

Experiment Number: A13815

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

G06: Ames Summary Data

Test Compound: **Black Cohosh**

CAS Number: **84776-26-1**

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

Time Report Requested: **21:28:50**

NTP Study Number:

A13815

Study Result:

Negative

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Mutagenicity

G06: Ames Summary Data

Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

Time Report Requested: 21:28:50

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	185 ± 5.2	199 ± 11.9	185 ± 7.5	194 ± 2.6	190 ± 16.2
100.0	158 ± 17.0	221 ± 8.2	195 ± 9.2	201 ± 12.9	210 ± 7.7
333.0	199 ± 12.3	221 ± 13.7	187 ± 4.5	217 ± 21.7	211 ± 16.3
1000.0	164 ± 2.6	238 ± 5.9	218 ± 8.0	233 ± 15.5	225 ± 14.0
3333.0	169 ± 1.2	192 ± 5.9	214 ± 27.9	189 ± 14.4	212 ± 5.7
10000.0	173 ± 7.5	207 ± 20.5	219 ± 10.4	206 ± 10.7	243 ± 4.8
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					647 ± 24.4
Positive Control ³	642 ± 25.5	668 ± 15.3			
Positive Control ⁴			843 ± 58.4		
Positive Control ⁵					
Positive Control ⁶				1450 ± 184.5	

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Test Compound: Black Cohosh
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Date Report Requested: 09/15/2018
Time Report Requested: 21:28:50

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	174 ± 3.8
100.0	213 ± 6.4
333.0	199 ± 4.6
1000.0	227 ± 11.8
3333.0	209 ± 9.2
10000.0	233 ± 4.9
Trial Summary	Negative
Positive Control ²	
Positive Control ³	
Positive Control ⁴	
Positive Control ⁵	1641 ± 68.0
Positive Control ⁶	

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Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control ¹	20 ± 4.9	14 ± 1.8	24 ± 5.1	21 ± 2.4	25 ± 2.9
100.0	26 ± 2.1	14 ± 3.2	19 ± 1.0	25 ± 1.9	20 ± 1.2
333.0	17 ± 2.0	14 ± 2.6	22 ± 3.8	23 ± 0.9	21 ± 2.7
1000.0	26 ± 1.5	14 ± 2.7	24 ± 3.5	17 ± 3.2	24 ± 1.8
3333.0	28 ± 2.1	15 ± 1.8	20 ± 3.5	24 ± 2.1	34 ± 3.5
10000.0	37 ± 3.3	11 ± 1.0	22 ± 2.7	21 ± 1.7	26 ± 2.4
Trial Summary	Equivocal	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³	316 ± 28.7	183 ± 10.2	379 ± 27.2		
Positive Control ⁵					
Positive Control ⁶				221 ± 18.2	177 ± 6.5

Experiment Number: A13815

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Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

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Strain: TA1535

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	19 ± 1.9	21 ± 1.9
100.0	21 ± 1.2	23 ± 3.2
333.0	24 ± 2.9	23 ± 0.7
1000.0	20 ± 0.7	24 ± 2.6
3333.0	17 ± 0.7	16 ± 1.7
10000.0	21 ± 0.7	22 ± 1.0
Trial Summary	Negative	Negative
Positive Control ²	99 ± 8.2	
Positive Control ³		
Positive Control ⁵		317 ± 35.9
Positive Control ⁶		

Experiment Number: A13815
Test Type: Genetic Toxicology - Bacterial
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CAS Number: 84776-26-1

Date Report Requested: 09/15/2018
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Strain: TA1537

Dose (ug/Plate)	With 10% Rat S9
Vehicle Control ¹	7 ± 0.9
100.0	5 ± 1.5
333.0	5 ± 1.5
1000.0	4 ± 0.9
3333.0	4 ± 0.7
10000.0	7 ± 0.9
Trial Summary	Negative
Positive Control ⁶	365 ± 33.5

