

Experiment Number: A23522

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

G06: Ames Summary Data

Test Compound: **Isophytol**

CAS Number: **505-32-8**

Date Report Requested: **09/16/2018**

Time Report Requested: **14:01:44**

NTP Study Number:

A23522

Study Result:

Negative

Experiment Number: A23522
 Test Type: Genetic Toxicology - Bacterial
 Mutagenicity

G06: Ames Summary Data
 Test Compound: Isophytol
 CAS Number: 505-32-8

Date Report Requested: 09/16/2018
 Time Report Requested: 14:01:44

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	159 ± 6.5	125 ± 5.5	106 ± 4.0	100 ± 3.5	139 ± 6.1
3.0					
10.0					
33.0					
100.0	152 ± 7.0	137 ± 0.6	99 ± 4.3	99 ± 0.9	152 ± 2.4
333.0	137 ± 12.1	114 ± 11.6	93 ± 5.7	100 ± 3.3	152 ± 3.6
1000.0	154 ± 7.0	129 ± 7.0	92 ± 5.5	106 ± 1.5	145 ± 10.8
3333.0	145 ± 4.4	142 ± 3.5	95 ± 2.2 ^x	95 ± 11.2 ^x	152 ± 9.7
10000.0	142 ± 11.3 ^p	144 ± 6.8 ^p	103 ± 9.8 ^x	120 ± 5.4 ^x	154 ± 12.0 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³					558 ± 45.3
Positive Control ⁴					
Positive Control ⁵	901 ± 16.9	729 ± 7.5	943 ± 19.4	841 ± 15.2	

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G06: Ames Summary Data

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

Time Report Requested: 14:01:44

CAS Number: 505-32-8

Strain: TA100

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	107 ± 1.2	135 ± 3.4	112 ± 3.5	140 ± 9.6	110 ± 13.5
3.0					
10.0					
33.0					
100.0	102 ± 4.6	147 ± 11.8	114 ± 11.9	135 ± 6.9	100 ± 9.0
333.0	107 ± 5.2	164 ± 10.8	114 ± 1.5	135 ± 1.9	102 ± 4.5
1000.0	100 ± 8.7	136 ± 14.2	100 ± 3.3	141 ± 7.4	96 ± 10.0
3333.0	113 ± 2.3 ^x	158 ± 14.2	123 ± 4.3 ^x	158 ± 4.3	101 ± 6.4 ^x
10000.0	110 ± 6.5 ^x	154 ± 18.0 ^p	119 ± 3.8 ^x	145 ± 6.9 ^p	99 ± 9.4 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²				599 ± 2.6	544 ± 17.2
Positive Control ³	680 ± 18.0				
Positive Control ⁴		559 ± 18.8	569 ± 29.2		
Positive Control ⁵					

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Test Compound: Isophytol
CAS Number: 505-32-8

Date Report Requested: 09/16/2018
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Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	163 ± 7.5	121 ± 6.4
3.0		
10.0		
33.0		
100.0	166 ± 9.2	109 ± 1.2
333.0	165 ± 11.3	94 ± 7.3
1000.0	179 ± 6.4	100 ± 3.8
3333.0	160 ± 1.2	101 ± 5.7 ^x
10000.0	180 ± 3.2 ^p	115 ± 5.0 ^x
Trial Summary	Negative	Negative
Positive Control ²		
Positive Control ³	687 ± 20.5	675 ± 43.2
Positive Control ⁴		
Positive Control ⁵		

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Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	10 ± 1.5	19 ± 2.2	8 ± 1.2	12 ± 2.0	16 ± 2.2
100.0	11 ± 1.5	15 ± 1.8	12 ± 2.0	14 ± 2.2	12 ± 2.1
333.0	7 ± 0.3	18 ± 2.6	9 ± 0.9	13 ± 4.5	11 ± 2.1
1000.0	9 ± 1.7	19 ± 1.2	9 ± 0.9	11 ± 2.3	12 ± 2.0
3333.0	9 ± 1.2	20 ± 4.9	9 ± 0.6 ^x	10 ± 1.2 ^x	14 ± 1.2
10000.0	8 ± 1.0 ^p	17 ± 3.5 ^p	10 ± 1.8 ^x	10 ± 1.5 ^x	12 ± 0.9 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³					
Positive Control ⁴					129 ± 8.5
Positive Control ⁵	757 ± 21.1	840 ± 17.0	955 ± 41.0	952 ± 22.9	
Positive Control ⁶					

