NTP Study Number: A14572

Study Result: Equivocal

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	158 ± 8.1	188 ± 9.8	182 ± 8.9	154 ± 9.0	195 ± 2.6
100.0	172 ± 5.9	185 ± 3.2	199 ± 11.4	149 ± 9.8	178 ± 2.9
333.0	185 ± 8.0	181 ± 5.0	195 ± 7.2	154 ± 9.6	188 ± 4.6
1000.0	170 ± 5.9	170 ± 9.0	208 ± 13.1	174 ± 3.5	195 ± 3.8
3333.0	161 ± 8.2	169 ± 6.5	186 ± 16.3	165 ± 7.8	186 ± 5.7
10000.0	171 ± 6.5	177 ± 4.8	165 ± 11.6	180 ± 7.7	161 ± 9.9
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[2]					759 ± 33.3
Positive Control[3]	525 ± 16.7	651 ± 6.4			
Positive Control[4]			764 ± 7.5		
Positive Control[5]					
Positive Control[6]				880 ± 102.9	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA100

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	158 ± 8.4
100.0	158 ± 2.4
333.0	178 ± 10.8
1000.0	181 ± 3.5
3333.0	172 ± 2.0
10000.0	159 ± 3.6
Trial Summary	Negative
Positive Control[2]	
Positive Control[3]	
Positive Control[4]	
Positive Control[5]	1160 ± 74.6
Positive Control[6]	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	16 ± 2.3	20 ± 2.2	14 ± 2.5	13 ± 1.0	15 ± 1.0
100.0	13 ± 1.5	17 ± 2.1	16 ± 1.2	13 ± 2.6	13 ± 0.9
333.0	13 ± 1.2	16 ± 4.5	15 ± 1.9	20 ± 1.0	13 ± 0.9
1000.0	15 ± 2.2	15 ± 2.0	11 ± 1.3	11 ± 2.1	10 ± 1.7
3333.0	15 ± 4.0	15 ± 2.3	13 ± 1.9	14 ± 0.5	10 ± 1.2
10000.0	11 ± 1.5	17 ± 1.0	13 ± 0.9	14 ± 1.5	9 ± 3.1
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[2]					133 ± 2.2
Positive Control[3]	231 ± 1.9	197 ± 24.0			
Positive Control[5]					
Positive Control[6]			319 ± 14.5	126 ± 20.7	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	20 ± 0.3
100.0	17 ± 1.2
333.0	21 ± 2.7
1000.0	16 ± 5.6
3333.0	15 ± 1.5
10000.0	17 ± 2.0
Trial Summary	Negative
Positive Control[2]	
Positive Control[3]	
Positive Control[5]	262 ± 8.8
Positive Control[6]	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA1537

Dose (ug/Plate)	With 30% Rat S9
Vehicle Control[1]	9 ± 0.7
100.0	7 ± 2.0
333.0	6 ± 1.9
1000.0	5 ± 1.2
3333.0	7 ± 2.2
10000.0	10 ± 1.7
Trial Summary	Negative
Positive Control[6]	155 ± 11.2

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 30% Rat S9
Vehicle Control[1]	151 ± 8.5	161 ± 13.0	140 ± 14.7	199 ± 13.9	193 ± 14.8
100.0	137 ± 4.2	148 ± 18.5	153 ± 10.2	201 ± 13.4	221 ± 18.1
333.0	145 ± 9.5	153 ± 3.9	153 ± 9.5	219 ± 18.7	220 ± 8.8
1000.0	163 ± 6.4	137 ± 5.2	134 ± 12.2	232 ± 7.7	238 ± 3.6
3333.0	144 ± 7.9	130 ± 9.5	151 ± 6.2	254 ± 10.1	225 ± 4.1
10000.0	160 ± 5.8	141 ± 4.0	166 ± 5.9	268 ± 6.3	230 ± 10.2
Trial Summary	Negative	Negative	Negative	Equivocal	Equivocal
Positive Control[4]					
Positive Control[6]			1116 ± 30.6	696 ± 28.3	626 ± 23.1
Positive Control[7]	1137 ± 190.9	646 ± 15.6			

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA97

Dose (ug/Plate)	With 10% Hamster S9	With 30% Hamster S9
Vehicle Control[1]	210 ± 4.7	180 ± 6.6
100.0	202 ± 7.2	195 ± 7.8
333.0	190 ± 18.5	172 ± 12.3
1000.0	241 ± 8.5	176 ± 4.5
3333.0	172 ± 14.7	125 ± 41.5
10000.0	212 ± 15.3	163 ± 4.9
Trial Summary	Negative	Negative
Positive Control[4]	1147 ± 71.6	
Positive Control[6]		1640 ± 9.6
Positive Control[7]		

