CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)

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Project Number

31287

Project Title

Comparing Carbon Water Filters with Reverse Osmosis Filters

Abstract

Objectives/Goals

In this project we were trying to find the best water filter (out of the two most common ones: reverse osmosis and carbon). We believed that the reverse osmosis would be the ideal filter because it has a special system that filters everything including bad bacteria, sediment, and chemicals.

Methods/Materials

For our experiment we filled five cups with 200 ml of water and place 1 chemical testing strip in each cup. After, we took out the stick after 30 seconds and recorded the results. We then repeated this with the carbon and reverse osmosis filtered water.

Results

We were trying to determine which filter filters hardness, pH, and chlorine out of Monterey tap water. Our first graph shows the levels of pH. The average of tap water was pH. 7.8, reverse osmosis was pH 6.2, and carbon was pH. 7.2. Our second graph shows the levels of hardness of the water. The averages for the hardness were 790 milligrams of calcium for tap water, 150 milligrams for reverse osmosis, and 260 milligrams for carbon.Our data seemed to indicate that our hypothesis was incorrect. It shows that the carbon filter is the ideal filter for the human body. This is because the ideal pH is between 6.5 and 8.5 and the pH for carbon filter was 7.2. The ideal hardness levels are between 150 and 200 milligrams. This suggests that the carbon filter is the ideal filter.

Conclusions/Discussion

Our experiment is important because it can greatly influence what type of water people decide to drink. They can make good decisions on which filter to use. The water filter companies could also be influenced because this could help them improve their filters.

Summary Statement

We wanted to find the most suitable water filter for the human body.

Help Received

Our science teacher helped us in revising our documents.

Preliminary