

Guidelines/Criteria	
	Reference: Chu I, Villeneuve DC, Valli VE, Ritter L, Norstrom RJ, Ryan JJ, Becking GC. 1984. Toxicological response and its reversibility in rats fed Lake Ontario or pacific coho salmon for 13 weeks. J Environ Sci Health B 19(8-9):713-731.
In vivo Study Type Route of Administration Species & age of animals	90 day dietary study Diet Male and female weanling Sprague-Dawley rats
Study Duration	90 days
Type of Mixture Binary >2 components Similar acting or dissimilar What Mode of Action was investigated?	No Adult coho salmon from either Lake Ontario or the Pacific ("uncontaminated" control) were incorporated into a pelleted rat diet. Both Nothing specific
Parameters/End points Measured Target organs/Critical effects Pharmacological changes or adverse effects	Body weight and food consumption, organ weights, haematology, hormonal analyses in testis, ovary and adrenals, gross pathology and histopathology in brain, liver, spleen, kidney & heart; fat accumulation in the liver; bone marrow smears; clinical chemistry. Both
Individual Components Characterisation of individual compounds Name, exact chemical name, CAS no. Were dose responses established for individual components? Were no effect levels established? Were doses below the NO(A)ELs investigated?	None N/A No No N/A
Mixtures Investigated Number of dose levels How does the mixture make-up compare to individual components? (e.g. low dose) equivalents used?) No. of technical replicates per exposure condition (<i>in vitro</i>) No. of animals per dose group (<i>in vivo</i>)	Three Fish was incorporated into the diet at 1.45%, 2.9% and 5.8% by weight 20 of each sex for each fish source and dose level, 10 of which were terminated after 90 days, and 10 of which were put onto a no-fish diet for another 90 days and then terminated.
Observations/Findings	All effects are expressed here as differences shown in the Lake Ontario salmon fed groups vs. the Pacific salmon fed groups. Spleen weight changes in males, but without clear pattern and not clearly dose-related; all normal in the recovery groups. Increased serum potassium in low and high but not mid-dose males. Apparent effects on blood glucose and haematology in recovery group males, not clearly treatment related. Induction of one specific hepatic enzyme. Increase in very mild histopathologic changes in liver (both sexes) and thyroid (males only) in all recovery groups (i.e. 180 days), but not at 90 days.
Overall opinion (e.g. sufficient numbers of groups investigated, group sizes adequate, observations reproducible, low dose levels used investigated)	There were no effects that were both adverse and clearly treatment-related, when effects were expressed as differences shown in the Lake Ontario salmon fed groups vs. the Pacific salmon fed groups. There were also differences between the chow-fed animals and the Pacific salmon fed groups, but the Pacific salmon fed groups are considered to be the relevant control for this study as far as effects of contaminant mixtures are concerned.