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G06: Ames Summary Data

Test Compound: Isophytol

CAS Number: 505-32-8

Date Report Requested: 09/16/2018

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Strain: TA1535

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	12 ± 0.6	11 ± 0.6	10 ± 1.0	9 ± 0.6	12 ± 3.0
100.0	6 ± 1.8	10 ± 1.0	10 ± 1.2	12 ± 2.4	10 ± 1.2
333.0	8 ± 1.8	9 ± 0.9	9 ± 0.7	10 ± 0.6	8 ± 1.8
1000.0	10 ± 0.9	10 ± 1.5	8 ± 0.7	9 ± 0.6	9 ± 0.3
3333.0	10 ± 0.9 ^x	8 ± 0.6	12 ± 2.4 ^x	14 ± 1.7	8 ± 0.9 ^x
10000.0	14 ± 1.5 ^x	9 ± 1.2 ^p	9 ± 2.6 ^x	10 ± 3.2 ^p	10 ± 1.3 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ³				132 ± 12.9	146 ± 17.2
Positive Control ⁴	193 ± 14.2				
Positive Control ⁵					
Positive Control ⁶		202 ± 22.4	158 ± 7.4		

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Test Compound: Isophytol
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Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	6 ± 0.7	9 ± 2.3
100.0	8 ± 0.3	9 ± 1.7
333.0	12 ± 2.6	9 ± 1.0
1000.0	8 ± 0.7	10 ± 1.5
3333.0	8 ± 0.9	8 ± 0.7 ^x
10000.0	10 ± 1.7 ^p	10 ± 2.1 ^x
Trial Summary	Negative	Negative
Positive Control ³		
Positive Control ⁴	166 ± 13.7	171 ± 0.9
Positive Control ⁵		
Positive Control ⁶		

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Mutagenicity

Test Compound: Isophytol

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CAS Number: 505-32-8

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	117 ± 6.7	155 ± 6.3	108 ± 3.3	133 ± 10.0	184 ± 11.2
100.0	118 ± 11.0	163 ± 3.1	97 ± 10.0	127 ± 7.1	177 ± 13.6
333.0	145 ± 9.9	167 ± 5.9	88 ± 3.2	124 ± 4.4	196 ± 18.2
1000.0	151 ± 14.0	163 ± 2.3	103 ± 3.2	114 ± 4.5	189 ± 17.3
3333.0	139 ± 5.8	170 ± 4.7	97 ± 5.4 ^x	110 ± 10.7 ^x	204 ± 11.7
10000.0	159 ± 9.5 ^p	179 ± 3.8 ^p	102 ± 3.2 ^x	135 ± 7.1 ^x	184 ± 13.5 ^p
Trial Summary	Equivocal	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³					632 ± 26.5
Positive Control ⁴					
Positive Control ⁷	551 ± 16.8	563 ± 51.8	460 ± 19.8	360 ± 23.8	

Experiment Number: A23522

G06: Ames Summary Data

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

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CAS Number: 505-32-8

Strain: TA97

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	152 ± 12.3	158 ± 16.5	125 ± 3.2	153 ± 7.0	129 ± 7.5
100.0	166 ± 5.9	143 ± 2.6	140 ± 2.4	146 ± 10.9	128 ± 3.9
333.0	172 ± 16.6	133 ± 8.6	144 ± 1.8	159 ± 6.0	134 ± 3.5
1000.0	159 ± 9.9	154 ± 19.9	136 ± 4.5	170 ± 1.5	135 ± 1.7
3333.0	128 ± 1.2 ^x	174 ± 15.1	162 ± 3.8 ^x	170 ± 9.7	131 ± 4.1 ^x
10000.0	138 ± 4.3 ^x	141 ± 10.4 ^p	168 ± 9.5 ^x	174 ± 4.7 ^p	121 ± 10.5 ^x
Trial Summary	Negative	Negative	Equivocal	Negative	Negative
Positive Control ²				670 ± 7.5	661 ± 7.6
Positive Control ³	576 ± 19.1				
Positive Control ⁴		856 ± 58.3	567 ± 23.7		
Positive Control ⁷					

