

**Distribution of Radioactivity 24 Hours Following Intravenous Administration of 10 mg/kg
[¹⁴C]DMAE to Male Wistar Han Rats (DMAE Study D)^a**

Dose Recovered in Excreta (%)

End of Collection Period (h)	Urine CPDE ^b	Feces CPDE	Volatile Organics ^c CPDE	CO ₂ ^c CPDE	Total CPDE
1	d	e	0.0269 ± 0.0048	0.344 ± 0.030	0.371 ± 0.027
2	d	e	0.0554 ± 0.0086	0.622 ± 0.070	0.677 ± 0.071
3	d	e	0.0875 ± 0.0151	0.904 ± 0.111	0.991 ± 0.119
4	12.7 ± 10.1	e	0.118 ± 0.015	1.17 ± 0.11	14.0 ± 10.1
6	d	e	0.145 ± 0.020	1.46 ± 0.13	14.3 ± 10.1
8	23.7 ± 9.2	0.0272 ± 0.0433	0.168 ± 0.024	1.76 ± 0.16	25.6 ± 9.2
12	31.1 ± 7.2	e	0.193 ± 0.021	2.33 ± 0.26	33.6 ± 7.2
24 ^f	39.2 ± 7.8	0.330 ± 0.092	0.230 ± 0.029	3.52 ± 0.78	43.3 ± 7.8

Distribution in Tissues (24 hours)

Tissue	nmol-eq DMAE/g Mean	nmol-eq DMAE/g SD	TBR ^k Mean	TBR SD	Dose in Total Tissue (%) Mean	Dose in Total Tissue (%) SD
Adipose ^g	7.78	2.71	0.616	0.112	0.525	0.202
Urinary Bladder	56.6	19.7	4.60	1.31	0.0126	0.0053
Blood ^g	12.9	5.2	Unity	—	0.926	0.439
Brain	48.8	11.2	4.04	0.89	0.216	0.090
Heart	48.6	10.7	4.11	1.19	0.125	0.028
Kidney	257	56	21.3	4.9	1.66	0.38
Liver	216	57	17.6	2.7	7.48	2.16
Lung	162	28	13.7	4.0	0.661	0.172
Muscle ^g	32.1	4.1	2.78	0.96	12.4	2.0
Skin ^g	26.7	1.9	2.33	0.88	4.84	0.58
Spleen	90.1	19.0	7.47	1.59	0.193	0.043
Thyroid	141	65	11.0	3.5	0.0034	0.0013
Testes	16.7	4.7	1.35	0.18	0.145	0.083
Stomach ^h	NA ⁱ	—	NA	—	0.335	0.089
Small Intestine ^h	NA	—	NA	—	1.76	0.48
Cecum ^h	NA	—	NA	—	0.223	0.062
Large Intestine ^h	NA	—	NA	—	0.473	0.049
Carcass ^j	NA	—	NA	—	3.65	5.10
Tail	12.4	4.1	0.634	0.211	2.92	1.02

Disposition Summary [Dose Recovered (%)]

Tissues and GI Tract	Excreted	Total
38.5 ± 2.3	43.3 ± 7.8	81.8 ± 7.1

^aAll values expressed as mean ± standard deviation SD (N = 4). The target dose was 10 mg DMAE/kg. The actual dose delivered was 9.57 ± 0.55 mg/kg (48.8 ± 2.8 µCi/kg).

^bCPDE = Cumulative percent dose excreted.

^cVolatile organics (trapped by isopropanol) and CO₂ (trapped by 1 N NaOH in H₂O) in exhaled breath.

^dUrine was collected at 4, 8, 12, and 24 hours (h) after [¹⁴C]DMAE administration.

^eFeces were collected at 8 and 24 h after [¹⁴C]DMAE administration.

^f24 h urine collection includes urine present in the urinary bladder at study termination.

^gPercent of dose in these tissues calculated using the following percentages of body weight: adipose 7.0%, blood 7.4%, muscle 40.4%, and skin 19.0%.

^hIncludes contents.

ⁱNA = Not applicable.

^jCarcass values are based on the residual digested carcass after the removal of the listed tissues (i.e., percent dose measured in skin, adipose, blood, and muscle was subtracted from the total percent dose measured in the carcass).

^kTBR = Tissue to blood ratio.