NTP Study Number: 163312

Study Result: Equivocal

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA100

Dose (ug/Plate)	Without S9	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control[1]	116 ± 0.7	101 ± 6.1	115 ± 11.7	133 ± 1.5	170 ± 3.5
100.0	111 ± 6.3			126 ± 5.0	181 ± 3.5
333.0	116 ± 10.3	93 ± 4.5	112 ± 4.2	148 ± 7.3	163 ± 7.3
1000.0	107 ± 9.3	110 ± 8.7	133 ± 7.7	138 ± 4.1	182 ± 7.0
3333.0	105 ± 5.5	126 ± 7.0	134 ± 3.5	145 ± 7.8	173 ± 9.2
6666.0		131 ± 3.7	142 ± 5.3		
10000.0	150 ± 8.2	136 ± 7.2	161 ± 1.5	144 ± 7.1	159 ± 16.4
Trial Summary	Equivocal	Equivocal	Equivocal	Negative	Negative
Positive Control[2]					
Positive Control[3]				476 ± 17.2	
Positive Control[4]					346 ± 16.4
Positive Control[5]	821 ± 20.1	612 ± 36.0	457 ± 4.8		

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA100

Dose (ug/Plate)	With 5% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control[1]	151 ± 4.3	142 ± 10.4	149 ± 17.6	119 ± 11.9	140 ± 1.9
100.0			161 ± 12.6		
333.0	142 ± 7.0	146 ± 8.3	151 ± 8.9	122 ± 3.6	131 ± 7.4
1000.0	153 ± 1.3	141 ± 1.5	147 ± 10.1	128 ± 4.0	139 ± 5.9
3333.0	148 ± 4.0	140 ± 0.3	170 ± 9.5	139 ± 3.5	138 ± 8.5
6666.0	153 ± 1.3	139 ± 6.4		140 ± 8.8	141 ± 5.8
10000.0	145 ± 7.3	155 ± 6.7	185 ± 14.3	161 ± 12.0	179 ± 4.7
Trial Summary	Negative	Negative	Negative	Equivocal	Equivocal
Positive Control[2]	1470 ± 31.7	1245 ± 63.8			
Positive Control[3]			563 ± 4.2	500 ± 20.2	883 ± 38.2
Positive Control[4]					
Positive Control[5]					

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA1535

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	12 ± 1.5	8 ± 1.5	10 ± 2.9	13 ± 1.5	9 ± 1.2
100.0		11 ± 3.0	13 ± 1.2	15 ± 2.5	12 ± 1.7
333.0	14 ± 1.5	3 ± 0.3	14 ± 3.1	12 ± 1.2	9 ± 1.8
1000.0	9 ± 1.5	5 ± 0.3	8 ± 3.1	12 ± 0.6	12 ± 0.9
3333.0	12 ± 2.4	11 ± 1.5	9 ± 1.7	14 ± 1.8	7 ± 1.2
6666.0	14 ± 1.5				
10000.0	9 ± 0.9	7 ± 1.5	12 ± 2.3	14 ± 0.6	8 ± 1.5
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[3]					78 ± 4.6
Positive Control[4]			70 ± 3.5		
Positive Control[5]	392 ± 7.4	343 ± 67.7			
Positive Control[6]				106 ± 10.8	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA1535

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	12 ± 1.8
100.0	
333.0	13 ± 1.7
1000.0	14 ± 3.8
3333.0	13 ± 1.2
6666.0	8 ± 1.8
10000.0	12 ± 1.7
Trial Summary	Negative
Positive Control[3]	
Positive Control[4]	386 ± 2.7
Positive Control[5]	
Positive Control[6]	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA97

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	219 ± 9.5	198 ± 12.2	206 ± 13.5	262 ± 9.8	199 ± 17.6
100.0	225 ± 2.9	212 ± 3.9	205 ± 8.7	271 ± 19.9	223 ± 6.9
333.0	229 ± 2.1	194 ± 6.2	235 ± 7.5	276 ± 15.2	216 ± 9.3
1000.0	254 ± 21.6	206 ± 3.5	192 ± 2.9	252 ± 6.2	218 ± 2.4
3333.0	216 ± 39.5	202 ± 9.2	187 ± 2.5	260 ± 17.5	226 ± 0.6
10000.0	265 ± 4.4	198 ± 17.3	184 ± 14.7	220 ± 3.2	210 ± 12.7
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[2]					504 ± 7.1
Positive Control[3]			347 ± 5.3		
Positive Control[4]				378 ± 19.7	
Positive Control[7]	554 ± 8.3	364 ± 16.4			

