

Experiment Number: 232717

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

**G06: Ames Summary Data**

Test Compound: **Calcium cyanamide**

CAS Number: **156-62-7**

Date Report Requested: **09/15/2018**

Time Report Requested: **04:04:48**

**NTP Study Number:**

232717

**Study Result:**

Weakly Positive

Experiment Number: 232717

Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

## G06: Ames Summary Data

Test Compound: Calcium cyanamide

CAS Number: 156-62-7

Date Report Requested: 09/15/2018

Time Report Requested: 04:04:48

## Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	305 ± 8.5	130 ± 4.3	190 ± 11.4	261 ± 8.0	119 ± 8.8
10.0	264 ± 22.6	136 ± 2.0	180 ± 14.7		
33.0	282 ± 8.6 <sup>S</sup>	133 ± 10.7 <sup>P</sup>	159 ± 2.3 <sup>P</sup>	277 ± 11.1 <sup>P</sup>	132 ± 1.9 <sup>P</sup>
100.0	277 ± 18.6 <sup>S</sup>	130 ± 3.3 <sup>P</sup>	179 ± 10.8 <sup>P</sup>	289 ± 6.1 <sup>P</sup>	121 ± 5.3 <sup>P</sup>
333.0	267 ± 9.8 <sup>S</sup>	134 ± 2.1 <sup>P</sup>	161 ± 1.2 <sup>S</sup>	300 ± 11.8 <sup>P</sup>	130 ± 5.3 <sup>P</sup>
1000.0	260 ± 16.7 <sup>S</sup>	124 ± 1.0 <sup>S</sup>	152 ± 4.1 <sup>S</sup>	287 ± 3.2 <sup>P</sup>	126 ± 8.1 <sup>P</sup>
3333.0				255 ± 4.0 <sup>P</sup>	120 ± 11.8 <sup>P</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>				1347 ± 65.5	1136 ± 28.0
Positive Control <sup>4</sup>	2296 ± 50.4	1436 ± 37.8	2833 ± 74.1		

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Time Report Requested: 04:04:48

**Strain: TA100**

<b>Dose (ug/Plate)</b>	<b>With 10% Rat S9</b>	<b>With 10% Hamster S9</b>	<b>With 10% Hamster S9</b>
Vehicle Control <sup>1</sup>	156 ± 6.4	120 ± 4.3	157 ± 3.2
10.0			
33.0	161 ± 4.0 <sup>P</sup>	129 ± 9.2 <sup>P</sup>	162 ± 15.0 <sup>P</sup>
100.0	153 ± 13.6 <sup>P</sup>	136 ± 4.1 <sup>P</sup>	176 ± 1.2 <sup>P</sup>
333.0	157 ± 2.1 <sup>P</sup>	133 ± 2.3 <sup>P</sup>	162 ± 13.7 <sup>P</sup>
1000.0	167 ± 5.4 <sup>P</sup>	157 ± 1.9 <sup>P</sup>	175 ± 4.7 <sup>P</sup>
3333.0	177 ± 10.7 <sup>P</sup>	148 ± 4.5 <sup>S</sup>	171 ± 3.5 <sup>S</sup>
Trial Summary	Negative	Equivocal	Negative
Positive Control <sup>2</sup>		2092 ± 18.7	1095 ± 34.3
Positive Control <sup>3</sup>	551 ± 6.7		
Positive Control <sup>4</sup>			

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## G06: Ames Summary Data

Test Compound: Calcium cyanamide

CAS Number: 156-62-7

Date Report Requested: 09/15/2018

Time Report Requested: 04:04:48

## Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	35 ± 1.5	28 ± 0.6	38 ± 3.9	32 ± 3.2	17 ± 3.0
10.0	29 ± 2.6	26 ± 2.2	43 ± 1.0	30 ± 2.0	
33.0	29 ± 4.1 <sup>s</sup>	23 ± 1.2 <sup>p</sup>	41 ± 4.0 <sup>p</sup>	30 ± 2.4 <sup>p</sup>	21 ± 1.7 <sup>p</sup>
100.0	31 ± 1.7 <sup>s</sup>	24 ± 3.5 <sup>p</sup>	39 ± 3.8 <sup>p</sup>	31 ± 4.8 <sup>p</sup>	16 ± 1.8 <sup>p</sup>
333.0	30 ± 4.9 <sup>s</sup>	20 ± 5.9 <sup>p</sup>	39 ± 0.9 <sup>s</sup>	33 ± 5.2 <sup>s</sup>	25 ± 1.3 <sup>p</sup>
1000.0	21 ± 2.1 <sup>s</sup>	24 ± 4.1 <sup>s</sup>	33 ± 5.0 <sup>s</sup>	35 ± 1.5 <sup>s</sup>	25 ± 2.0 <sup>p</sup>
3333.0					20 ± 3.6 <sup>s</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>					47 ± 1.7
Positive Control <sup>4</sup>	1362 ± 46.0	1221 ± 45.6	2322 ± 77.1	2467 ± 41.8	