Experiment Number: A13815

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

Time Report Requested: 21:28:50

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 10% Rat S9
Vehicle Control ¹				157 ± 17.0	
Vehicle Control ¹	125 ± 11.0	179 ± 7.3	124 ± 5.9		153 ± 2.1
3.3					
10.0					
33.0					
100.0	138 ± 7.1	165 ± 6.7	125 ± 5.2		175 ± 9.0
100.0				154 ± 4.5	
333.0	138 ± 6.4	190 ± 13.9	124 ± 5.7		153 ± 13.4
333.0				146 ± 9.9	
1000.0	127 ± 2.3	184 ± 8.1	121 ± 6.2		179 ± 1.0
1000.0				161 ± 6.0	
3333.0	142 ± 2.1	227 ± 5.6	129 ± 7.2		171 ± 25.4
3333.0				160 ± 4.1	
10000.0				201 ± 16.6	
10000.0	132 ± 6.8	191 ± 2.7	125 ± 5.8		196 ± 6.7
Trial Summary	Negative	Equivocal	Negative	Negative	Negative
Positive Control ⁴					
Positive Control ⁶					1100 ± 78.8
Positive Control ⁷				1358 ± 30.3	
Positive Control ⁸	865 ± 101.2	669 ± 28.6	778 ± 74.4		

Experiment Number: A13815
 Test Type: Genetic Toxicology - Bacterial
 Mutagenicity

G06: Ames Summary Data
 Test Compound: Black Cohosh
 CAS Number: 84776-26-1

Date Report Requested: 09/15/2018
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Strain: TA97

Dose (ug/Plate)	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹				
Vehicle Control ¹	152 ± 7.3	176 ± 20.1	154 ± 13.8	155 ± 12.8
3.3			178 ± 10.0	
10.0			145 ± 5.8	
33.0			151 ± 4.0	
100.0	152 ± 6.5	221 ± 8.2	141 ± 7.9	157 ± 8.1
100.0				
333.0	158 ± 6.9	202 ± 9.4	154 ± 6.9	150 ± 12.9
333.0				
1000.0	168 ± 6.1	218 ± 5.9		169 ± 10.4
1000.0				
3333.0	157 ± 11.9	147 ± 7.6		145 ± 9.1
3333.0				
10000.0				
10000.0	160 ± 3.8	187 ± 12.9		133 ± 6.0
Trial Summary	Negative	Equivocal	Negative	Negative
Positive Control ⁴		1439 ± 127.9	1384 ± 89.3	
Positive Control ⁶	609 ± 4.4			1331 ± 37.8
Positive Control ⁷				
Positive Control ⁸				

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

Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	14 ± 1.5	17 ± 1.7	22 ± 4.1	16 ± 1.8	28 ± 3.8
100.0	12 ± 2.9	23 ± 0.9	19 ± 3.2	16 ± 3.8	24 ± 4.1
333.0	11 ± 1.2	17 ± 2.4	23 ± 1.8	18 ± 3.3	28 ± 4.6
1000.0	17 ± 3.5	20 ± 1.2	20 ± 3.0	18 ± 0.3	14 ± 1.9
3333.0	15 ± 0.9	16 ± 1.2	24 ± 1.9	20 ± 3.3	25 ± 1.0
10000.0	12 ± 0.9	22 ± 3.2	20 ± 1.9	15 ± 3.8	25 ± 1.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²			329 ± 42.4		1240 ± 58.5
Positive Control ⁹	101 ± 6.4	92 ± 4.0			
Positive Control ⁵				367 ± 19.7	

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G06: Ames Summary Data

Test Compound: **Black Cohosh**

CAS Number: **84776-26-1**

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

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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	24 ± 4.5
100.0	22 ± 2.6
333.0	18 ± 0.9
1000.0	17 ± 2.6
3333.0	21 ± 0.6
10000.0	24 ± 1.2
Trial Summary	Negative
Positive Control ²	
Positive Control ⁹	
Positive Control ⁵	1360 ± 27.0

Experiment Number: A13815

Test Type: Genetic Toxicology - Bacterial
Mutagenicity

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Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

