



**Oregon Health Authority Standard Operating Guidance
Target Analytes for Oregon's Fish Advisory Program
December 30, 2013**

Chemical	Form	Oral Reference Dose ¹ (mg/kg-day)	Screening Value (mg/kg fish tissue)
Metals			
Arsenic	Inorganic	0.0003	0.7
Cadmium		0.001	2.3
Mercury (Vulnerable Populations) ²	Methylmercury	0.0001	0.2
Mercury (General population) ³	Methylmercury	0.0003 ⁴	0.6
Selenium		0.005	11.7
Tributyltin		0.0003	0.7
Organochlorine Pesticides			
Aldrin		0.00003	0.07
Chlordane	total (cis- and trans-chlordane, cis- and trans-nonachlor, oxychlordane)	0.0005	1.2
DDT	total (2,4'-DDD, 4,4'-DDD, 2,4'-DDE, 4,4'-DDE, 2,4'-DDT, 4,4'-DDT)	0.0005	1.2
Dicofol		0.0004	0.9
Dieldrin		0.00005	0.1
Endosulfan	I and II	0.006	14
Endrin		0.0003	0.7
Heptachlor Epoxide		0.00001	0.03
Hexachlorobenzene		0.0008	1.9

¹ Unless otherwise noted, all oral reference doses are from EPA's IRIS program (<http://www.epa.gov/IRIS/>)

² Vulnerable populations are children and women of childbearing age

³ General public excluding vulnerable populations (defined above)

⁴ This value is based on an older IRIS value for methylmercury, which was based on studies in otherwise healthy adults. This value is used in this way by state fish advisory programs in California, Washington, and Idaho. See Technical Memo on the Use of an Alternate Toxicity Value for Methylmercury Applied to Healthy Adults.

Chemical	Form	Oral Reference Dose¹ (mg/kg-day)	Screening Value (mg/kg fish tissue)
Lindane	γ-hexachlorocyclohexane; γ-HCH	0.0003	0.7
Methoxychlor		0.005	11.7
Mirex		0.0002	0.5
Toxaphene ⁵		0.002	4.7
Organophosphate Pesticides			
Chlorpyrifos		0.0003	0.7
Diazinon		0.0007	1.6
Disulfoton		0.00004	0.09
Ethion		0.0005	1.2
Terbufos		0.00002	0.05
Chlorophenoxy herbicides			
Oxyfluorfen		0.003	7
Polychlorinated biphenyls (PCBs)	Total (sum of congeners)	0.00002	0.05
Dioxins/furans	TEQ	0.0000000007	1.6 (ng/kg)
Brominated flame retardants	Congener-specific analysis		
BDE-47		0.0001	0.2
BDE-99		0.0001	0.2
BDE-153		0.0002	0.5
BDE-209		0.007	16.3
Perfluorochemicals (PFCs)⁶	Congener-specific analysis		
Perfluorooctane Sulfonate (PFOS)		0.00008	0.2
Perfluorooctanoic Acid (PFOA)		0.00008	0.2

Screening values were developed from the listed RfD assuming 4 eight-ounce fish meals per month using the equation below:

$$SV = \frac{RfD \times BW}{IR \times CF}$$

Where:

SV = Screening value (mg/kg)

RfD = Oral reference dose (mg/kg-day)

BW = Bodyweight (70 kg for all but mercury which used 60 kg for pregnant women)

IR = Intake rate of fish (30 grams per day)

CF = Unitless conversion factor (0.001) to convert grams of fish to kilograms of fish

⁵ ATSDR's Intermediate Oral Minimal Risk Level (<http://www.atsdr.cdc.gov/toxprofiles/tp94-a.pdf>); no IRIS value

⁶ PFC RfDs developed by Minnesota Department of Health

(<http://www.health.state.mn.us/divs/eh/hazardous/topics/pfcs/finalreport011508.pdf>); no IRIS value available