CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY

Name(s)
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Project Number
J2227

Project Title
Watch Out for Lead

Abstract

Objectives/Goals
People don#t always realize that the pots and pans that they use to cook with every day might be containing lead. This project looks at the safety of cooking with a ceramic pot. The safety was tested by boiling water in different ceramic pots that did contain lead (the pots were tested for lead earlier). After the water was boiled, it was put in a special container where a formula was added to determine whether or not the water tested positive on lead. My hypothesis was that if I boiled water in the ceramics,then the lead would leak in.

Methods/Materials
MATERIALS: Dropper; Three ceramic pots; 10 lead testing swabs; Lead testing in Water kit: Disolving tablet, Glass bottle, Testing strip, Carrier solution.

METHODS: First prepare all materials necessary for the project. Then take one of the pots and wipe the testing swabs across it. (Repeat with all of the ceramics). Next fill the ceramics that tested positive for lead with water (about three quarters). Then heat the water at 140° F or 60° C. Once the water is heated up, let it sit for two hours undisturbed. Pour the water (that is now at room temperature) into the testing bottle. Add the dissolving tablet into the bottle and shake vigorously. Add the carrier solution to the formula and let sit undisturbed for ten minutes. Insert Test strip to the top of bottle and wait for a pink line to appear through it. Then use a lead check swab to find out if the water had led in it.

Results
When I tested the ceramics containing lead for additives the results were negative. The lead in the cooking pots (which were previously proven to have been to contain lead) did not leak into the water, when a temperature of 100 degrees celsius was reached. The results did not support my hypothesis.

Conclusions/Discussion
In this expiriment, my hypothesis was proven wrong. I thought that when heating water at a boiling temeprature in a ceramic cooking pot containing lead, the lead in the pot would extract from the surface realising the harmfull chemical intoo the water. In conclusion, the results for my experiment prove that it is safe to heat up water in ceramic cooking pots even when high temperatures are reached. Lead is something that people should be more aware of because it is something that is known to be very hazerdous to your health. And now lead in water that you heat up yourself in a ceramic pot is something less to worry about.

Summary Statement
My project is about searching for lead in ceramic cooking pots.

Help Received