

Appendix H77 – Fish Flesh to Flesh+Bone Dose Ratio

Dose (flesh + bone)

Concentrations in Edible Portions of Fish around Springville Dam (BFFCATC + BFFCATD)

Isotope	Average	+/-	1 Sigma	Units
Sr-90	1.40E-08	+/-	1.16E-09	$\mu\text{Ci/g}$ - wet

Background Concentrations in Edible Portions of Fish (BFFCTRL)

Isotope	Average	+/-	1 Sigma	Units
Sr-90	1.02E-08	+/-	1.77E-09	$\mu\text{Ci/g}$ - wet

Net Concentrations in Edible Portions of Fish

Isotope	Flesh	Units
Sr-90	3.74E-09	$\mu\text{Ci/g}$ - wet

Evaluation of Meat Yield, Proximate Composition and Fatty Acid Profile of Cultured Brook Trout (*Salvelinus fontinalis* Mitchell, 1814) and Black Sea Trout (*Salmo trutta labrax* Pallas, 1811) in Comparison with their Hybrid

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Meat Yield	Median	Bone Yield	Median
60-70%	65%	1-2%	1.5%

Net Concentrations in Fish Flesh verse Bone

Isotope	Flesh	Bone*	Unit
Sr-90	3.74E-09	4.48E-06	$\mu\text{Ci/g}$

*Max Bone-to-Flesh Ratio for Sr90 = 1198

Consumption Rate

1	g flesh/year
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Isotope	Flesh	Bone*	Intake	Units
Sr-90	3.74E-09	1.03E-07	1.07E-07	$\mu\text{Ci/year}$

Ingestion dose coefficients (mrem / μCi) from ICRP 68

Isotope	f1	DCF	Units
Sr-90	0.3	1.04E+02	mrem/ μCi Ing
Sr-90	0.01	1.00E+01	mrem/ μCi Ing

Isotope	Flesh	Bone*	Dose	Units
Sr-90	3.88E-07	1.07E-05	1.11E-05	mrem/year
Total	3.88E-07	1.07E-05	1.11E-05	mrem/year

Dose (flesh only)

Concentrations in Edible Portions of Fish around Springville Dam (BFFCATC + BFFCATD)

Isotope	Average	+/-	1 Sigma	Units
Sr-90	1.40E-08	+/-	1.16E-09	$\mu\text{Ci/g}$ - wet

Background Concentrations in Edible Portions of Fish (BFFCTRL)

Isotope	Average	+/-	1 Sigma	Units
Sr-90	1.02E-08	+/-	1.77E-09	$\mu\text{Ci/g}$ - wet

Net Concentrations in Edible Portions of Fish

Isotope	Flesh	Units
Sr-90	3.74E-09	$\mu\text{Ci/g}$ - wet

Consumption Rate

1	g flesh/year
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Isotope	Intake	Units
Sr-90	3.74E-09	$\mu\text{Ci/year}$

Ingestion dose coefficients (mrem / μCi) from ICRP 68

Isotope	f1	DCF	Units
Sr-90	0.3	1.04E+02	mrem/ μCi Ing
Sr-90	0.01	1.00E+01	mrem/ μCi Ing

Isotope	Dose	Units
Sr-90	3.88E-07	mrem/year
Total	3.88E-07	mrem/year

Ratio

Isotope	Avg Dose	Units
Flesh+Bone	1.11E-05	mrem/year
Flesh Only	3.88E-07	mrem/year
Ratio	28.65	