

Experiment Number: **G18020C**

Test Type: **Genetic Toxicology - In Vitro
Micronucleus**

G03: In Vitro Micronucleus Summary Data

Test Compound: **Mesotrione|Distilled Water|Distilled water**

Date Report Requested: **11/16/2021**

Time Report Requested: **11:21:15**

NTP Study Number:

G18020C

Cell Type:

TK6

Study Result:

Positive

Experiment Number: G18020C

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Date Report Requested: 11/16/2021

Time Report Requested: 11:21:15

Duration: 4 h; Activation: Without S9

Concentration (mM)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ¹	100.0	1.82	1.0	0.966 ± 0.079	
0.6	89.2	2.23	1.2	1.120 ± 0.580	1.0000
0.86	104.4	2.03	1.1	0.840 ± 0.101	1.0000
1.21	107.6	2.4	1.3	0.953 ± 0.207	1.0000
1.71	103.1	2.1	1.2	0.880 ± 0.120	1.0000
2.1	104.1	2.23	1.2	0.900 ± 0.031	1.0000
2.57	95.9	2.33	1.3	1.053 ± 0.289	1.0000
3.14	57.9	34.93	19.2	0.930 ± 0.230	
3.85	10.3	57.93	31.9	1.020 ± 0.130	
4.71	8.5	65.8	36.3	2.130 ± 1.490	
5.77	67.4	6.7	3.7	1.720 ± 0.000	
7.07	53.1	8.6	4.7	1.600 ± 0.000	
10	0.1	99.47	54.8	2.020 ± 2.020	
Trend p-Value				0.5327	
VIN ²	89.8	5.73	3.2	2.050 ± 0.204	0.0010 *

Trial Summary: Negative

Experiment Number: G18020C
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 Micronucleus

G03: In Vitro Micronucleus Summary Data
 Test Compound: Mesotrione|Distilled Water|Distilled water

Date Report Requested: 11/16/2021
 Time Report Requested: 11:21:15

Duration: 24 h; Activation: Without S9

Concentration (mM)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ³	100.0	1.58	1.0	1.702 ± 0.124	
0.6	72.8	2.27	1.4	1.180 ± 0.478	1.0000
0.86	95.7	2.13	1.4	1.340 ± 0.200	1.0000
1.21	99.8	2.13	1.4	1.407 ± 0.237	1.0000
1.71	90.9	3.47	2.2	2.087 ± 0.560	1.0000
2.1	92.5	3.13	2.0	2.087 ± 0.346	1.0000
2.57	74.7	5.7	3.6	3.520 ± 0.975	0.2543
3.14	77.0	4.87	3.1	4.020 ± 0.666	0.0520
3.85	72.5	5.43	3.4	5.013 ± 1.174	0.0219 *
4.71	52.0	7.9	5.0	7.270 ± 1.900	
5.77	36.7	13.5	8.6	12.270 ± 0.890	
7.07	37.1	18.77	11.9	8.060 ± 1.720	
10	1.0	86.73	55.1	0.220 ± 0.130	
Trend p-Value				< 0.001 *	
VIN ⁴	85.5	5.3	3.4	2.935 ± 0.461	0.0047 *

Trial Summary: Positive

Experiment Number: G18020C

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MicronucleusG03: In Vitro Micronucleus Summary Data
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Date Report Requested: 11/16/2021

Time Report Requested: 11:21:15

Duration: 24 h; Activation: Without S9

Concentration (mM)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ³	100.0	2.62	1.0	1.015 ± 0.034	
0.6	96.7	2.2	0.8	1.100 ± 0.111	1.0000
0.86	94.8	2.6	1.0	1.333 ± 0.070	0.4124
1.21	91.1	2.53	1.0	1.293 ± 0.133	0.8098
1.71	91.7	2.77	1.1	1.460 ± 0.156	0.2600
2.1	92.2	2.83	1.1	1.487 ± 0.059	0.1579
2.57	83.8	3.1	1.2	2.020 ± 0.172	0.0198 *
3.14	88.2	3.87	1.5	2.140 ± 0.060	0.0155 *
3.85	76.8	4.1	1.6	2.500 ± 0.110	0.0025 *
4.71	67.8	5.2	2.0	3.260 ± 0.416	< 0.001 *
5.77	56.4	7.63	2.9	4.620 ± 0.242	< 0.001 *
7.07	44.3	11.37	4.3	6.220 ± 0.360	
10	5.6	59.13	22.6	3.080 ± 2.700	
Trend p-Value				< 0.001 *	
VIN ⁵	62.4	7.9	3.0	7.405 ± 0.344	0.0010 *

Trial Summary: Positive

Experiment Number: G18020C

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 Test Compound: Mesotrione|Distilled Water|Distilled water

Date Report Requested: 11/16/2021

Test Type: Genetic Toxicology - In Vitro
 Micronucleus

Time Report Requested: 11:21:15

Duration: 4 h; Activation: With 1% Rat S9

Concentration (mM)	% Relative Survival	% Apoptosis and Necrosis	Fold Change in Apoptosis and Necrosis	% MN	p-Value
	Mean	Mean	Mean	Mean ± SEM	
Vehicle Control ¹	100.0	1.76	1.0	0.724 ± 0.034	
0.6	93.0	2.63	1.5	0.673 ± 0.208	1.0000
0.86	107.0	1.73	1.0	0.880 ± 0.203	1.0000
1.21	106.8	2.03	1.2	0.940 ± 0.272	1.0000
1.71	103.7	2.2	1.2	0.820 ± 0.125	1.0000
2.1	110.1	2.3	1.3	0.753 ± 0.181	1.0000
2.57	108.5	1.8	1.0	0.893 ± 0.176	1.0000
3.14	99.0	2.2	1.3	0.733 ± 0.158	1.0000
3.85	104.9	2.33	1.3	0.747 ± 0.116	1.0000
4.71	104.6	2.3	1.3	0.840 ± 0.106	1.0000
5.77	84.5	3.4	1.9	0.827 ± 0.096	1.0000
7.07	81.3	4.77	2.7	1.233 ± 0.207	0.0849
10	12.3	49.85	28.3	2.600 ± 0.180	
Trend p-Value				0.0222 *	
CPA ⁶	52.6	7.63	4.3	2.325 ± 0.229	0.0010 *

Trial Summary: Negative

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LEGEND

MN = Micronuclei, CAS = Chemical abstract registry

For the 4 h chemical exposures with and without S9, the medium with test article (and S9, if present) is changed after 4 h and replaced with fresh medium without test article or S9, and cells are cultured for an additional 20 h to achieve a total culture time of 24 h

Values given as Mean or Mean \pm Standard Error Mean

Statistical analysis only performed on: % MN

Pairwise comparison with the vehicle control; values are significant at $P \leq 0.025$ by Dunn's test

Positive control: pairwise comparison with the vehicle control; values are significant at $P \leq 0.05$ by Mann Whitney U test

Apoptotic and necrotic cells are detected in the assay as ethidium monoazide (EMA)-positive events

Concentration-related trend; significant at $P \leq 0.025$ by Jonckheere's test

* Statistically significant pairwise or trend test

The number of wells per concentration of test article = 3

1: Vehicle Control: Distilled Water

2: Positive Control: 3 ng/mL Vinblastine sulfate

3: Vehicle Control: Distilled water

4: Positive Control: 0.5 ng/mL Vinblastine sulfate

5: Positive Control: 0.75 ng/mL Vinblastine sulfate

6: Positive Control: 3 ug/mL Cyclophosphamide monohydrate

**** END OF REPORT ****