

guchi, (1994) Assessment of the human carcinogens arsenic acid and arsenic trichloride in the mouse micronucleus assay. MMS communications, 2, 117-121.

G. 研究発表

1. 論文発表

なし

2. 学会発表

なし

H. 知的所有権の取得状況

1. 特許取得

なし

2. 実用新案登録

なし

3. その他

なし

Table 1 Summary of results - micronucleus test

Sampling time (hr)	Substance	Dose (mg/kg)	No. of mice	MNPCE / PCE (%)		PCE / (PCE+NCE) (%)		S ^{WC}
				Mean \pm SD (range)	S ^{KC}	Mean \pm SD (range)	S ^{WC}	
24	Vehicle (Pure water)	0	5	0.27 \pm 0.10 (0.15 ~ 0.40)	—	50.2 \pm 8.1 (40.5 ~ 60.0)	—	
		25	5	0.30 \pm 0.12 (0.20 ~ 0.50)	N.S.	55.4 \pm 5.5 (46.8 ~ 61.8)	N.S.	
	CCA	50	5	0.31 \pm 0.09 (0.25 ~ 0.45)	N.S.	51.4 \pm 7.2 (40.3 ~ 60.4)	N.S.	
		100	5	0.42 \pm 0.12 (0.30 ~ 0.60)	N.S.	43.6 \pm 8.0 (30.8 ~ 51.6)	N.S.	
48	Mitomycin C	10	5	5.45 \pm 1.90 (2.45 ~ 7.45)	***	43.5 \pm 7.0 (31.8 ~ 49.9)	N.S.	
		0	5	0.27 \pm 0.13 (0.05 ~ 0.35)	—	54.3 \pm 3.8 (48.2 ~ 57.8)	—	
	CCA	0	5	0.43 \pm 0.19 (0.25 ~ 0.70)	N.S.	24.5 \pm 14.6 (8.2 ~ 42.8)	*	
		100	5	0.43 \pm 0.19 (0.25 ~ 0.70)	N.S.	24.5 \pm 14.6 (8.2 ~ 42.8)	*	

MNPCE : Micronucleated polychromatic erythrocytes.

PCE : Polychromatic erythrocytes.

NCE : Normochromatic erythrocytes.

SD : Standard deviation.

S^{KC} : Statistical analysis using the tables of Kastenbaum-Bowman or a chi-square test.

S^{WC} : Statistical analysis using Wilcoxon's sum of ranks test.

N.S. : Not significantly different from the concurrent vehicle control ($p \geq 0.05$).

*, ***, : Significantly different from the concurrent vehicle control at $p \leq 0.05$ and $p \leq 0.001$, respectively.

Appendix 1 Mortality in toxicity and micronucleus tests

Test	Substance	Dose (mg/kg)	Mortality
Toxicity test	CCA	50	0 / 3
		100	0 / 3
		200	2 / 3
		400	3 / 3
		800	3 / 3
Micronucleus test	Vehicle	0	0 / 10
	CCA	25	0 / 5
		50	0 / 5
		100	0 / 10
	Mitomycin C	10	0 / 5

Mortality : Number of death / Number of animals dosed.

Vehicle : Pure water.

Appendix 2 Individual values of micronucleus test

Sampling time (hr)	Substance	Dose (mg/kg)	Animal number	B.W. (g)	MNPCE/PCE (%)	PCE/(PCE+NCE) (%)
24	Vehicle (Pure water)	0	111	35.4	0.40	46.1
			112	37.1	0.25	57.1
			113	29.7	0.35	47.5
			114	34.0	0.20	40.5
			115	33.4	0.15	60.0
	CCA	25	121	34.4	0.50	56.7
			122	36.5	0.30	57.0
			123	33.3	0.20	54.9
			124	37.0	0.30	46.8
			125	31.9	0.20	61.8
		50	126	33.2	0.25	50.7
			127	36.1	0.25	40.3
			128	34.0	0.35	60.4
			129	36.8	0.45	53.1
			130	33.3	0.25	52.6
	100	131	35.8	0.45	30.8	
		132	29.8	0.35	47.5	
		133	36.2	0.30	51.6	
		134	34.3	0.60	41.5	
		135	35.1	0.40	46.5	
Mitomycin C	10	141	33.0	4.95	31.8	
		142	36.4	2.45	49.9	
		143	31.6	7.45	47.8	
		144	32.9	6.35	43.9	
		145	32.7	6.05	44.1	
48	Vehicle (Pure water)	0	116	36.7	0.35	57.8
			117	37.2	0.35	54.2
			118	33.6	0.35	48.2
			119	34.3	0.05	54.2
			120	32.1	0.25	57.3
	CCA	100	136	34.7	0.30	10.9
			137	34.6	0.55	29.3
			138	32.5	0.70	8.2
			139	34.5	0.35	31.5
			140	33.8	0.25	42.8

BW : Body weight at the day of dosing.

MNPCE : Micronucleated polychromatic erythrocytes.

PCE : Polychromatic erythrocytes.

NCE : Normochromatic erythrocytes.

Appendix 3 Individual clinical observation in toxicity test

Test	Substance	Dose (mg/kg)	Animal number	Time after the administration			
				1	3	24	48 (hr)
Toxicity test	CCA	50	11	—	P	—	—
			12	P	P	—	—
			13	—	—	—	—
		100	14	P	P	—	—
			15	—	P	—	—
			16	P	P	—	—
		200	17	D	D	Fd	
			18	D	D, P	—	—
			19	P	D, P	Fd	
		400	20	D, P	L, Lo, P	Fd	
			21	D, P	L, Lo, P	Fd	
			22	D, P	D, P	Fd	
		800	23	D, P, L	Fd		
			24	D, P, L	Fd		
			25	L, Lo	Fd		

— : No abnormalities detected.

D : Decrease in spontaneous motor activity.

Fd : Found dead.

L : Loss of spontaneous motor activity.

Lo : Loose stool.

P : Piloerection.

Appendix 4 Individual clinical observation in micronucleus test

Test	Substance	Dose (mg/kg)	Animal number	Time after the administration				
				1	3	24	48 (hr)	
Micronucleus test	Vehicle (Pure water)	0	111	—	—	—E		
			112	—	—	—E		
			113	—	—	—E		
			114	—	—	—E		
			115	—	—	—E		
			25	121	—	—	—E	
				122	—	—	—E	
				123	—	—	—E	
				124	—	—	—E	
				125	—	—	—E	
	CCA	50	126	—	—	—E		
			127	—	—	—E		
			128	—	—	—E		
			129	—	—	—E		
			130	—	—	—E		
		100	131	P	P	—E		
			132	P	P	—E		
			133	—	—	—E		
			134	P	—	—E		
			135	P	P	P, E		
	Mitomycin C	10	146	—	—	—E		
			147	—	—	—E		
			148	—	—	—E		
			149	—	—	—E		
			150	—	—	—E		
Vehicle (Pure water)	0	116	—	—	—	—E		
		117	—	—	—	—E		
		118	—	—	—	—E		
		119	—	—	—	—E		
		120	—	—	—	—E		
CCA	100	136	P	P	P	—E		
		137	P	P	—	—E		
		138	P	P	—	—E		
		139	—	—	—	—E		
		140	—	—	—	—E		

— : No abnormalities detected.

E : Euthanatized for sampling.

P : Piloerection.