

Tissue:wholebody ratios for fish and amphibians

		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
Ag	Bone	5.9E-01	-	-
Ag	Kidney	1.0E+00	-	-
Ag	Liver	3.4E-01	-	-
Ag	Muscle	1.0E+00	-	-
Al	Bone	2.4E-01	-	-
Al	Kidney	2.9E-01	-	-
Al	Liver	5.6E-01	-	-
Al	Muscle	2.0E+00	-	-
As	Bone	1.0E+00	-	-
As	Kidney	1.0E+00	-	-
As	Liver	1.0E+00	-	-
As	Muscle	1.0E+00	-	-
B	Bone	5.3E-01	-	-
B	Kidney	5.3E-01	-	-
B	Liver	1.0E+00	-	-
B	Muscle	1.0E+00	-	-
Ba	Bone	1.5E-01	-	4.4E-02
Ba	Kidney	1.8E+00	-	5.0E-01
Ba	Liver	6.7E+00	-	3.9E-01
Ba	Muscle	5.6E+00	-	2.4E+00
Be	Bone	5.6E-01	-	-
Be	Kidney	1.0E+00	-	-
Be	Liver	1.0E+00	-	-
Be	Muscle	1.0E+00	-	-
Ca	Bone	1.4E-01	-	2.1E-02
Ca	Kidney	1.9E+01	-	2.1E+01
Ca	Liver	8.3E+01	-	1.4E+01
Ca	Muscle	4.2E+01	-	1.4E+01
Cd	Bone	5.3E-01	3.1E-01	-
Cd	Kidney	2.3E-01	-	-
Cd	Liver	5.6E-01	1.0E+00	-
Cd	Muscle	1.0E+00	3.0E+00	-
Ce	Bone	2.6E-01	2.9E+00	6.9E-01
Ce	Kidney	1.5E-01	-	2.4E-01
Ce	Liver	5.3E-01	-	4.6E-02
Ce	Muscle	2.0E+00	-	3.3E+00

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		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
Co	Bone	4.2E-01	6.7E-01	7.1E-01
Co	Kidney	2.6E-01	-	-
Co	Liver	1.0E+00	1.8E-01	1.0E+00
Co	Muscle	1.0E+00	1.8E+00	1.0E+00
Cr	Bone	2.1E-01	3.7E-01	2.7E-01
Cr	Kidney	6.3E-01	-	
Cr	Liver	1.0E+00	3.7E-01	7.1E-01
Cr	Muscle	2.3E+00	1.0E+00	1.0E+00
Cs	Bone	5.6E-01	1.0E+00	1.0E+00
Cs	Kidney	1.7E+00	-	1.0E+00
Cs	Liver	2.6E+00	2.8E+00	2.0E+00
Cs	Muscle	1.0E+00	1.0E+00	1.0E+00
Cu	Bone	1.0E+00	5.6E-01	1.0E+00
Cu	Kidney	1.3E-01	-	5.1E-01
Cu	Liver	3.8E-02	1.0E+00	1.1E-01
Cu	Muscle	1.8E+00	1.0E+00	2.4E+00
Dy	Bone	-	-	-
Dy	Kidney	5.3E-03	-	-
Dy	Liver	-	-	-
Dy	Muscle	-	-	-
Eu	Bone	2.2E-01	-	-
Eu	Kidney	1.0E+00	-	-
Eu	Liver	1.0E+00	-	-
Eu	Muscle	2.3E+00	-	-
Fe	Bone	1.0E+00	5.6E-01	1.0E+00
Fe	Kidney	5.3E-02	-	6.9E-02
Fe	Liver	3.2E-02	2.0E-01	5.3E-02
Fe	Muscle	2.7E+00	1.0E+00	3.2E+00
Hg	Bone	1.8E+00	-	-
Hg	Kidney	1.0E+00	-	-
Hg	Liver	1.0E+00	2.0E+01	-
Hg	Muscle	1.0E+00	6.3E-01	-
I	Bone	1.0E+00	-	-
I	Kidney	-	-	-
I	Liver	-	-	-
I	Muscle	1.0E+00	-	-

Tissue:wholebody ratios for fish and amphibians

		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
K	Bone	1.0E+00	-	1.0E+00
K	Kidney	1.7E+00	-	1.0E+00
K	Liver	1.0E+00	-	1.0E+00
K	Muscle	1.0E+00	-	1.0E+00
La	Bone	2.9E-01	-	-
La	Kidney	1.9E-01	-	-
La	Liver	4.3E-01	-	-
La	Muscle	1.9E+00	-	-
Mg	Bone	2.9E-01	-	2.1E-01
Mg	Kidney	2.6E+00	-	1.0E+00
Mg	Liver	2.1E+00	-	1.0E+00
Mg	Muscle	1.6E+00	-	1.0E+00
Mn	Bone	1.4E-01	6.7E-01	2.9E-02
Mn	Kidney	1.7E+00		1.0E+00
Mn	Liver	1.0E+00		3.1E+00
Mn	Muscle	1.0E+01		3.5E+00
Mo	Bone	4.5E-01	-	-
Mo	Kidney	1.0E-01	1.0E+00	-
Mo	Liver	1.6E-01	1.0E+00	-
Mo	Muscle	1.0E+00	-	-
Na	Bone	3.1E-01	-	3.3E-01
Na	Kidney	5.9E-01	-	6.2E-01
Na	Liver	1.0E+00	-	6.3E-01
Na	Muscle	1.6E+00	-	1.0E+00
Nb	Bone	6.3E-01	-	-
Nb	Kidney	-	-	-
Nb	Liver	-	-	-
Nb	Muscle	1.0E+00	-	-
Ni	Bone	4.0E-01	-	2.4E-02
Ni	Kidney	2.6E-01	-	1.0E+00
Ni	Liver	7.1E-01	2.9E+01	6.2E+00
Ni	Muscle	1.3E+00	1.0E+00	2.9E+00
P	Bone	1.9E-01	-	6.7E-02
P	Kidney	2.5E+00	-	1.0E+00
P	Liver	2.0E+00	-	1.0E+00
P	Muscle	3.1E+00	-	1.0E+00

