

Experiment Number: **029359**

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

**G06: Ames Summary Data**

Test Compound: **Selenium sulfide**

CAS Number: **7446-34-6**

Date Report Requested: **09/14/2018**

Time Report Requested: **13:57:53**

**NTP Study Number:** 029359

**Study Result:** Positive

Experiment Number: 029359

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

## G06: Ames Summary Data

Test Compound: Selenium sulfide

CAS Number: 7446-34-6

Date Report Requested: 09/14/2018

Time Report Requested: 13:57:53

## Strain: TA100

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>	133 ± 9.0	146 ± 10.8	164 ± 13.0	113 ± 1.2	155 ± 8.1
33.0		182 ± 7.2	176 ± 14.2		174 ± 5.9
100.0	151 ± 10.7	277 ± 3.2	199 ± 12.7	98 ± 5.4	236 ± 15.5
333.0	154 ± 9.3	297 ± 17.7	230 ± 11.1	96 ± 5.2	232 ± 42.9
666.0		301 ± 19.7	254 ± 1.2		231 ± 6.4
1000.0	147 ± 18.9 <sup>p</sup>	228 ± 12.3 <sup>p</sup>	299 ± 10.6 <sup>p</sup>	101 ± 7.6 <sup>p</sup>	216 ± 9.0 <sup>p</sup>
3333.0	151 ± 19.9 <sup>p</sup>			105 ± 19.8 <sup>p</sup>	
10000.0	128 ± 14.1 <sup>p</sup>			134 ± 6.6 <sup>p</sup>	
Trial Summary	Negative	Positive	Positive	Negative	Equivocal
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>	640 ± 21.2				
Positive Control <sup>4</sup>		915 ± 43.3	865 ± 45.2	491 ± 7.5	568 ± 16.0

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CAS Number: 7446-34-6

Date Report Requested: 09/14/2018  
Time Report Requested: 13:57:53

Strain: TA100

Dose (ug/Plate)	With 5% Hamster S9	With 5% Hamster S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	165 ± 16.4	146 ± 12.1	103 ± 14.5	117 ± 10.1
33.0	208 ± 5.8	214 ± 64.3		147 ± 4.3
100.0	245 ± 11.6	241 ± 12.2	91 ± 8.6	202 ± 13.5
333.0	320 ± 12.2	229 ± 11.3	85 ± 2.3	254 ± 7.6
666.0	301 ± 7.2	279 ± 8.5		233 ± 32.9
1000.0	288 ± 19.7 <sup>p</sup>	240 ± 3.2 <sup>p</sup>	87 ± 4.9 <sup>p</sup>	260 ± 22.0 <sup>p</sup>
3333.0			106 ± 10.2 <sup>p</sup>	
10000.0			149 ± 16.6 <sup>p</sup>	
Trial Summary	Positive	Weakly Positive	Equivocal	Positive
Positive Control <sup>2</sup>	735 ± 83.6	1220 ± 99.5	910 ± 24.5	624 ± 41.5
Positive Control <sup>3</sup>				
Positive Control <sup>4</sup>				

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Strain: TA1535

Dose (ug/Plate)	Without S9	With 10% Rat S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	23 ± 2.3	9 ± 1.9	10 ± 1.2
100.0	28 ± 3.5	11 ± 1.7	9 ± 2.9
333.0	26 ± 3.8	11 ± 0.3	8 ± 2.3
1000.0	20 ± 1.2 <sup>P</sup>	9 ± 2.4 <sup>P</sup>	10 ± 1.5 <sup>P</sup>
3333.0	14 ± 1.9 <sup>P</sup>	10 ± 1.5 <sup>P</sup>	7 ± 1.5 <sup>P</sup>
10000.0	13 ± 2.5 <sup>P</sup>	9 ± 0.0 <sup>P</sup>	11 ± 0.7 <sup>P</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>4</sup>			308 ± 7.7
Positive Control <sup>3</sup>	534 ± 16.4		
Positive Control <sup>5</sup>		198 ± 8.4	

