

**Disposition of Radioactivity 24 Hours Following a Single 10 mg/kg Oral Gavage  
Administration of [ $^{14}\text{C}$ ]L-BMAA to Female Harlan Sprague Dawley Rats (Group K)<sup>a</sup>**

**Dose Recovered in Excreta (%)**

| End of Collection Period (h) | Urine CPDE <sup>b</sup> | Cage Rinse CPDE | Feces CPDE      | Volatile Organics CPDE | CO <sub>2</sub> CPDE | GI Content        | Total CPDE |
|------------------------------|-------------------------|-----------------|-----------------|------------------------|----------------------|-------------------|------------|
| 4                            | 1.46 $\pm$ 0.63         | 1.47 $\pm$ 0.60 | –               | 0.0370 $\pm$ 0.0084    | 34.6 $\pm$ 1.6       | –                 | 37.6       |
| 8                            | 2.65 $\pm$ 0.54         | 2.30 $\pm$ 0.83 | –               | 0.0804 $\pm$ 0.0131    | 46.5 $\pm$ 1.6       | –                 | 51.5       |
| 12                           | 3.41 $\pm$ 0.70         | 2.67 $\pm$ 0.98 | –               | 0.122 $\pm$ 0.023      | 51.8 $\pm$ 1.4       | –                 | 58.0       |
| 24 <sup>c</sup>              | 5.54 $\pm$ 1.02         | 3.30 $\pm$ 1.11 | 1.80 $\pm$ 0.83 | 0.182 $\pm$ 0.023      | 57.6 $\pm$ 2.3       | 0.734 $\pm$ 0.322 | 68.7       |

**Disposition in Tissues**

| Tissue               | nmol-eq/g Mean | nmol-eq/g SD | TBR <sup>e</sup> Mean | TBR SD | % Recovery Mean | % Recovery SD |
|----------------------|----------------|--------------|-----------------------|--------|-----------------|---------------|
| Blood <sup>d</sup>   | 10.6           | 1.8          | unity                 | –      | 0.900           | 0.139         |
| Adipose <sup>d</sup> | 6.72           | 1.01         | 0.719                 | 0.263  | 0.543           | 0.090         |
| Muscle <sup>d</sup>  | 9.46           | 1.75         | 0.980                 | 0.256  | 4.38            | 0.70          |
| Skin <sup>d</sup>    | 10.7           | 1.0          | 1.11                  | 0.22   | 2.34            | 0.18          |
| Brain                | 8.45           | 2.67         | 0.848                 | 0.227  | 0.0837          | 0.0252        |
| Heart                | 8.50           | 0.84         | 0.890                 | 0.217  | 0.0353          | 0.0043        |
| Kidneys              | 21.0           | 1.6          | 2.20                  | 0.55   | 0.157           | 0.013         |
| Liver                | 108            | 63           | 11.7                  | 8.8    | 4.39            | 2.55          |
| Lung                 | 13.5           | 0.9          | 1.41                  | 0.29   | 0.0812          | 0.0151        |
| Spleen               | 14.3           | 0.9          | 1.49                  | 0.31   | 0.0452          | 0.0030        |
| Adrenals             | 27.2           | 3.3          | 2.83                  | 0.69   | 0.00593         | 0.00216       |
| Thymus               | 20.2           | 1.8          | 2.10                  | 0.42   | 0.0449          | 0.0071        |
| Thyroid              | 37.9           | 20.5         | 4.23                  | 3.16   | 0.00088         | 0.00024       |
| Urinary Bladder      | 10.7           | 1.8          | 1.10                  | 0.21   | 0.00247         | 0.00044       |
| Pancreas             | 15.3           | 1.9          | 1.58                  | 0.24   | 0.0677          | 0.0095        |
| Ovaries              | 9.44           | 0.75         | 0.990                 | 0.253  | 0.0484          | 0.0098        |
| Cecum                | 9.40           | 1.55         | 0.984                 | 0.271  | 0.0190          | 0.0046        |
| Large Intestine      | 11.7           | 2.4          | 1.21                  | 0.29   | 0.0552          | 0.0143        |
| Small Intestine      | 17.3           | 1.5          | 1.79                  | 0.36   | 0.225           | 0.015         |
| Stomach              | 12.2           | 2.1          | 1.30                  | 0.47   | 0.080           | 0.0249        |

**Disposition Summary (Dose Recovered [%])**

| Sample                 | % Recovered Mean | % Recovered SD |
|------------------------|------------------|----------------|
| Urine + Cage Rinse     | 8.85             | 1.11           |
| Urine                  | 5.54             | 1.02           |
| Cage Rinse             | 3.30             | 1.11           |
| Feces                  | 1.80             | 0.83           |
| Volatile Organics      | 0.182            | 0.023          |
| CO <sub>2</sub>        | 57.6             | 2.3            |
| GI Content             | 0.734            | 0.322          |
| Carcass                | 0.840            | 0.514          |
| Tissues                | 14.3             | 2.8            |
| <b>Total Recovered</b> | <b>83.0</b>      | <b>1.6</b>     |

<sup>a</sup>All values expressed as mean  $\pm$  standard deviation (SD) (N = 5). The target dose was 10 mg L-BMAA/kg. The actual dose delivered was 10.5  $\pm$  0.2 mg/kg (35.3  $\pm$  0.5  $\mu\text{Ci/kg}$ ).

<sup>b</sup>CPDE = Cumulative percent dose excreted.

<sup>c</sup>24 hours (h) urine collection includes urine present in the urinary bladder at study termination.

<sup>d</sup>Tissue 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).

<sup>e</sup>TBR = tissue to blood ratio.