

Disposition of Radioactivity 24 Hours Following Oral Gavage Administration of 400 mg/kg [¹⁴C]DTBBA to Male Harlan Sprague Dawley Rats (Group H)^a

Dose Recovered in Excreta (%)

End of Collection Period (h)	Urine CPDE ^b	Cage Rinse CPDE	Feces CPDE	Volatile Organics CPDE	CO ₂ CPDE	GI Content	Total CPDE
4	5.83 ± 8.08	4.60 ± 4.74	–	0.0217 ± 0.0047	0.182 ± 0.035	–	10.6
8	31.2 ± 11.3	9.58 ± 5.19	–	0.0438 ± 0.0064	0.336 ± 0.025	–	41.2
12	47.7 ± 21.3	12.4 ± 7.0	–	0.0726 ± 0.0062	0.537 ± 0.055	–	60.7
24 ^c	52.8 ± 22.9	13.2 ± 7.5	21.1 ± 7.8	0.0968 ± 0.0095	0.747 ± 0.053	1.93 ± 1.32	90.1

Disposition in Tissues

Tissue	nmol-eq/g Mean	nmol-eq/g SD	TBR ^e Mean	TBR SD	Percent Recovery Mean	Percent Recovery SD
Blood ^d	5.93	1.87	unity	–	0.0524	0.0136
Adipose ^d	5.39	3.19	0.886	0.358	0.0447	0.0240
Muscle ^d	1.59	0.49	0.273	0.064	0.0769	0.0207
Skin ^d	6.60	3.83	1.09	0.49	0.150	0.085
Brain	1.13	0.30	0.202	0.075	0.00095	0.00024
Heart	2.22	0.94	0.368	0.082	0.00100	0.00046
Kidneys	15.9	7.8	2.59	0.64	0.0135	0.0058
Liver	15.0	7.1	2.46	0.67	0.0770	0.0336
Lung	3.83	1.29	0.644	0.068	0.00235	0.00064
Spleen	2.65	1.17	0.441	0.120	0.00087	0.00035
Adrenals	9.37	2.06	1.64	0.45	0.00021	0.00005
Thymus	1.78	0.54	0.304	0.057	0.00037	0.00011
Thyroid	11.1	7.9	1.72	0.77	0.00032	0.00021
Urinary Bladder	23.8	13.9	4.00	2.26	0.00072	0.00040
Pancreas	6.15	4.63	0.967	0.554	0.00200	0.00151
Testes	1.46	0.56	0.247	0.066	0.00233	0.00075
Cecum	60.9	39.3	9.56	3.49	0.0204	0.0110
Large Intestine	26.6	15.5	4.44	2.21	0.0160	0.0090
Small Intestine	55.3	40.3	8.56	3.73	0.104	0.065
Stomach	32.8	29.0	4.98	3.62	0.0215	0.0190

Disposition Summary–Dose Recovered (%)

Sample	Percent Recovered Mean	Percent Recovered SD
Urine + Cage Rinse	66.1	28.2
Urine	52.8	22.9
Cage Rinse	13.2	7.5
Feces	21.1	7.8
Volatile Organics	0.0968	0.0095
CO ₂	0.747	0.053
GI Contents	1.93	1.32
Carcass	0.322	0.202
Tissues	0.910	0.427
Total Recovered	91.0	32.9

^aAll values expressed as mean ± standard deviation (SD) (N = 5). The target dose was 400 mg DTBBA/kg. The actual dose delivered was 377 ± 18 mg/kg (42.6 ± 2.0 µCi).

^bCPDE = Cumulative percent dose excreted

^c24 hour (h) urine collection included urine present in the urinary bladder at study termination.

^dTissue weights for the dispersed tissues were calculated using the following percentages of body weight: adipose 7.0%, blood 7.4%, muscle 40.4%, and skin 19% (International Life Sciences Institute, 1994).

^eTBR = tissue to blood ratio