

Disposition of Radioactivity 6 Days Following Intravenous Administration of 3.6 mg/kg [¹⁴C]1,2,3-Trichloropropane to Male Fischer 344 Rats – Group 4 Tissue to Blood Ratios

Distribution in Tissues (15 minutes to 6 days)^a
Tissue to Blood Ratios

Tissue	15 minutes	30 minutes	1 hour	2 hours	4 hours	8 hours	1 day	2 days	4 days	6 days
Brain	1.09 ±0.13	0.63 ±0.11	0.53 ±0.04	0.53 ±0.11	0.87 ±0.38	0.83 ±0.08	0.73 ±0.03	0.67 ±0.31	0.71 ±0.21	0.69 ±0.05
Lungs	1.08 ±0.33	0.68 ±0.16	0.76 ±0.07	0.87 ±0.03	0.97 ±0.09	1.19 ±0.16	1.28 ±0.11	1.25 ±0.23	1.15 ±0.16	0.80 ±0.05
Liver	2.38 ±0.19	1.95 ±0.51	2.90 ±0.19	4.22 ±0.64	4.89 ±0.49	5.48 ±0.43	3.48 ±0.91	4.14 ±0.66	3.47 ±0.31	2.95 ±0.22
Kidneys	3.07 ±0.57	2.94 ±0.54	5.37 ±1.07	8.84 ±0.65	9.90 ±0.63	10.84 ±0.32	6.79 ±1.58	6.67 ±1.74	4.61 ±0.51	4.05 ±0.42
Spleen	0.53 ±0.04	0.45 ±0.07	0.64 ±0.06	0.78 ±0.06	0.88 ±0.04	1.14 ±0.18	0.87 ±0.10	0.84 ±0.28	0.98 ±0.05	0.95 ±0.13
Small Intestine	1.48 ±0.65	3.91 ±3.30	7.36 ±1.42	9.56 ±5.77	6.24 ±0.36	3.15 ±0.82	1.36 ±0.39	1.01 ±0.31	0.46 ±0.02	0.33 ±0.03
Large Intestine	1.63 ±1.66	1.41 ±0.78	0.79 ±0.16	1.36 ±0.30	5.15 ±3.58	14.02 ±7.44	1.92 ±0.59	1.15 ±0.31	0.56 ±0.03	0.48 ±0.03
Testes	0.62 ±0.05	0.33 ±0.13	0.53 ±0.07	0.50 ±0.04	0.64 ±0.09	0.73 ±0.06	0.41 ±0.04	0.24 ±0.09	0.38 ±0.07	0.33 ±0.02
Epididimides	NC ^b	1.29 ±0.50	1.78 ±0.15	1.13 ±0.48	NC	NC	NC	0.56 ±0.01	0.52 ±0.03	0.53 ±0.07
Adipose Tissue	13.64 ±3.58	9.81 ±1.16	6.54 ±2.42	7.18 ±3.16	2.74 ±1.30	2.68 ±0.44	0.48 ±0.03	0.59 ±0.51	0.38 ±0.03	0.39 ±0.06
Skin	2.81 ±1.33	1.42 ±0.86	0.91 ±0.35	0.89 ±0.05	0.95 ±0.26	1.30 ±0.32	0.63 ±0.10	0.63 ±0.16	0.46 ±0.17	0.51 ±0.02
Muscle	0.99 ±0.17	0.34 ±0.08	0.40 ±0.08	0.40 ±0.04	0.53 ±0.12	0.43 ±0.06	0.36 ±0.02	0.27 ±0.13	0.30 ±0.05	0.35 ±0.04
Plasma	0.61 ±0.25	0.63 ±0.15	0.78 ±0.10	0.82 ±0.13	0.89 ±0.03	0.78 ±0.02	0.54 ±0.03	0.38 ±0.11	0.29 ±0.02	0.26 ±0.01
Blood Concentration ^c	10.60 ±1.45	8.01 ±0.31	10.99 ±0.02	7.39 ±0.62	7.08 ±0.83	4.77 ±0.22	2.65 ±0.06	1.97 ±0.30	1.54 ±0.18	1.14 ±0.07

^aAll values expressed as mean ± standard deviation. The target dose was 3.6 mg/kg body weight (~ 14 μ Ci/mg). The actual dose delivered was 3.6 ± 0.4 mg (24.4 μ mol)/kg (2.08 ± 0.24 μ Ci/ μ mol) for the n = 30 rats used for urine, feces and tissue collection (Group 4). N = 3 per time point for Group 4.

^bNC = not collected.

^cBlood concentrations in nmol/g blood were calculated from ¹⁴C in blood and the specific activity of administered 1,2,3-trichloropropane. No attempt was made to account for the change in specific activity when ¹⁴CO₂ was formed from trichloropropane.