

Experiment Number: 292245
Test Type: Genetic Toxicology - Micronucleus
Route: Intraperitoneal Injection
Species/Strain: Mouse/B6C3F1

G04: In Vivo Micronucleus Summary Data

Test Compound: 4-Biphenylamine
CAS Number: 92-67-1

Date Report Requested: 09/19/2018

Time Report Requested: 15:10:56

NTP Study Number:	292245
Study Duration:	2 Days
Study Methodology:	Slide Scoring
Male Study Result:	Positive

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Date Report Requested: 09/19/2018
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Tissue: Blood; Sex: Male; Number of Treatments: 0; Time interval between final treatment and cell sampling: 24 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	10	2.40 ± 0.27		10	3.30 ± 0.40		7.09 ± 0.72
25.0	10	2.30 ± 0.37	0.5581	10	3.60 ± 0.52	0.3588	7.29 ± 0.56
50.0	10	2.10 ± 0.46	0.6728	10	3.60 ± 0.43	0.3588	5.57 ± 0.41
100.0	10	2.20 ± 0.39	0.6161	10	2.40 ± 0.34	0.8837	4.96 ± 0.36
200.0	10	1.90 ± 0.31	0.7774	10	2.80 ± 0.33	0.7393	8.18 ± 2.27
Trend p-Value		0.7720			0.8880		

Trial Summary: Positive

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CAS Number: 92-67-1

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Tissue: Blood; Sex: Male; Number of Treatments: 1; Time interval between final treatment and cell sampling: 24 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	10	3.00 ± 0.58		10	3.20 ± 0.39		5.16 ± 0.70
25.0	10	4.20 ± 0.44	0.0783	10	4.00 ± 0.87	0.1725	7.44 ± 0.78
50.0	10	4.00 ± 0.47	0.1156	10	4.30 ± 0.65	0.1016	6.25 ± 0.71
100.0	10	2.50 ± 0.34	0.7502	10	2.80 ± 0.61	0.6975	5.99 ± 0.69
200.0	10	2.60 ± 0.58	0.7038	10	5.10 ± 0.89	0.0183	7.43 ± 1.44
Trend p-Value		0.9490			0.0520		

Trial Summary: Positive

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Tissue: Blood; Sex: Male; Number of Treatments: 1; Time interval between final treatment and cell sampling: 24 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control [†]	5	2.40 ± 0.51		5	4.00 ± 0.32		7.86 ± 1.62
25.0	5	6.60 ± 2.16	< 0.001 *	5	5.60 ± 0.75	0.1235	10.46 ± 2.47
50.0	4	5.75 ± 1.60	0.0056 *	4	2.75 ± 0.75	0.8427	12.53 ± 1.33
100.0	5	8.00 ± 0.84	< 0.001 *	5	1.80 ± 0.80	0.9796	16.64 ± 2.32
Trend p-Value		0.0010 *			0.9950		

Trial Summary: Positive

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Tissue: Bone marrow; Sex: Male; Number of Treatments: 1; Time interval between final treatment and cell sampling: 24 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	3.60 ± 0.93		5	2.40 ± 0.75		39.28 ± 2.83
25.0	5	6.60 ± 1.57	0.0614	5	3.40 ± 0.40	0.1762	48.56 ± 1.84
50.0	5	7.60 ± 1.81	0.0248	5	2.40 ± 0.68	0.5000	43.92 ± 4.95
100.0	5	7.20 ± 2.11	0.0360	5	3.40 ± 1.17	0.1762	40.38 ± 4.91
200.0	5	3.40 ± 0.81	0.5494	5	1.60 ± 0.51	0.8147	52.78 ± 3.49
Trend p-Value		0.7900			0.8620		

Trial Summary: Positive

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Tissue: Bone marrow; Sex: Male; Number of Treatments: 1; Time interval between final treatment and cell sampling: 48 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	2.20 ± 0.58		5	2.00 ± 0.55		57.44 ± 4.93
25.0	5	4.60 ± 1.36	0.1018	5	3.00 ± 0.84	0.1584	51.70 ± 4.36
50.0	4	6.75 ± 2.72	0.0207	4	3.00 ± 1.29	0.1699	59.60 ± 4.48
100.0	5	10.60 ± 2.80	< 0.001 *	5	2.00 ± 0.95	0.5000	32.30 ± 5.81
Trend p-Value		< 0.001 *			0.6000		

