

Daly, 1991

Guidelines/Criteria	
	Reference: Daly HB. 1991. Reward reductions found more aversive by rats fed environmentally contaminated salmon. Neurotoxicol Teratol 13:449-453.
In vivo Study Type Route of Administration Species & age of animals	Behavioural study Diet Male sprague-Dawley rats (75-93 days old)
Study Duration	20 days of feeding test or control diets followed by 8 days on restricted control diet to lower body weight to 80% of ad lib control, followed by 27 days of testing (still on control diet)
Type of Mixture Binary >2 components Similar acting or dissimilar What Mode of Action was investigated?	No Lake Ontario or ocean salmon (used as the control) were included in the diet. Both Nothing specific
Parameters/End points Measured Target organs/Critical effects Pharmacological changes or adverse effects	Body weight gain during the 20 day feeding period, and time taken to move to a food reward Depends on magnitude of effects
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>)	One The diet included 30% salmon. Different groups were fed salmon from the Pacific (control) or Lake Ontario. There was also a zero fish diet. Ten were given a large food reward and then switched to a small food reward. Five were given a small food reward throughout.
Observations/Findings	No effect on weight gain. When trained using a large food reward there was no effect of diet on response, but when then switched to a small food reward the rats previously fed Lake Ontario salmon took longer (14.2 secs) to reach the reward than those previously fed ocean fish (6.2 secs). The authors conclude that the results are consistent with Lake Ontario fed groups having increased reactivity to an adverse event.
Overall opinion (e.g. sufficient numbers of groups investigated, group sizes adequate, observations reproducible, low dose levels used investigated)	When so few variables are measured it makes it hard to put the results into context of the overall state of health of the rats. However, the effect on behaviour seems real. The explanation is not clear.