CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY

Name(s)
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Project Number
J2020

Project Title
Mercury Canned from the Sea

Abstract

Objectives/Goals
The objective of this project was to determine mercury concentrations in packaged tuna and to see if it is within safe levels to eat.

Methods/Materials
Tuna samples in cans and pouches were collected and analyzed on a DMA-80 Direct Mercury Analyzer. Mercury concentrations were compared to the Fish Containment Goal for mercury adopted by the California Department of EPA. The concentrations were also compared by cans vs. pouches, albacore vs. light tuna, and oil vs. water.

Results
Mercury concentrations in tuna varied widely. In this study, mercury concentrations ranged from 0.000 to 0.674 µg/g. The largest difference was between albacore and light tuna, with albacore having greater amounts of mercury. Out of 35 samples, 49% were greater than the Fish Containment Goal of 0.220 µg/g and 7% were over the limit of no consumption.

Conclusions/Discussion
You should know about mercury levels in tuna because mercury is a toxic chemical that has shown to be a health hazard. The data from this project shows that mercury concentrations can be greater than limits set by the EPA for consumption. The data suggests that light tuna packed in oil has the least amount of mercury.

Summary Statement
Mercury concentrations in packaged tuna.

Help Received
Mother helped make figures; Used lab equipment to analyze samples at Marine Pollution Studies Lab at Moss Landing Marine Labs under the supervision of analyst Jessica Mesek.