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*Quantitative Assay of Environmental Cs-137 in Oncorhynchus clarki pleuriticus and
Oncorhynchus mykiss Muscle*

Radioactive particles were dispersed across the entire biosphere due to atmospheric nuclear weapons testing, mostly during the 1950's and 1960's. One radioactive element that was a large portion (~6%) of the sum total of all radioactive particulate deposited from nuclear weapons testing is Cesium-137. The objective of this research is to determine residual Cesium-137 activity in different elements of a mountain environment. The hypothesis for this project was that the radioactivity would decline more rapidly than decay alone for the lake fish tissue. Another hypothesis is that Cesium-137 would be present in measurable quantities in the soil surrounding a mountain lake. Soil samples were taken in three different locations based on distance from the shore. Fish were caught using fly fishing techniques to harvest muscle tissue. All environmental samples were run through a GeLi detector to determine activity. Once GeLi results were obtained, a calculation was done to determine the radioactivity per gram in the samples. Results show that all samples contained measurable amounts of Cesium-137. Samples that showed the most radioactivity were the soil samples. Muscle tissue radioactivity is shown to have decreased over a 40 year interval. Though Cesium-137 was detectable it is not found in levels exceeding the EPA limits. Based on the results, both hypotheses were supported.