

TABLE I

Estimates (CI 95%) for Emin, Emax, ED50 (µg/kg), GSD, percentage of variance explained (R²) and Hill coefficient (n) for different effects in line A, B and C rats 8 days after a single oral exposure to different doses of TCDD.

Rat line		Body weight change (% Initial body weight)		Relative thymus weight (% Body weight)		Liver EROD activity ((pmol/mg) × min)		Serum FFA levels (nM)		Serum bilirubin levels (µM)		Serum ASAT activity (U/l)		Incisor tooth defects	
Emin	A	104	(103-105)	0.13	(0.12 - 0.14)*	72	(0 - 390)	0.38	(0.30 - 0.45) *§	1.6	(1.1 - 2.1)	217	(102 - 330)	0.59	(0.33 - 0.85) §
	B	105	(104 - 107)	0.16	(0.12 - 0.20)	85	(0 - 250)	0.48	(0.41 - 0.55)	1.7	(1.2 - 2.1)	175	(140 - 210)	0.20	(0 - 0.45)
	C	104	(103 - 106)	0.15	(0.14 - 0.16)	88	(0 - 570)	0.54	(0.45 - 0.64)	1.9	(0.98 - 2.8)	203	(150 - 250)	0.46	(0.2 - 0.73)
Emax	A	95	(93 - 96) *§	0.050	(0.043 - 0.058)*	1170	(1000 - 1300)*	0.57	(0.47 - 0.66) *§	5.0	(0-14) *§	878	(0 - 2000)	2.6	(2.2 - 3.0)
	B	83	(80 - 86) *	0.026	(0 - 0.055)	1220	(1100 - 1400)	1.1	(0.84 - 1.3)	12	(11 - 14) *	668	(540 - 800) *	2.3	(1.9 - 2.7)
	C	78	(74 - 81)	0.038	(0.028 - 0.047)	1580	(1200 - 2000)	1.3	(1.0 - 1.5)	23	(18 - 28)	1620	(840 - 2400)	2.7	(2.0 - 3.3)
ED50 ^a	A	20	(9.1 - 46) *	1.8	(0.94 - 3.3)	0.15	(0.064 - 0.34)	32	(0 - 3000)	656	(0.0017 - 3000)	283	(0.37 - 3000)	35	(17 - 75) *
	B	21	(14 - 33) *	1.9	(0.44 - 8.5)	0.28	(0.17 - 0.47)	110	(39 - 310) *	95	(61 - 150) *	57	(25 - 130)	30	(0 - 3000)
	C	5.5	(3.7 - 8.4)	0.83	(0.54 - 1.3)	0.14	(0.053 - 0.35)	21	(11 - 40)	27	(18 - 40)	33	(9.2 - 120)	9.3	(4.4 - 20)
GSD	A	5.0	(1.7 - 15)	4.4	(1.9 - 10)	3.4	(1.1 - 11)	1.2	(0 - 50)	50	(0.012 - 50)	15	(0.063 - 50)	2.7	(0.96 - 7.3)
	B	2.8	(1.5 - 5.1)	34	(2.5 - 50)	2.9	(1.4 - 6.0)	3.1	(0.83 - 12)	3.6	(2.1 - 6.2)	5.1	(1.8 - 14)	1.0	(0 - 50)
	C	4.2	(2.5 - 7.2)	4.8	(2.6 - 8.7)	4.0	(0.92 - 17)	1.8	(0.90 - 3.6)	2.5	(1.5 - 4.2)	4.9	(1.8 - 13)	2.8	(1.0 - 7.5)
R ²	A	0.69		0.77		0.65		0.13		0.42		0.31		0.57	
	B	0.80		0.79		0.81		0.51		0.88		0.76		0.59	
	C	0.91		0.90		0.70		0.48		0.88		0.90		0.61	
Hill n ^b	A	1.1	(0.25 - 1.9)	1.1	(0.41 - 1.8)	1.3	(0 - 2.7)	5.0	(0 - 200)	0.31	(0 - 1.1)	0.75	(0 - 2.1)	1.8	(0 - 3.8)
	B	1.5	(0.55 - 2.5)	0.42	(0.068 - 0.78)	1.5	(0.34 - 2.7)	5.0	(0 - 40)	1.3	(0.71 - 1.9)	1.0	(0.33 - 1.6)	5.0	(0 - 74)
	C	1.1	(0.67 - 1.6)	1.0	(0.60 - 1.5)	1.1	(0 - 2.5)	2.8	(0 - 6.7)	1.8	(0.82 - 2.7)	0.94	(0.40 - 1.5)	1.6	(0 - 3.36)

^a µg/kg TCDD

^b Hill coefficients were derived from the Hill plot model for the same data.

* Significantly different from line C estimate.

§ Significantly different from line B estimate.

TABLE II

Efficacy ((Emax-Emin)/Emin), and relative efficacy and potency (compared with line C) for different effects in line A, B and C rats 8 days after a single oral exposure to different doses of TCDD.

	Rat line	Body weight change	Relative thymus weight	Liver EROD activity	Serum FFA levels	Serum bilirubin levels	Serum ASAT activity	Incisor tooth defects
Efficacy ^a ((Emax – Emin)/Emin)	A	-0.093 *§	-0.60 *	15	0.5 *§	2.2 *	3.1	3.31
	B	-0.21	-0.84	13	1.3	6.5	2.8	10.62
	C	-0.25	-0.74	17	1.4	11	7.0	4.74
Efficacy relative to line C	A	0.37	0.81	0.90	0.37	0.19	0.44	0.70
	B	0.84	1.1	0.78	0.93	0.57	0.40	2.24
	C	1	1	1	1	1	1	1
Potency relative to line C	A	0.27	0.47	0.93	0.66	0.041	0.12	0.26
	B	0.26	0.43	0.48	0.19	0.28	0.58	0.31
	C	1	1	1	1	1	1	1

^a Statistically significant ($P < 0.05$) differences are shown only for efficacy.

* Significantly different from line C estimate.

§ Significantly different from line B estimate.

