CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
J1123

Project Title
Desalination: Water for the Future

Abstract

Objectives/Goals
I originally wanted to find out if it is possible to desalinate ocean water at home for drinking. From there, I created my hypothesis, which states that if the concentration of the salt water is increased, then the volume of freshwater collected will decrease.

Methods/Materials
I tested this by taping a small bowl to the bottom of the larger bowl and then filled it up with 500mL of distilled water. Then I added 18, 36, 54, 72, 90, or 108 grams of salt to the bowl. Once that was finished, I covered the bowl with cling wrap with a rock or stone, weighing about 0.4 Kg on top, creating a dip over the center of the smaller bowl. Then I placed it in the sun for a week. After a week, I used the graduated cylinder to measure how much water was left in the larger bowl, how much was collected (desalinated), and the salinity of the water collected using some salt test strips.

Results
My results supported my hypothesis by showing that the bowl that had one tablespoon of salt had about double of the desalinated water of the six-tablespoon bowl for all of my trials.

Conclusions/Discussion
They also showed that it is possible to desalinate ocean water at home, but it is tastier to drink the water from a desalination plant.

Summary Statement
Testing to see if ocean water can be desalinated at home for drinking purposes.

Help Received
Mother purchased supplies and drove me to the desalination plant for a field trip.