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## G06: Ames Summary Data

Test Compound: Selenium sulfide  
CAS Number: 7446-34-6

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## Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 5% Rat S9	With 5% Rat S9
Vehicle Control <sup>1</sup>	160 ± 3.1	146 ± 8.3	143 ± 10.4	146 ± 13.8	173 ± 3.2
33.0					193 ± 8.2
100.0	229 ± 33.2				286 ± 26.6
333.0	221 ± 22.6	145 ± 6.6			398 ± 23.6
666.0					339 ± 36.0
1000.0	220 ± 27.2 <sup>p</sup>	145 ± 2.3 <sup>p</sup>	188 ± 6.7 <sup>p</sup>	265 ± 17.9 <sup>p</sup>	428 ± 9.8 <sup>p</sup>
3333.0	208 ± 14.8 <sup>p</sup>	224 ± 13.2 <sup>p</sup>	315 ± 3.5 <sup>p</sup>	267 ± 14.7 <sup>p</sup>	
6666.0		289 ± 33.3 <sup>p</sup>	335 ± 26.0 <sup>p</sup>	222 ± 5.0 <sup>p</sup>	
7500.0			311 ± 15.9 <sup>p</sup>	193 ± 18.6 <sup>p</sup>	
10000.0	277 ± 41.5 <sup>p</sup>	185 ± 19.9 <sup>p</sup>	334 ± 7.0 <sup>p</sup>	208 ± 9.2 <sup>p</sup>	
Trial Summary	Equivocal	Weakly Positive	Positive	Equivocal	Positive
Positive Control <sup>2</sup>					
Positive Control <sup>4</sup>				701 ± 1.7	667 ± 28.5
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>	876 ± 60.1	738 ± 24.2	986 ± 88.5		

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Test Type: Genetic Toxicology - Bacterial  
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Test Compound: Selenium sulfide

Time Report Requested: 13:57:53

CAS Number: 7446-34-6

## Strain: TA97

Dose (ug/Plate)	With 5% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control <sup>1</sup>	155 ± 13.9	159 ± 19.5	132 ± 26.9	177 ± 7.3	151 ± 12.1
33.0	182 ± 11.3			201 ± 5.5	
100.0	199 ± 10.0	141 ± 10.7		211 ± 18.3	
333.0	263 ± 5.5	167 ± 7.7		281 ± 16.2	
666.0	343 ± 6.8			294 ± 9.6	
1000.0	383 ± 45.2 <sup>p</sup>	151 ± 10.9 <sup>p</sup>	236 ± 13.3 <sup>p</sup>	334 ± 43.2 <sup>p</sup>	164 ± 14.4 <sup>p</sup>
3333.0		166 ± 9.5 <sup>p</sup>	194 ± 25.5 <sup>p</sup>		202 ± 15.6 <sup>p</sup>
6666.0			171 ± 17.5 <sup>p</sup>		200 ± 20.3 <sup>p</sup>
7500.0			162 ± 23.0 <sup>p</sup>		150 ± 14.5 <sup>p</sup>
10000.0		211 ± 10.2 <sup>p</sup>	179 ± 22.0 <sup>p</sup>		135 ± 17.4 <sup>p</sup>
Trial Summary	Positive	Equivocal	Equivocal	Weakly Positive	Equivocal
Positive Control <sup>2</sup>					
Positive Control <sup>4</sup>	624 ± 18.5	373 ± 17.3	490 ± 42.2	396 ± 7.8	
Positive Control <sup>5</sup>					471 ± 14.4
Positive Control <sup>6</sup>					

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Test Compound: Selenium sulfide

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## Strain: TA97

Dose (ug/Plate)	With 5% Hamster S9	With 5% Hamster S9	With 5% Hamster S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	180 ± 1.6	173 ± 3.2	182 ± 4.6	130 ± 4.4	190 ± 13.1
33.0		209 ± 17.6	218 ± 8.4		212 ± 9.4
100.0		301 ± 5.2	262 ± 17.3	140 ± 1.5	246 ± 13.3
333.0		508 ± 20.9	345 ± 7.2	140 ± 3.0	387 ± 11.6
666.0		536 ± 18.0	437 ± 19.5		409 ± 20.4
1000.0	262 ± 3.1 <sup>P</sup>	585 ± 4.8 <sup>P</sup>	488 ± 10.1 <sup>P</sup>	163 ± 12.5 <sup>P</sup>	401 ± 27.9 <sup>P</sup>
3333.0	263 ± 49.6 <sup>P</sup>			169 ± 3.5 <sup>P</sup>	
6666.0	236 ± 10.1 <sup>P</sup>				
7500.0	224 ± 18.0 <sup>P</sup>				
10000.0	381 ± 14.4 <sup>P</sup>			292 ± 21.3 <sup>P</sup>	
Trial Summary	Equivocal	Positive	Positive	Positive	Positive
Positive Control <sup>2</sup>	803 ± 17.0	364 ± 4.7	896 ± 21.9	534 ± 21.7	412 ± 13.3
Positive Control <sup>4</sup>					
Positive Control <sup>5</sup>					
Positive Control <sup>6</sup>					