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA97

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	229 ± 7.2
100.0	226 ± 4.8
333.0	242 ± 11.8
1000.0	246 ± 6.0
3333.0	235 ± 14.8
10000.0	253 ± 8.7
Trial Summary	Negative
Positive Control[2]	
Positive Control[3]	412 ± 3.7
Positive Control[4]	
Positive Control[7]	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA98

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	26 ± 3.8	20 ± 0.9	22 ± 2.3	24 ± 4.1	22 ± 1.5
100.0	18 ± 0.3	30 ± 3.0	31 ± 2.6	24 ± 3.2	26 ± 4.7
333.0	20 ± 3.5	24 ± 0.3	15 ± 1.2	27 ± 1.2	18 ± 3.1
1000.0	22 ± 1.9	30 ± 0.3	20 ± 0.3	27 ± 1.5	20 ± 0.9
3333.0	19 ± 3.2	23 ± 2.6	25 ± 3.0	22 ± 2.0	23 ± 2.5
10000.0	9 ± 1.0	17 ± 0.7	21 ± 2.9	17 ± 0.6	23 ± 2.6
Trial Summary	Negative	Negative	Negative	Negative	Negative
Positive Control[2]					607 ± 60.3
Positive Control[3]			299 ± 9.2	84 ± 6.8	
Positive Control[8]	371 ± 9.8	380 ± 9.0			

Strain: TA98

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	21 ± 1.7
100.0	18 ± 2.0
333.0	15 ± 2.1
1000.0	23 ± 1.5
3333.0	23 ± 2.2
10000.0	20 ± 2.8
Trial Summary	Negative
Positive Control[2]	
Positive Control[3]	284 ± 6.1
Positive Control[8]	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA102

Dose (ug/Plate)	Without S9	Without S9	With 10% Rat S9	With 30% Rat S9	With 10% Hamster S9
Vehicle Control[1]	204 ± 6.8	268 ± 7.8	329 ± 5.0	272 ± 8.1	374 ± 18.0
100.0	270 ± 4.3	309 ± 7.1	388 ± 10.6	323 ± 5.5	358 ± 9.1
333.0	282 ± 3.8	312 ± 7.4	405 ± 8.8	319 ± 7.5	403 ± 21.6
1000.0	231 ± 9.0	255 ± 11.0	383 ± 24.1	318 ± 2.7	384 ± 7.2
3333.0	214 ± 21.5	260 ± 15.8	362 ± 6.9	299 ± 13.5	371 ± 34.9
10000.0	249 ± 13.3	304 ± 18.7	366 ± 17.7	259 ± 19.0	353 ± 11.8
Trial Summary	Equivocal	Negative	Equivocal	Negative	Negative
Positive Control[9]	672 ± 72.5	498 ± 28.0			
Positive Control[6]					555 ± 11.8
Positive Control[10]			521 ± 9.8	501 ± 10.7	

Strain: TA102

Dose (ug/Plate)	With 30% Hamster S9
Vehicle Control[1]	301 ± 4.8
100.0	317 ± 7.9
333.0	315 ± 19.5
1000.0	309 ± 17.3
3333.0	310 ± 19.9
10000.0	296 ± 8.1
Trial Summary	Negative
Positive Control[9]	
Positive Control[6]	652 ± 12.2
Positive Control[10]	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA104

Dose (ug/Plate)	Without S9	Without S9	Without S9	Without S9	With 5% Rat S9
Vehicle Control[1]	307 ± 7.8	446 ± 17.4	314 ± 4.2	424 ± 16.5	403 ± 6.1
100.0	313 ± 17.4	478 ± 10.8	317 ± 8.3		384 ± 18.8
333.0	355 ± 12.5	454 ± 25.4	325 ± 3.7	396 ± 11.9	369 ± 6.7
1000.0	335 ± 3.1	494 ± 15.3	319 ± 15.6	375 ± 5.8	366 ± 9.6
1666.0				390 ± 6.9	
3333.0	372 ± 7.2	605 ± 11.3	414 ± 4.9	389 ± 8.1	392 ± 4.0
6666.0				415 ± 20.7	
10000.0	387 ± 9.9	590 ± 13.7	316 ± 14.5	449 ± 24.0	402 ± 14.9
Trial Summary	Equivocal	Weakly Positive	Equivocal	Negative	Negative
Positive Control[4]					
Positive Control[6]					761 ± 17.2
Positive Control[11]	930 ± 70.3	863 ± 33.2	939 ± 27.3	753 ± 11.3	

