± 2.5	18 ± 1.8	21 ± 1.9	20 ± 2.9
33.0	27 ± 1.7	17 ± 1.9	24 ± 4.8	27 ± 3.4	25 ± 3.5
66.0		20 ± 3.7	25 ± 3.8		23 ± 2.8
100.0	25 ± 4.9	11 ± 3.8	14 ± 3.3	34 ± 3.0	40 ± 7.8
166.0	21 ± 3.5				
333.0				6 ± 1.8 ^s	
666.0				0 ± 0.0 ^s	
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³		479 ± 38.6	234 ± 9.9	121 ± 17.8	204 ± 6.4
Positive Control ⁸	785 ± 11.6				

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Strain: TA98

Dose (ug/Plate)	With 30% Rat S9	With 30% Hamster S9
Vehicle Control ¹	22 ± 2.0	25 ± 1.9
3.0	13 ± 0.6	
10.0	16 ± 1.9	23 ± 1.7
33.0	21 ± 2.8	17 ± 1.5
66.0	21 ± 2.3	
100.0	19 ± 1.2	30 ± 3.8
166.0		
333.0		30 ± 1.5
666.0		14 ± 2.3 ^s
Trial Summary	Negative	Negative
Positive Control ³	82 ± 4.4	456 ± 21.6
Positive Control ⁸		

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Strain: TA102

Dose (ug/Plate)	Without S9	Without S9	With 30% Rat S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control ¹	241 ± 23.1	210 ± 41.4	350 ± 27.4	245 ± 11.4	316 ± 14.7
0.3		192 ± 11.5			
1.0		223 ± 7.2			
3.0	319 ± 16.7	231 ± 9.5	383 ± 21.7		418 ± 21.7
10.0	338 ± 6.7	222 ± 5.2	393 ± 30.5	185 ± 9.2	443 ± 7.5
33.0	383 ± 6.7	291 ± 15.7	399 ± 5.9	342 ± 14.6	475 ± 6.2
66.0	300 ± 3.2			582 ± 20.3	
100.0	333 ± 20.7	301 ± 55.2	572 ± 10.8	611 ± 15.6	624 ± 15.6
166.0				591 ± 7.4	
333.0			703 ± 35.4	491 ± 81.5	799 ± 21.5
Trial Summary	Equivocal	Equivocal	Positive	Positive	Positive
Positive Control ⁹	519 ± 17.6	662 ± 20.2			
Positive Control ⁴					
Positive Control ⁶				645 ± 9.2	588 ± 24.1
Positive Control ¹⁰			497 ± 60.9		

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Test Compound: Methanediamine 2HCl

CAS Number: 57166-92-4

Date Report Requested: 09/11/2018

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Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	218 ± 6.0
0.3	
1.0	181 ± 15.5
3.0	191 ± 4.9
10.0	204 ± 33.6
33.0	268 ± 9.9
66.0	
100.0	529 ± 29.1
166.0	
333.0	845 ± 54.0
Trial Summary	Positive
Positive Control ⁹	
Positive Control ⁴	559 ± 31.5
Positive Control ⁶	
Positive Control ¹⁰	

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Date Report Requested: 09/11/2018

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Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	With 30% Rat S9	With 30% Rat S9	With 30% Hamster S9
Vehicle Control ¹	361 ± 45.9	384 ± 15.6	392 ± 25.4	400 ± 9.0	407 ± 5.5
0.1		394 ± 15.0			
0.3		435 ± 21.8			
1.0		453 ± 14.5			
3.0	438 ± 21.2	431 ± 12.7	356 ± 18.3	441 ± 14.2	424 ± 19.3
10.0	410 ± 15.5	383 ± 31.5	429 ± 4.7	450 ± 20.0	465 ± 14.7
33.0	296 ± 11.8		461 ± 3.6	555 ± 20.1	433 ± 1.7
66.0	43 ± 10.7 ^s				
100.0	18 ± 17.7 ^s		555 ± 6.8	567 ± 13.1	451 ± 15.5
166.0				392 ± 72.5	
333.0			260 ± 44.8		442 ± 16.5
Trial Summary	Equivocal	Equivocal	Weakly Positive	Weakly Positive	Negative
Positive Control ⁴					837 ± 11.0
Positive Control ⁶			727 ± 19.2	717 ± 28.3	
Positive Control ¹¹	656 ± 53.2	597 ± 19.2			

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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: 0.5 ug/Plate 2-Aminoanthracene
 - 3: 1.0 ug/Plate 2-Aminoanthracene
 - 4: 2.5 ug/Plate 2-Aminoanthracene
 - 5: 5.0 ug/Plate Sodium Azide
 - 6: 5.0 ug/Plate 2-Aminoanthracene
 - 7: 50.0 ug/Plate 9-Aminoacridine
 - 8: 2.5 ug/Plate 4-Nitro-O-Phenylenediamine
 - 9: 0.5 ug/Plate Mitomycin-C
 - 10: 10.0 ug/Plate 2-Aminoanthracene
 - 11: 250.0 ug/Plate Methyl Methane Sulfonate
- s: Slight Toxicity

** END OF REPORT **