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Time Report Requested: 04:04:48

## Strain: TA1535

Dose (ug/Plate)	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	14 ± 3.2	13 ± 1.8	12 ± 0.9	11 ± 2.3	10 ± 1.0
10.0					
33.0	13 ± 0.9 <sup>P</sup>	23 ± 1.0 <sup>P</sup>	16 ± 1.2 <sup>P</sup>	19 ± 2.7 <sup>P</sup>	18 ± 0.9 <sup>P</sup>
100.0	17 ± 0.6 <sup>P</sup>	15 ± 1.2 <sup>P</sup>	18 ± 1.3 <sup>P</sup>	12 ± 2.4 <sup>P</sup>	25 ± 2.6 <sup>P</sup>
333.0	18 ± 2.0 <sup>P</sup>	24 ± 4.7 <sup>P</sup>	24 ± 2.1 <sup>P</sup>	30 ± 3.3 <sup>P</sup>	22 ± 1.2 <sup>P</sup>
1000.0	16 ± 0.3 <sup>P</sup>	27 ± 0.7 <sup>P</sup>	27 ± 2.6 <sup>P</sup>	18 ± 2.8 <sup>P</sup>	20 ± 2.1 <sup>P</sup>
3333.0	24 ± 0.6 <sup>P</sup>	19 ± 3.0 <sup>S</sup>	25 ± 1.7 <sup>S</sup>	23 ± 3.2 <sup>P</sup>	30 ± 4.2 <sup>S</sup>
Trial Summary	Negative	Equivocal	Positive	Equivocal	Equivocal
Positive Control <sup>2</sup>				66 ± 4.1	69 ± 5.3
Positive Control <sup>3</sup>	56 ± 4.4	45 ± 5.0	85 ± 2.9		
Positive Control <sup>4</sup>					

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

**G06: Ames Summary Data**

Test Compound: **Calcium cyanamide**

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**Strain: TA1535**

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<b>Dose (ug/Plate)</b>	<b>With 10% Hamster S9</b>
Vehicle Control <sup>1</sup>	11 ± 1.5
10.0	
33.0	16 ± 1.3 <sup>p</sup>
100.0	17 ± 1.5 <sup>p</sup>
333.0	22 ± 0.6 <sup>p</sup>
1000.0	23 ± 2.3 <sup>p</sup>
3333.0	23 ± 2.4 <sup>p</sup>
Trial Summary	Equivocal
Positive Control <sup>2</sup>	197 ± 15.9
Positive Control <sup>3</sup>	
Positive Control <sup>4</sup>	

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Test Type: Genetic Toxicology - Bacterial  
Mutagenicity

## G06: Ames Summary Data

Test Compound: Calcium cyanamide

CAS Number: 156-62-7

Date Report Requested: 09/15/2018

Time Report Requested: 04:04:48

## Strain: TA1537

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	14 ± 1.5	5 ± 0.7	7 ± 0.9	12 ± 3.3	8 ± 0.6
10.0	21 ± 2.7	7 ± 0.7	5 ± 1.7		
33.0	11 ± 2.1 <sup>P</sup>	7 ± 0.6 <sup>P</sup>	4 ± 1.3 <sup>P</sup>	15 ± 1.5 <sup>P</sup>	8 ± 1.9 <sup>P</sup>
100.0	15 ± 0.3 <sup>P</sup>	5 ± 0.7 <sup>P</sup>	6 ± 0.6 <sup>P</sup>	9 ± 1.5 <sup>P</sup>	6 ± 1.0 <sup>P</sup>
333.0	14 ± 3.2 <sup>S</sup>	6 ± 0.9 <sup>P</sup>	6 ± 0.6 <sup>S</sup>	11 ± 1.9 <sup>P</sup>	9 ± 1.9 <sup>P</sup>
1000.0	12 ± 2.4 <sup>S</sup>	8 ± 2.9 <sup>S</sup>	3 ± 0.9 <sup>S</sup>	13 ± 3.2 <sup>P</sup>	6 ± 1.5 <sup>P</sup>
3333.0				16 ± 1.0 <sup>P</sup>	9 ± 0.7 <sup>P</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>				48 ± 2.5	56 ± 1.0
Positive Control <sup>5</sup>	199 ± 22.0	451 ± 85.2	764 ± 95.8		