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA104

Dose (ug/Plate)	With 5% Rat S9	With 10% Rat S9	With 10% Rat S9	With 10% Rat S9	With 30% Rat S9
Vehicle Control[1]	442 ± 16.4	516 ± 16.6	420 ± 13.8	488 ± 12.9	479 ± 14.0
100.0	457 ± 10.7	556 ± 9.0	403 ± 5.5	451 ± 14.7	505 ± 8.2
333.0	413 ± 16.6	579 ± 4.7	355 ± 10.2	462 ± 9.7	579 ± 10.4
1000.0	410 ± 10.4	600 ± 7.6	358 ± 8.1	438 ± 9.9	540 ± 17.1
1666.0					
3333.0	398 ± 14.7	641 ± 18.5	348 ± 1.3	436 ± 22.8	552 ± 1.5
6666.0					
10000.0	460 ± 13.9	649 ± 27.2	417 ± 27.7	466 ± 2.6	528 ± 11.7
Trial Summary	Negative	Weakly Positive	Negative	Negative	Equivocal
Positive Control[4]					
Positive Control[6]	1122 ± 51.7	958 ± 31.2	667 ± 11.6	1057 ± 57.2	955 ± 65.6
Positive Control[11]					

Strain: TA104

Dose (ug/Plate)	With 30% Rat S9	With 30% Rat S9	With 5% Hamster S9	With 5% Hamster S9	With 10% Hamster S9
Vehicle Control[1]	425 ± 36.1	466 ± 8.2	330 ± 15.0	403 ± 20.4	505 ± 16.5
100.0	451 ± 23.6	470 ± 24.5	345 ± 2.7	398 ± 16.8	531 ± 9.7
333.0	454 ± 6.4	483 ± 7.8	326 ± 14.0	363 ± 11.9	534 ± 32.2
1000.0	405 ± 13.9	434 ± 24.9	351 ± 3.8	332 ± 0.7	573 ± 11.1
1666.0					
3333.0	405 ± 1.8	484 ± 13.3	392 ± 14.8	398 ± 19.5	601 ± 15.3
6666.0					
10000.0	461 ± 53.5	477 ± 14.3	385 ± 52.2	470 ± 19.5	575 ± 50.5
Trial Summary	Negative	Negative	Equivocal	Equivocal	Weakly Positive
Positive Control[4]			759 ± 15.8	725 ± 25.2	1132 ± 80.4
Positive Control[6]	707 ± 4.1	837 ± 48.1			
Positive Control[11]					

Experiment Number: **163312**

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

G06: Ames Summary Data

Test Compound: **Cytarabine hydrochloride**

CAS Number: **69-74-9**

Date Report Requested: **09/12/2018**

Time Report Requested: **21:26:28**

Strain: TA104

Dose (ug/Plate)	With 10% Hamster S9	With 10% Hamster S9	With 30% Hamster S9	With 30% Hamster S9	With 30% Hamster S9
Vehicle Control[1]	411 ± 13.4	408 ± 21.9	518 ± 12.4	440 ± 14.4	436 ± 15.4
100.0	391 ± 11.3	436 ± 6.1	539 ± 11.8	460 ± 9.6	408 ± 13.6
333.0	389 ± 3.7	375 ± 20.5	577 ± 17.8	458 ± 8.4	437 ± 21.7
1000.0	359 ± 12.3	354 ± 5.2	546 ± 15.7	462 ± 8.4	402 ± 23.9
1666.0					
3333.0	406 ± 7.8	378 ± 9.5	573 ± 26.5	484 ± 8.0	442 ± 13.9
6666.0					
10000.0	418 ± 45.2	373 ± 16.8	595 ± 32.2	484 ± 25.8	496 ± 39.1
Trial Summary	Negative	Negative	Equivocal	Negative	Equivocal
Positive Control[4]	666 ± 19.0	811 ± 9.6	1069 ± 13.4	944 ± 45.6	724 ± 24.5
Positive Control[6]					
Positive Control[11]					

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: 0.5 ug/Plate 2-Aminoanthracene
3: 1.0 ug/Plate 2-Aminoanthracene
4: 2.5 ug/Plate 2-Aminoanthracene
5: 5.0 ug/Plate Sodium Azide
6: 5.0 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: 10.0 ug/Plate 2-Aminoanthracene
11: 250.0 ug/Plate Methyl Methane Sulfonate

** END OF REPORT **