Experiment Number: A23522
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Isophytol
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Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	158 ± 7.7	112 ± 0.9
100.0	151 ± 3.5	113 ± 5.8
333.0	163 ± 6.8	101 ± 5.0
1000.0	172 ± 7.2	116 ± 7.7
3333.0	149 ± 9.6	115 ± 5.8 ^x
10000.0	160 ± 17.4 ^p	121 ± 9.1 ^x
Trial Summary	Negative	Negative
Positive Control ²		
Positive Control ³	729 ± 10.4	605 ± 6.4
Positive Control ⁴		
Positive Control ⁷		

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Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data

Test Compound: Isophytol

CAS Number: 505-32-8

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Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 10% Rat S9
Vehicle Control ¹	25 ± 3.1	25 ± 1.8	17 ± 2.3	22 ± 2.2	31 ± 2.1
100.0	32 ± 2.3	27 ± 4.2	13 ± 2.3	19 ± 1.2	32 ± 3.6
333.0	26 ± 2.9	25 ± 0.7	17 ± 1.9	20 ± 1.5	37 ± 5.4
1000.0	25 ± 3.8	30 ± 1.7	16 ± 3.2	28 ± 2.0	31 ± 4.2
3333.0	28 ± 4.0	27 ± 0.9	19 ± 2.1 ^x	19 ± 3.3 ^x	33 ± 2.7
10000.0	25 ± 6.0 ^p	26 ± 0.3 ^p	20 ± 3.4 ^x	24 ± 5.2 ^x	37 ± 1.2 ^p
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²					
Positive Control ³					702 ± 62.0
Positive Control ⁸	432 ± 18.4	284 ± 1.8	371 ± 27.8	406 ± 11.3	
Positive Control ⁴					

Experiment Number: A23522

G06: Ames Summary Data

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Mutagenicity**Test Compound: **Isophytol**

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CAS Number: 505-32-8

Strain: TA98

Dose (ug/Plate)	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9	With 10% Hamster S9	With 10% Hamster S9
Vehicle Control ¹	25 ± 4.3	28 ± 3.6	16 ± 1.3	30 ± 2.0	27 ± 4.7
100.0	24 ± 2.0	28 ± 5.8	17 ± 2.6	29 ± 3.6	23 ± 0.3
333.0	23 ± 4.4	27 ± 6.2	15 ± 4.9	31 ± 2.0	20 ± 2.8
1000.0	22 ± 1.7	36 ± 6.2	17 ± 0.6	27 ± 2.2	27 ± 4.5
3333.0	23 ± 2.9 ^x	31 ± 3.9	18 ± 2.1 ^x	30 ± 2.1	27 ± 2.8 ^x
10000.0	25 ± 2.0 ^x	23 ± 3.1 ^p	19 ± 5.4 ^x	33 ± 2.7 ^p	30 ± 1.9 ^x
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control ²				681 ± 44.7	843 ± 8.3
Positive Control ³	545 ± 14.5				
Positive Control ⁸					
Positive Control ⁴		368 ± 12.8	457 ± 21.6		

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Test Compound: Isophytol
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Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	35 ± 3.4	18 ± 2.5
100.0	35 ± 6.1	17 ± 1.2
333.0	29 ± 2.3	19 ± 4.4
1000.0	40 ± 8.4	18 ± 2.3
3333.0	30 ± 5.8	19 ± 4.9 ^x
10000.0	29 ± 3.6 ^p	12 ± 6.2 ^x
Trial Summary	Negative	Negative
Positive Control ²		
Positive Control ³	424 ± 22.4	499 ± 12.2
Positive Control ⁸		
Positive Control ⁴		

