**Aulerich et al, 1971**

| **Guidelines/Criteria** | |
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| Reference: | Aulerich RJ, Ringer RK, Seagran HL, Youatt WG. 1971. Effect of feeding coho salmon and other Great Lakes fish on mink reproduction. Can J Zool 49(5):611-616. |
| **In vivo *Study Type*** | Mink reproduction studies |
| Route of Administration | Diet |
| Species & age of animals | Male and female adult mink |
| **Study Duration** | 11, 6 and 6 months respectively |
| **Type of Mixture** | |
| Binary | No |
| >2 components | Various fish from the Great Lakes or ocean fish (used as the control) were included in the diet |
| Similar acting or dissimilar | Both |
| What Mode of Action was investigated? | Nothing specific |
| **Parameters/End points Measured** | |
| Target organs/Critical effects | Mating success, number of kits born dead and alive, number of kits alive at 4 weeks old and kit weight |
| Pharmacological changes or adverse effects | Adverse |
| **Individual Components** | |
| Characterisation of individual compounds | None |
| Name, exact chemical name, CAS no. | N/A |
| Were dose responses established for individual components? | No |
| Were no effect levels established? | No |
| Were doses below the NO(A)ELs investigated? | N/A |
| **Mixtures Investigated** | |
| Number of dose levels | One |
| How does the mixture make-up compare to individual components? (e.g. low dose) equivalents used?) | There was 30% fish inclusion in the diet. In Experiment 1 the groups were ocena perch (control) and 1967 Lake Michigan coho salmon. In Experiment 2 the groups were ocean whiting (control), 1968 Oregon coho salmon, 1967 Lake Michigan coho salmon, 1968 Lake Michigan coho salmon and 1968 Lake Michigan coho salmon canning by-products. In Experiment 3 the groups were ocean whiting (control), 1969 Lake Michigan or Lake Erie coho salmon, 1969 Lake Michigan bloater chub and 1969 Lake Michigan or Lake Erie yellow perch. |
| No. of technical replicates per exposure condition (*in vitro)* | |
| No. of animals per dose group (*in vivo* ) | In the three experiments there were 5 males and 10 females in the first, and 7 males and 14 females in the second and third. |
| **Observations/Findings** | Kits born, kit survival and average weight were reduced in all experiments in all groups fed fish from Lake Michigan, and those fed coho salmon from Lake Erie. Mating success and adult survival was less consistently reduced. There was a poor relationship of effects to fish mercury content, but a better one to DDT/dieldrin concentration. |
| **Overall opinion** | |
| (e.g. sufficient numbers of groups investigated, group sizes adequate, observations reproducible, low dose levels used investigated) | The dramatic effects in this study are clearly robust findings. The cause is contamination in Lake Michigan, but beyond some speculation there is no clear evidence in this paper as to the exact cause of the effects. |