SUPPLEMENTARY MATERIAL 1. *P* values indicating significant and nonsignificant relationships between and among tissues of similar functional groups.

| Trace element and functional group |
|---|
| Copper |
| muscle and heart (muscle lower; $P < 0.0001$)* |
| liver and spleen (spleen lower; $P = 0.0002$)* |
| liver and kidney (kidney lower; $P < 0.0001$)* |
| spleen and kidney ($P = 0.4955$) |
| stomach tissue and pyloric caeca + adipose (pyloric caeca + adipose lower; $P = 0.0004$)* |
| stomach tissue and intestine (intestine lower; $P = 0.0022$)* |
| pyloric caeca + adipose and intestine ($P = 0.0787$) |
| ovary/egg and testes ($P = 0.0630$) |
| adipose and brain (adipose lower; $P = 0.0003$)* |
| skin and gill (skin lower; $P = 0.0128$) |
| skin and bone (bone lower; $P = 0.0028$)* |
| gill and bone (bone lower; $P < 0.0001$)* |
| Zinc |
| muscle and heart (muscle lower; $P = 0.0002$)* |
| liver and spleen ($P = 0.328$) |
| liver and kidney (liver lower; $P < 0.0001$)* |
| spleen and kidney (spleen lower; $P < 0.0001$)* |
| stomach tissue and pyloric caeca + adipose (pyloric caeca + adipose lower; $P = 0.0328$) |
| stomach tissue and intestine ($P = 0.9353$) |
| pyloric caeca + adipose and intestine (pyloric caeca + adipose lower; $P = 0.0328$) |
| ovary/egg and testes ($P = 0.3527$) |
| adipose and brain (adipose lower; $P < 0.0001$)* |
| skin and gill (gill lower; $P < 0.0001$)* |
| skin and bone (bone lower; $P < 0.0001$)* |
| gill and bone (bone lower; $P = 0.0060$)* |
| Arsenic |
| muscle and heart (muscle lower; $P = 0.0002$)* |
| liver and spleen (spleen lower; $P = 0.0036$)* |
| liver and kidney (kidney lower; $P = 0.0010$)* |
| spleen and kidney (kidney lower; $P = 0.0274$) |
| stomach tissue and pyloric caeca + adipose ($P = 0.1052$) |
| stomach tissue and intestine ($P = 0.1991$) |
| pyloric caeca + adipose and intestine ($P = 0.9005$) |
| ovary/egg and testes ($P = 0.7972$) |
| adipose and brain (brain lower; $P = 0.0002$)* |
| skin and gill (skin lower; $P = 0.0129$) |
| skin and bone (bone is lower; $P = 0.0032$)* |
| gill and bone (bone is lower; $P < 0.0001$)* |
| Cadmium |
| muscle and heart ($P = 0.0638$) |
| liver and spleen (spleen lower; $P = 0.0014$* |
| liver and kidney (kidney lower; $P = 0.0084$)* |
| spleen and kidney ($P = 0.1857$) |
| stomach tissue and pyloric caeca + adipose ($P = 0.7950$) |
| stomach tissue and intestine ($P = 0.5795$) |
| pyloric caeca + adipose and intestine ($P = 0.8777$) |
| ovary/egg and testes ($P = 1$) |
| adipose and brain ($P = 0.8062$) |
| skin and gill ($P = 0.0816$) |
| skin and bone ($P = 0.4321$) |
| gill and bone (bone lower; $P = 0.0071$)* |
| Lead |
| muscle and heart ($P = 0.0688$) |
| liver and spleen ($P = 0.0661$) |
| liver and kidney ($P = 0.4371$) |
| spleen and kidney ($P = 0.1303$) |
| stomach tissue and pyloric caeca + adipose ($P = 0.2310$) |
| stomach tissue and intestine ($P = 0.2032$) |
| pyloric caeca + adipose and intestine ($P = 0.8690$) |
| ovary/egg and testes ($P = 0.4127$) |

SUPPLEMENTARY MATERIAL 1. Continued.

| Trace element and functional group |
|---|
| adipose and brain ($P = 0.7856$) |
| skin and gill ($P = 0.1534$) |
| skin and bone ($P = 0.9051$) |
| gill and bone ($P = 0.1324$) |

*An asterisk indicates a significant difference at a Bonferroni-adjusted significance level of 0.05/15 = 0.00333.