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	19 ± 2.3	13 ± 0.9	23 ± 2.2	26 ± 5.5	23 ± 2.7
100.0	17 ± 2.3	10 ± 1.5	18 ± 0.9	22 ± 2.6	16 ± 3.0
333.0	20 ± 2.0	9 ± 0.6	19 ± 1.5	19 ± 1.2	21 ± 3.5
1000.0	19 ± 1.5	12 ± 0.3	20 ± 2.8	22 ± 1.5	18 ± 1.3
3333.0	21 ± 2.3	10 ± 2.7	30 ± 1.3	29 ± 2.7	15 ± 1.3
10000.0	25 ± 0.6	12 ± 1.7	18 ± 2.0	24 ± 1.2	16 ± 2.4
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[2]			640 ± 83.3		909 ± 55.5
Positive Control[8]	96 ± 1.2	82 ± 8.1			
Positive Control[5]				278 ± 27.0	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	26 ± 3.4
100.0	25 ± 1.2
333.0	22 ± 4.3
1000.0	22 ± 5.2
3333.0	16 ± 1.5
10000.0	22 ± 4.9
Trial Summary	Negative
Positive Control[2]	
Positive Control[8]	
Positive Control[5]	906 ± 42.2

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA102

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	282 ± 15.5	367 ± 6.1	418 ± 14.3	336 ± 12.0	330 ± 53.9
100.0	340 ± 12.6	356 ± 4.4	357 ± 12.4	269 ± 5.5	361 ± 108.7
333.0	347 ± 23.9	305 ± 23.2	372 ± 10.0	266 ± 14.5	392 ± 24.1
1000.0	345 ± 27.2	349 ± 18.7	442 ± 38.1	247 ± 9.7	367 ± 18.6
3333.0	318 ± 0.6	304 ± 11.2	442 ± 16.2	227 ± 25.5	392 ± 29.6
10000.0	297 ± 2.2	312 ± 13.4	362 ± 24.2	263 ± 6.5	400 ± 33.2
Trial Summary	Equivocal	Negative	Negative	Negative	Negative
Positive Control[9]				1493 ± 73.2	
Positive Control[10]			1988 ± 86.9		2278 ± 51.0
Positive Control[11]	1361 ± 23.4	1336 ± 58.1			

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	293 ± 34.1
100.0	246 ± 28.9
333.0	281 ± 5.2
1000.0	254 ± 12.2
3333.0	280 ± 11.6
10000.0	201 ± 5.5
Trial Summary	Negative
Positive Control[9]	1788 ± 64.5
Positive Control[10]	
Positive Control[11]	

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	203 ± 0.9	235 ± 9.7	328 ± 10.7	214 ± 9.4	228 ± 8.0
100.0	170 ± 8.2	335 ± 46.3	328 ± 17.9	174 ± 4.2	207 ± 13.3
333.0	177 ± 6.5	299 ± 6.3	253 ± 10.0	175 ± 22.0	213 ± 15.6
1000.0	148 ± 5.7	349 ± 4.5	297 ± 16.2	174 ± 8.7	226 ± 5.0
3333.0	152 ± 8.9	325 ± 22.3	322 ± 2.4	215 ± 16.2	219 ± 18.3
10000.0	136 ± 17.9	331 ± 12.6	309 ± 20.9	149 ± 6.4	200 ± 16.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[12]			2136 ± 59.9	1096 ± 32.4	1608 ± 44.1
Positive Control[13]	655 ± 23.1	761 ± 15.2			

Experiment Number: **A14572**

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

G06: Ames Summary Data

Test Compound: **Aluminum citrate**

CAS Number: **31142-56-0**

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

Time Report Requested: **01:23:14**

Strain: TA104

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	208 ± 5.8
100.0	209 ± 2.5
333.0	172 ± 4.7
1000.0	189 ± 11.2
3333.0	187 ± 10.1
10000.0	162 ± 8.0
Trial Summary	Negative
Positive Control[12]	1217 ± 88.9
Positive Control[13]	

LEGEND

Values given as Mean or Mean ± 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: 0.4 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: 24.0 ug/Plate 9-Aminoacridine
8: 1.0 ug/Plate 4-Nitro-O-Phenylenediamine
9: 5.0 ug/Plate Sterigmatocystin
10: 10.0 ug/Plate Sterigmatocystin
11: 75.0 ug/Plate Other Positive Control
12: 4.0 ug/Plate 2-Aminoanthracene
13: 75.0 ug/Plate Methyl Methane Sulfonate

** END OF REPORT **