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Strain: TA102

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	314 ± 7.8	209 ± 3.2	274 ± 3.5	350 ± 3.6	297 ± 11.6
100.0	304 ± 14.9	263 ± 17.7	252 ± 15.9	334 ± 16.2	235 ± 22.9
333.0	302 ± 9.8	216 ± 6.1	265 ± 26.4	374 ± 16.6	265 ± 16.7
1000.0	316 ± 19.5	236 ± 13.2	289 ± 7.1	343 ± 19.9	266 ± 26.5
3333.0	309 ± 4.4	178 ± 17.2	319 ± 20.0	368 ± 13.9	304 ± 19.7
10000.0	269 ± 17.2	210 ± 6.9	317 ± 12.3	399 ± 14.2	266 ± 11.3
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ¹⁰				1034 ± 27.1	
Positive Control ¹¹			1189 ± 98.2		992 ± 78.4
Positive Control ¹²	1022 ± 4.5	847 ± 55.3			

Experiment Number: A13815
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Black Cohosh
CAS Number: 84776-26-1

Date Report Requested: 09/15/2018
Time Report Requested: 21:28:50

Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	367 ± 4.2
100.0	350 ± 55.2
333.0	376 ± 8.7
1000.0	333 ± 20.8
3333.0	371 ± 6.0
10000.0	313 ± 11.0
Trial Summary	Negative
Positive Control ¹⁰	1162 ± 21.9
Positive Control ¹¹	
Positive Control ¹²	

Experiment Number: A13815

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

Test Compound: Black Cohosh

CAS Number: 84776-26-1

Date Report Requested: 09/15/2018

Time Report Requested: 21:28:50

Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control ¹	270 ± 9.0	225 ± 4.4	279 ± 7.0	271 ± 21.9	245 ± 10.6
100.0	312 ± 4.5	247 ± 3.9	232 ± 32.4	255 ± 12.5	248 ± 10.1
333.0	311 ± 16.7	212 ± 10.7	221 ± 13.8	271 ± 4.9	211 ± 11.7
1000.0	336 ± 8.5	249 ± 12.5	260 ± 9.7	284 ± 4.7	253 ± 13.9
3333.0	291 ± 8.5	233 ± 4.1	250 ± 11.6	291 ± 16.8	249 ± 5.5
10000.0	302 ± 15.9	223 ± 7.9	302 ± 13.7	295 ± 5.6	265 ± 6.4
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ¹³			1470 ± 21.6	1567 ± 7.2	943 ± 15.0
Positive Control ¹⁴	976 ± 14.0	834 ± 20.1			

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Test Compound: Black Cohosh
CAS Number: 84776-26-1

Date Report Requested: 09/15/2018
Time Report Requested: 21:28:50

Strain: TA104

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	256 ± 8.5
100.0	271 ± 5.9
333.0	267 ± 24.0
1000.0	250 ± 9.6
3333.0	252 ± 13.9
10000.0	234 ± 13.7
Trial Summary	Negative
Positive Control ¹³	849 ± 56.7
Positive Control ¹⁴	

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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: Dimethyl Sulfoxide
- 2: 0.4 ug/Plate 2-Aminoanthracene
- 3: 0.5 ug/Plate Sodium Azide
- 4: 0.75 ug/Plate 2-Aminoanthracene
- 5: 1.0 ug/Plate 2-Aminoanthracene
- 6: 2.0 ug/Plate 2-Aminoanthracene
- 7: 2.0 nmoles/L 2-Aminoanthracene
- 8: 24.0 ug/Plate 9-Aminoacridine
- 9: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine
- 10: 5.0 ug/Plate Sterigmatocystin
- 11: 10.0 ug/Plate Sterigmatocystin
- 12: 75.0 ug/Plate Other Positive Control
- 13: 4.0 ug/Plate 2-Aminoanthracene
- 14: 75.0 ug/Plate Methyl Methane Sulfonate

**** END OF REPORT ****