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		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
Pb	Bone	4.2E-01	2.0E-01	1.6E-01
Pb	Kidney	6.7E-01	-	2.3E-01
Pb	Liver	5.3E-01	1.0E+00	1.0E+00
Pb	Muscle	1.0E+00	2.4E+00	1.0E+00
Po	Bone	1.0E+00	1.0E+00	-
Po	Kidney	-	-	-
Po	Liver	-	6.7E-01	-
Po	Muscle	1.0E+00	7E+00	-
Pu	Bone	-	5.6E-01	-
Pu	Kidney	-	-	-
Pu	Liver	-	5.1E-01	-
Pu	Muscle	-	3.6E+01	-
Ra	Bone	2.1E-01	2.9E-01	-
Ra	Kidney	-	-	-
Ra	Liver	-	-	-
Ra	Muscle	2.4E+00	1.7E+00	-
Rb	Bone	5.0E-01	-	1.0E+00
Rb	Kidney	1.6E+00	-	1.0E+00
Rb	Liver	1.9E+00	-	1.0E+00
Rb	Muscle	1.0E+00	-	1.0E+00
Ru	Bone	5.9E-01	3.6E-01	-
Ru	Kidney	-	1.4E-01	-
Ru	Liver	-	1.3E-01	-
Ru	Muscle	1.0E+00	1.8E+00	-
Sb	Bone	3.6E-01	-	-
Sb	Kidney	2.1E-01	-	-
Sb	Liver	2.3E-01	-	-
Sb	Muscle	1.6E+00	-	-
Sc	Bone	1.8E-01	-	-
Sc	Kidney	2.1E+00	-	-
Sc	Liver	5.9E-01	-	-
Sc	Muscle	3.8E+00	-	-
Se	Bone	1.0E+00	-	-
Se	Kidney	4.8E-01	-	-
Se	Liver	3.7E-01	-	-
Se	Muscle	1.0E+00	-	-

Tissue:wholebody ratios for fish and amphibians

		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
Sm	Bone	-	-	-
Sm	Kidney	-	-	-
Sm	Liver	-	-	-
Sm	Muscle	-	-	-
Sr	Bone	1.4E-01	2.1E-01	2.1E-02
Sr	Kidney	1.4E+01	-	1.0E+01
Sr	Liver	2.7E+01	1.0E+00	1.3E+01
Sr	Muscle	3.8E+01	3.1E+00	1.9E+01
Te	Bone	6.3E-01	-	-
Te	Kidney	1.0E+00	-	-
Te	Liver	1.0E+00	-	-
Te	Muscle	1.0E+00	-	-
Th	Bone	2.2E-01	-	-
Th	Kidney	1.0E+00	-	-
Th	Liver	1.7E+00	-	-
Th	Muscle	2.2E+00	-	-
Ti	Bone	3.6E-01	-	-
Ti	Kidney	4.2E-01	-	-
Ti	Liver	1.0E+00	-	-
Ti	Muscle	1.0E+00	-	-
Tl	Bone	2.2E-01	-	-
Tl	Kidney	5.6E-01	-	-
Tl	Liver	5.6E-01	-	-
Tl	Muscle	2.4E+00	-	-
U	Bone	2.1E-01	-	-
U	Kidney	2.0E+00	-	-
U	Liver	4.8E+00	-	-
U	Muscle	2.5E+00	-	-
V	Bone	5.3E-01	-	1.8E-01
V	Kidney	1.0E+00	-	5.0E-01
V	Liver	7.1E-01	2.2E+02	1.8E-01
V	Muscle	1.0E+00	8.3E+00	1.0E+00
Y	Bone	3.1E-01	-	-
Y	Kidney	3.1E-01	-	-
Y	Liver	4.2E-01	-	-
Y	Muscle	1.8E+00	-	-

Adapted from Yankovich *et al.* 2010

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		Freshwater Fish	Marine Fish	Amphibians
Element	Tissue	Ratio	Ratio	Ratio
Zn	Bone	2.6E-01	1.0E+00	1.7E-01
Zn	Kidney	1.6E-01	-	4.7E-01
Zn	Liver	2.7E-01	1.0E+00	4.1E-01
Zn	Muscle	2.1E+00	1.0E+00	1.3E+00
Zr	Bone	4.8E-01	-	-
Zr	Kidney	1.0E+00	-	-
Zr	Liver	1.0E+00	8.3E+00	-
Zr	Muscle	1.0E+00	2.4E+00	-