

Experiment Number: **G94009C**

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

**G06: Ames Summary Data**

Test Compound: **2,3-butanedione**

CAS Number: **431-03-8**

Date Report Requested: **09/10/2018**

Time Report Requested: **15:53:35**

**NTP Study Number:**

G94009C

**Study Result:**

Positive

Experiment Number: **G94009C**Test Type: **Genetic Toxicology - Bacterial Mutagenicity****G06: Ames Summary Data**Test Compound: **2,3-butanedione**CAS Number: **431-03-8**Date Report Requested: **09/10/2018**Time Report Requested: **15:53:35****Strain: TA100**

<b>Dose (ug/plate)</b>	<b>Without S9</b>	<b>Without S9</b>	<b>With 10% Rat S9</b>	<b>With 10% Rat S9</b>
Vehicle Control <sup>1</sup>	109 ± 4.0	93.3 ± 4.2	129.7 ± 7.4	92 ± 7.5
100	134.3 ± 8.6	105.7 ± 8.1	137.3 ± 2.3	101.3 ± 3.2
200	165 ± 10.1	152.3 ± 14.7		
250			164 ± 7.0	137.3 ± 8.4
300	155.7 ± 2.8	144.3 ± 1.2		
500	90.7 ± 5.4 <sup>s</sup>	68.7 ± 6.2 <sup>s</sup>	160 ± 5.5	176 ± 15.1
750	2 ± 1.0 <sup>s</sup>	Toxic	72 ± 12.2 <sup>s</sup>	122.3 ± 10.8 <sup>s</sup>
1000	Toxic	Toxic	17.7 ± 2.2 <sup>s</sup>	49.3 ± 6.6
2000			Toxic	Toxic
Trial Summary	Equivocal	Equivocal	Equivocal	Weakly Positive
Positive Control <sup>2</sup>	589.7 ± 35.5	677 ± 36.1		
Positive Control <sup>3</sup>			664.7 ± 54.5	543 ± 20.0

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<b>Strain: TA97a</b>				
<b>Dose (ug/plate)</b>	<b>Without S9</b>	<b>Without S9</b>	<b>With 10% Rat S9</b>	<b>With 10% Rat S9</b>
Vehicle Control <sup>1</sup>	125.5 ± 18.5	102.3 ± 8.2	149.7 ± 4.6	127 ± 7.5
100	144.7 ± 9.2	171.7 ± 15.2	155.3 ± 7.3	164.7 ± 6.4
200	182.7 ± 12.6	148.3 ± 5.9		
250			189.7 ± 18.0	194.7 ± 6.8
300	212 ± 6.4	206 ± 11.5		
500	170 ± 15.1 <sup>s</sup>	163.7 ± 18.7	250.3 ± 10.3	196.7 ± 6.4
750	166.3 ± 5.2 <sup>s</sup>	122.7 ± 11.0 <sup>s</sup>	163.7 ± 2.7 <sup>s</sup>	99.7 ± 5.2
1000	148.3 ± 5.4 <sup>s</sup>	61.3 ± 12.8 <sup>s</sup>	8.7 ± 1.2 <sup>s</sup>	13.3 ± 5.8 <sup>s</sup>
2000			Toxic	Toxic
Trial Summary	Weakly Positive	Weakly Positive	Weakly Positive	Weakly Positive
Positive Control <sup>4</sup>	1689.3 ± 31.3	2207 ± 171.6		
Positive Control <sup>5</sup>			3181 ± 288.2	2082 ± 147.5

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## G06: Ames Summary Data

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## Strain: TA98

Dose (ug/plate)	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control <sup>1</sup>	14 ± 2.5	17.3 ± 3.3	20.3 ± 2.9	21.3 ± 4.4
100	17.3 ± 2.3	26.7 ± 2.3	18.7 ± 2.3	25.7 ± 5.5
200	18 ± 0.0	20 ± 2.0		
250			22.3 ± 4.7	26 ± 2.6
300	15.7 ± 1.8	23.7 ± 2.8		
500	18.3 ± 1.5	19.3 ± 1.9	15.3 ± 3.0	23.3 ± 2.3
750	9 ± 1.2 <sup>s</sup>	9.3 ± 3.3 <sup>s</sup>	13.7 ± 0.7 <sup>s</sup>	13 ± 3.2 <sup>s</sup>
1000	3.3 ± 0.9 <sup>s</sup>	6 ± 0.6 <sup>s</sup>	2.3 ± 0.3 <sup>s</sup>	7 ± 1.0 <sup>s</sup>
2000			Toxic	Toxic
Trial Summary	Negative	Negative	Negative	Negative
Positive Control <sup>6</sup>			811 ± 42.3	1385.3 ± 80.0
Positive Control <sup>7</sup>	609 ± 36.7	595.7 ± 44.4		

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**Strain: E. coli WP2 uvrA pKM101**

<b>Dose (ug/plate)</b>	<b>Without S9</b>	<b>Without S9</b>	<b>With 10% Rat S9</b>	<b>With 10% Rat S9</b>
Vehicle Control <sup>1</sup>	140.7 ± 2.6	128 ± 8.1	174.7 ± 11.5	140 ± 2.0
100	217.7 ± 12.4	205.7 ± 17.9	262.7 ± 18.4	280.3 ± 6.3
200	279.3 ± 12.1	220.3 ± 22.9		
250			319.3 ± 13.0	269.7 ± 15.2
300	275.3 ± 14.1	260 ± 6.5		
500	271.3 ± 32.9	278.3 ± 22.8	346 ± 21.9	298.3 ± 24.7
750	165 ± 22.7 <sup>s</sup>	98 ± 15.6 <sup>s</sup>	341.7 ± 11.5	274.7 ± 13.4
1000	113 ± 18.7 <sup>s</sup>	13.3 ± 1.8	196 ± 32.7 <sup>s</sup>	179.3 ± 7.9 <sup>s</sup>
2000			Toxic	11 ± 2.1
Trial Summary	Positive	Positive	Positive	Positive
Positive Control <sup>8</sup>	2111 ± 131.7	1565.7 ± 79.4		
Positive Control <sup>9</sup>			1063 ± 69.3	1036.7 ± 33.5

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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: 1 ug/plate Sodium Azide

3: 2 ug/plate Benzo[a]pyrene

4: 0.25 ug/plate ICR191

5: 2.5 ug/plate 2-Aminoanthracene

6: 2 ug/plate 2-Aminoanthracene

7: 3 ug/plate 2-Nitrofluorene

8: 0.25 ug/plate 4-Nitroquinoline-N-oxide

9: 20 ug/plate 2-Aminoanthracene

s: Slight Toxicity

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