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

Test Compound: Isophytol

CAS Number: 505-32-8

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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	269 ± 5.0	152 ± 7.8	239 ± 24.4	333 ± 21.5	264 ± 13.3
100.0	302 ± 6.6	150 ± 12.8	239 ± 2.9	380 ± 8.5	264 ± 17.5
333.0	288 ± 29.4	158 ± 6.2	254 ± 2.0	352 ± 25.2	271 ± 8.3
1000.0	291 ± 11.7	159 ± 5.9	276 ± 17.9	411 ± 18.2	271 ± 14.4
3333.0	271 ± 13.0	158 ± 9.5	226 ± 10.7	332 ± 43.2	258 ± 27.4
10000.0	310 ± 5.5 ^p	181 ± 3.3 ^p	281 ± 11.9 ^p	332 ± 25.7 ^p	275 ± 7.5 ^p
Trial Summary	Negative	Negative	Negative	Equivocal	Negative
Positive Control ⁹	1094 ± 25.8	862 ± 27.9			
Positive Control ⁶			769 ± 31.5	1112 ± 36.9	914 ± 36.3

Experiment Number: A23522
Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Isophytol
CAS Number: 505-32-8

Date Report Requested: 09/16/2018
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Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control ¹	387 ± 14.1
100.0	412 ± 11.0
333.0	345 ± 36.9
1000.0	416 ± 35.2
3333.0	377 ± 8.8
10000.0	382 ± 13.7 ^P
Trial Summary	Negative
Positive Control ⁹	
Positive Control ⁶	2400 ± 138.4

Experiment Number: A23522
 Test Type: Genetic Toxicology - Bacterial
 Mutagenicity

G06: Ames Summary Data
 Test Compound: Isophytol
 CAS Number: 505-32-8

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Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control ¹	355 ± 21.2	259 ± 18.1	338 ± 20.5	458 ± 13.9	328 ± 21.9
100.0	379 ± 15.5	262 ± 9.0	337 ± 12.2	477 ± 5.7	339 ± 5.5
333.0	347 ± 26.4	258 ± 10.8	333 ± 16.7	434 ± 16.5	264 ± 7.8
1000.0	330 ± 11.4	295 ± 3.2	351 ± 19.8	635 ± 41.6	325 ± 23.1
3333.0	368 ± 10.7	278 ± 3.0	380 ± 10.0	684 ± 53.1	366 ± 13.0
10000.0	363 ± 9.0 ^p	299 ± 28.1 ^p	351 ± 12.1 ^p	614 ± 52.6 ^p	321 ± 34.7 ^p
Trial Summary	Negative	Negative	Negative	Equivocal	Negative
Positive Control ⁶			946 ± 19.1	1157 ± 29.4	944 ± 14.0
Positive Control ¹⁰	839 ± 19.9	983 ± 36.7			

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Test Type: Genetic Toxicology - Bacterial
Mutagenicity

G06: Ames Summary Data
Test Compound: Isophytol
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Strain: TA104

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control ¹	384 ± 13.8	431 ± 8.7
100.0	400 ± 8.1	462 ± 22.1
333.0	396 ± 15.5	445 ± 16.4
1000.0	391 ± 27.8	444 ± 5.1
3333.0	353 ± 17.7	443 ± 27.1
10000.0	409 ± 11.4 ^p	452 ± 42.8 ^p
Trial Summary	Negative	Negative
Positive Control ⁶	1176 ± 28.1	1214 ± 103.6
Positive Control ¹⁰		

Experiment Number: A23522

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

G06: Ames Summary Data

Test Compound: **Isophytol**

CAS Number: **505-32-8**

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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: 1.0 ug/Plate 2-Aminoanthracene

3: 2.0 ug/Plate 2-Aminoanthracene

4: 5.0 ug/Plate 2-Aminoanthracene

5: 5.0 ug/Plate Sodium Azide

6: 10.0 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: 250.0 ug/Plate Methyl Methane Sulfonate

p: Precipitate

x: Slight Toxicity and Precipitate

**** END OF REPORT ****