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Strain: TA97

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Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control <sup>1</sup>	141 ± 19.0
33.0	
100.0	
333.0	
666.0	
1000.0	205 ± 2.1 <sup>P</sup>
3333.0	173 ± 10.7 <sup>P</sup>
6666.0	155 ± 25.3 <sup>P</sup>
7500.0	159 ± 4.7 <sup>P</sup>
10000.0	143 ± 9.8 <sup>P</sup>
Trial Summary	Equivocal
Positive Control <sup>2</sup>	
Positive Control <sup>4</sup>	398 ± 25.1
Positive Control <sup>5</sup>	
Positive Control <sup>6</sup>	



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## G06: Ames Summary Data

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Test Type: Genetic Toxicology - Bacterial  
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Test Compound: Selenium sulfide

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CAS Number: 7446-34-6

## Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	17 ± 1.7	21 ± 1.7	26 ± 2.3	21 ± 2.1	28 ± 0.3
0.0			0 ± 0.0		
33.0				19 ± 1.8	
100.0	14 ± 0.7			23 ± 2.4	23 ± 2.7
333.0	21 ± 2.1	29 ± 1.2		25 ± 1.3	20 ± 5.4
666.0				22 ± 2.4	
1000.0	27 ± 2.0 <sup>P</sup>	30 ± 2.0 <sup>P</sup>	28 ± 2.8 <sup>P</sup>	24 ± 1.9 <sup>P</sup>	20 ± 3.2 <sup>P</sup>
3333.0	27 ± 2.7 <sup>P</sup>	35 ± 4.2 <sup>P</sup>	20 ± 2.1 <sup>P</sup>		26 ± 1.3 <sup>P</sup>
6666.0		37 ± 3.1 <sup>P</sup>	26 ± 2.0 <sup>P</sup>		
7500.0			31 ± 2.4 <sup>P</sup>		
10000.0	51 ± 3.0 <sup>P</sup>	53 ± 2.7 <sup>P</sup>	39 ± 2.2 <sup>P</sup>		29 ± 1.2 <sup>P</sup>
Trial Summary	Weakly Positive	Weakly Positive	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>4</sup>					313 ± 10.8
Positive Control <sup>7</sup>	578 ± 48.8	534 ± 26.3	604 ± 40.8	496 ± 11.4	

Experiment Number: 029359

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

Test Compound: Selenium sulfide

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**Strain: TA98**

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<b>Dose (ug/Plate)</b>	<b>With 10% Hamster S9</b>	<b>With 10% Hamster S9</b>
Vehicle Control <sup>1</sup>	21 ± 2.8	31 ± 4.5
0.0		
33.0		
100.0	22 ± 1.8	
333.0	28 ± 1.2	34 ± 2.1
666.0		
1000.0	29 ± 4.1 <sup>P</sup>	27 ± 3.5 <sup>P</sup>
3333.0	37 ± 3.9 <sup>P</sup>	23 ± 1.9 <sup>P</sup>
6666.0		27 ± 3.2 <sup>P</sup>
7500.0		
10000.0	45 ± 4.7 <sup>P</sup>	33 ± 4.0 <sup>P</sup>
Trial Summary	Weakly Positive	Negative
Positive Control <sup>2</sup>	545 ± 48.4	589 ± 61.5
Positive Control <sup>4</sup>		
Positive Control <sup>7</sup>		

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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: 0.5 ug/Plate 2-Aminoanthracene
- 3: 1.0 ug/Plate Sodium Azide
- 4: 1.0 ug/Plate 2-Aminoanthracene
- 5: 2.5 ug/Plate 2-Aminoanthracene
- 6: 50.0 ug/Plate 9-Aminoacridine
- 7: 2.5 ug/Plate 4-Nitro-O-Phenylenediamine
- p: Precipitate

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