Trial Summary: Positive

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Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	2.60 ± 0.51		5	1.80 ± 0.37		51.48 ± 2.26
25.0	5	4.40 ± 1.36	0.1387	5	1.20 ± 0.20	0.7809	44.52 ± 2.48
50.0	5	6.00 ± 1.48	0.0321	5	1.00 ± 0.55	0.8576	42.76 ± 3.46
100.0	3	8.33 ± 4.33	0.0050 *	3	1.67 ± 0.33	0.5549	28.47 ± 7.18
150.0	3	4.00 ± 0.00	0.2195	3	3.00 ± 1.15	0.1364	29.80 ± 9.18
Trend p-Value		0.1060			0.0710		
Positive Control ²	5	54.80 ± 8.29	< 0.001 *	5	3.00 ± 1.14	0.1101	35.20 ± 8.02

Trial Summary: Positive

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Test Compound: 4-Biphenylamine

CAS Number: 92-67-1

Date Report Requested: 09/19/2018

Time Report Requested: 15:10:56

Tissue: Bone marrow; Sex: Male; Number of Treatments: 2; Time interval between final treatment and cell sampling: 48 h

Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	3.40 ± 0.81		5	1.40 ± 0.24		44.40 ± 6.98
12.5	5	4.20 ± 0.86	0.3785	5	1.40 ± 0.68	0.5000	39.78 ± 6.92
25.0	5	7.60 ± 0.75	0.0882	5	1.40 ± 0.40	0.5000	44.78 ± 9.22
50.0	5	8.20 ± 2.01	0.0662	5	0.80 ± 0.49	0.8173	13.54 ± 5.03
100.0	4	24.75 ± 11.43	< 0.001 *	4	1.00 ± 0.41	0.7053	19.70 ± 7.90
Trend p-Value		< 0.001 *			0.7950		
Positive Control ²	5	43.80 ± 7.68	< 0.001 *	5	2.80 ± 0.58	0.0631	25.92 ± 3.07

Trial Summary: Positive

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Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	2.10 ± 0.80		5	0.20 ± 0.20		43.62 ± 1.64
12.5	5	3.20 ± 0.75	0.1970	5	1.20 ± 0.49	0.0293	39.64 ± 2.84
25.0	5	6.90 ± 0.46	0.0021 *	5	1.00 ± 0.32	0.0512	44.06 ± 0.84
50.0	5	8.30 ± 2.53	< 0.001 *	5	0.20 ± 0.20	0.5000	39.36 ± 3.47
100.0	3	46.17 ± 4.33	< 0.001 *	3	0.00 ± 0.00	0.7807	44.83 ± 3.00
Trend p-Value		< 0.001 *			0.9290		
Positive Control ²	5	45.00 ± 5.70	< 0.001 *	5	3.20 ± 0.49	< 0.001 *	32.50 ± 2.51

Trial Summary: Positive

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Dose (mg/kg)	N	MN PCE/1000		N	MN NCE/1000		% PCE
		Mean ± SEM	p-Value		Mean ± SEM	p-Value	Mean ± SEM
Vehicle Control ¹	5	2.00 ± 0.57		5	0.40 ± 0.24		37.04 ± 2.65
50.0	5	5.70 ± 1.17	0.0109	5	1.00 ± 0.77	0.1925	29.06 ± 2.46
75.0	5	15.70 ± 2.52	< 0.001 *	5	1.20 ± 0.58	0.1393	40.16 ± 3.25
100.0	5	17.50 ± 3.00	< 0.001 *	5	0.40 ± 0.40	0.5000	27.20 ± 0.86
150.0	3	10.17 ± 2.52	< 0.001 *	3	0.33 ± 0.33	0.5455	31.37 ± 5.04
Trend p-Value		< 0.001 *			0.5740		
Positive Control ²	5	35.10 ± 4.76	< 0.001 *	5	2.40 ± 0.68	0.0037 *	24.90 ± 2.22

Trial Summary: Positive

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LEGEND

MN = micronucleated, PCE = polychromatic erythrocyte, NCE = normochromatic erythrocyte

CAS Number = Chemical Abstracts Service registry number

N = Number of subjects

Values given as Mean or Mean \pm Standard Error Mean

Results were tabulated as the mean of the pooled results from all animals within a treatment group, plus or minus the standard error of the mean

Pairwise comparison to the concurrent control, dosed groups significant at $p = 0.025/\text{number of treatment groups}$; positive control value is significant at $p = 0.05$

Cochran-Armitage trend test, significant at $p = 0.025$

* Statistically significant pairwise or trend test

1: Vehicle Control: Corn Oil

2: 100.0 mg/kg Dimethylbenzanthracene

**** END OF REPORT ****