CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY

Name(s)
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Project Number
J1912

Project Title
Yucky Water: Is Your Water Safe to Drink?

Abstract

Objectives/Goals
The objective is to test water samples from different sources for various properties such as bacteria, lead content, pH Levels, etc. My hypothesis was that Thousand Oaks tap water would be cleaner than the other samples tested.

Methods/Materials
I obtained water samples from 4 sources including tap water from my home in Thousand Oaks, Arrowhead Bottled Water, tap water from Van Nuys, and tap water from a United Airlines 747. I used test strips to measure the levels of Lead/Pesticides, Nitrate, Nitrites, pH, Chlorine, and Hardness. To measure the bacteria content, I filled a vial with a bacterial growth powder and the selected water samples. I kept the vials in a warm place for 48 hours and then determined whether bacteria was present or not based on the color of the water.

Results
None of the samples tested showed the presence of bacteria. All other measurements were within the normal, or desired, range except the hardness level for the Thousand Oaks tap water. The desireable range of hardness for drinking water is below 50 ppm. This water sample showed a hardness level of 120 ppm!

Conclusions/Discussion
I found the Arrowhead Bottled Water tested best for drinking water, while the Thousand Oaks Tap Water had the overall worst results. I was pleased that all the water samples tested were safe and none showed signs of bacteria.

Summary Statement
My project tested various drinking water samples for the presence of bacteria, lead, pesticides, etc.

Help Received
N/A