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

Test Compound: Calcium cyanamide

CAS Number: 156-62-7

Date Report Requested: 09/15/2018

Time Report Requested: 04:04:48

**Strain: TA1537**

<b>Dose (ug/Plate)</b>	<b>With 10% Rat S9</b>	<b>With 10% Hamster S9</b>	<b>With 10% Hamster S9</b>
Vehicle Control <sup>1</sup>	6 ± 1.0	8 ± 2.9	10 ± 1.2
10.0			
33.0	6 ± 1.8 <sup>P</sup>	14 ± 0.6 <sup>P</sup>	5 ± 0.7 <sup>P</sup>
100.0	6 ± 0.9 <sup>P</sup>	10 ± 0.6 <sup>P</sup>	6 ± 1.2 <sup>P</sup>
333.0	7 ± 2.3 <sup>P</sup>	10 ± 1.2 <sup>P</sup>	4 ± 1.5 <sup>P</sup>
1000.0	6 ± 1.2 <sup>P</sup>	12 ± 1.2 <sup>P</sup>	7 ± 1.0 <sup>P</sup>
3333.0	6 ± 1.2 <sup>P</sup>	11 ± 1.0 <sup>P</sup>	7 ± 2.3 <sup>P</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>2</sup>		108 ± 13.1	115 ± 11.4
Positive Control <sup>3</sup>	42 ± 2.7		
Positive Control <sup>5</sup>			



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Test Compound: Calcium cyanamide

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Time Report Requested: 04:04:48

## Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	30 ± 3.9	18 ± 2.1	20 ± 1.3	59 ± 6.0	24 ± 3.2
10.0	36 ± 6.5	18 ± 2.2	19 ± 2.6		
33.0	38 ± 3.5 <sup>P</sup>	15 ± 1.2 <sup>P</sup>	21 ± 2.3 <sup>P</sup>	44 ± 1.5 <sup>P</sup>	21 ± 1.9 <sup>P</sup>
100.0	35 ± 8.7 <sup>P</sup>	19 ± 3.0 <sup>P</sup>	19 ± 2.3 <sup>P</sup>	49 ± 1.2 <sup>P</sup>	22 ± 2.3 <sup>P</sup>
333.0	31 ± 3.3 <sup>S</sup>	16 ± 0.9 <sup>P</sup>	19 ± 2.6 <sup>S</sup>	48 ± 4.6 <sup>P</sup>	28 ± 1.0 <sup>P</sup>
1000.0	26 ± 0.3 <sup>S</sup>	25 ± 4.1 <sup>S</sup>	17 ± 2.3 <sup>S</sup>	40 ± 6.1 <sup>P</sup>	24 ± 1.7 <sup>P</sup>
3333.0				51 ± 6.5 <sup>S</sup>	15 ± 1.2 <sup>P</sup>
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control <sup>2</sup>					
Positive Control <sup>3</sup>				501 ± 16.7	849 ± 31.1
Positive Control <sup>6</sup>	1097 ± 30.7	1514 ± 8.9	2077 ± 42.8		

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Test Compound: Calcium cyanamide

CAS Number: 156-62-7

Date Report Requested: 09/15/2018

Time Report Requested: 04:04:48

## Strain: TA98

Dose (ug/Plate)	With 10% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control <sup>1</sup>	22 ± 3.2	28 ± 1.7	32 ± 2.2
10.0			
33.0	25 ± 2.2 <sup>P</sup>	29 ± 1.3 <sup>P</sup>	24 ± 3.3 <sup>P</sup>
100.0	25 ± 3.3 <sup>P</sup>	30 ± 2.1 <sup>P</sup>	26 ± 4.1 <sup>P</sup>
333.0	24 ± 3.9 <sup>P</sup>	27 ± 2.9 <sup>P</sup>	23 ± 1.7 <sup>P</sup>
1000.0	27 ± 2.6 <sup>P</sup>	27 ± 2.4 <sup>P</sup>	22 ± 3.2 <sup>P</sup>
3333.0	23 ± 2.3 <sup>P</sup>	26 ± 5.7 <sup>S</sup>	27 ± 1.2 <sup>P</sup>
Trial Summary	Negative	Negative	Negative
Positive Control <sup>2</sup>		1239 ± 61.5	1026 ± 58.2
Positive Control <sup>3</sup>	424 ± 20.6		
Positive Control <sup>6</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: Water

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 \*\***