

Disposition of Radioactivity 168 Hours Following a Single 10 mg/kg Oral Gavage Administration of [^{14}C]L-BMAA to Male Harlan Sprague Dawley Rats (Group J)^a

Dose Recovered in Excreta (%)

End of Collection Period (h)	Urine CPDE ^b	Cage Rinse CPDE	Feces CPDE	CO ₂ CPDE	GI Content	Total CPDE
4	0.860 $\pm$ 0.146	0.300 $\pm$ 0.131	—	—	—	1.16
8	2.42 $\pm$ 0.81	0.670 $\pm$ 0.134	—	—	—	3.09
12	3.51 $\pm$ 0.91	1.14 $\pm$ 0.24	—	—	—	4.65
24	4.76 $\pm$ 1.23	1.47 $\pm$ 0.28	2.69 $\pm$ 2.77	50.4 $\pm$ 9.6	—	59.3
48	5.50 $\pm$ 1.41	1.56 $\pm$ 0.28	3.05 $\pm$ 2.80	53.6 $\pm$ 10.2	—	63.7
72	5.74 $\pm$ 1.46	1.63 $\pm$ 0.29	3.16 $\pm$ 2.80	54.8 $\pm$ 10.2	—	65.3
96	5.85 $\pm$ 1.48	1.64 $\pm$ 0.29	3.24 $\pm$ 2.81	55.6 $\pm$ 10.3	—	66.3
120	5.90 $\pm$ 1.48	1.69 $\pm$ 0.30	3.30 $\pm$ 2.80	56.2 $\pm$ 10.3	—	67.1
144	5.94 $\pm$ 1.48	1.70 $\pm$ 0.30	3.33 $\pm$ 2.80	56.7 $\pm$ 10.3	—	67.7
168 ^c	5.98 $\pm$ 1.49	1.75 $\pm$ 0.30	3.38 $\pm$ 2.80	57.1 $\pm$ 10.3	0.0702 $\pm$ 0.0183	68.5

Disposition in Tissue

Tissue	nmol-eq/g Mean	nmol-eq/g SD	TBR Mean	TBR SD	% Recovery Mean	% Recovery SD
Blood ^d	4.45	0.68	unity	—	0.426	0.072
Adipose ^d	4.29	1.13	0.970	0.253	0.388	0.107
Muscle ^d	5.25	0.56	1.20	0.18	2.74	0.31
Skin ^d	9.50	1.65	2.17	0.50	2.33	0.42
Brain	3.16	1.27	0.651	0.170	0.0247	0.0093
Heart	4.77	0.54	1.02	0.07	0.0197	0.0017
Kidneys	7.11	0.94	1.52	0.11	0.0628	0.0103
Liver	11.9	4.8	2.49	0.73	0.642	0.236
Lung	5.13	0.62	1.10	0.10	0.0298	0.0029
Spleen	5.47	0.85	1.16	0.05	0.0163	0.0034
Adrenals	11.2	2.6	2.52	0.56	0.00164	0.00026
Thymus	5.20	0.95	1.10	0.10	0.0105	0.0019
Thyroid	15.2	2.2	3.32	0.83	0.000557	0.000091
Urinary Bladder	8.64	1.85	1.87	0.45	0.00153	0.00025
Pancreas	5.04	0.78	1.07	0.09	0.0154	0.0030
Testes	3.21	0.60	0.680	0.054	0.0554	0.0149
Cecum	4.55	0.79	0.977	0.170	0.00778	0.00091
Large Intestine	4.16	0.73	0.892	0.147	0.0199	0.0055
Small Intestine	4.03	0.49	0.871	0.150	0.0576	0.0101
Stomach	4.61	0.66	0.997	0.220	0.0220	0.0021

Disposition Summary –(Dose Recovered [%])

Sample	% Recovered Mean	% Recovered SD
Urine + Cage Rinse	7.73	1.66
Urine	5.98	1.49
Cage Rinse	1.75	0.30
Feces	3.38	2.80
Volatile Organics	NA	NA
CO ₂	57.1	10.3
GI Content	0.0702	0.0183
Carcass	0.258	0.276
Tissues	7.13	0.89
Total Recovered	75.7	10.8

^aAll values expressed as mean $\pm$ standard deviation (SD) (N = 5). The target dose was 10 mg L-BMAA/kg. The actual dose delivered was 10.0 $\pm$ 0.2 mg/kg (47.6 $\pm$ 0.8 μCi).

^bCumulative percent dose excreted.

^c168 hours (h) urine collection includes 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).

TBR = Tissue to blood ratio.