

# CALIFORNIA STATE SCIENCE FAIR 2005 PROJECT SUMMARY

Name(s)

Brian N. Bhaskar

**Project Number** 

J1302

### **Project Title**

# Dare to Share Your Water: A Study of Bacteria in Backwash

### **Abstract**

### **Objectives/Goals**

To determine if drinking a water bottle after excercise with either a straw or by mouth will contaminate the remaining water in the bottle with bacteria from the mouth.

#### Methods/Materials

After one hour of excercise, I asked 15 subjects to drink from a water bottle, once by mouth and once by straw. The subjects were asked to drink 3/4 of the water in the bottle. A one milliliter sample of the remaining water was removed and poured into the culture medium. After 48 hours at room temperature, the colonies were counted. A control was taken.

Materials:

Petri dishes

Culture medium

Calibrated dropper

Straws

0.5 liter arrowhead water bottles

gloves and mask

marker

magnifying glass

#### Results

100% of the 30 samples (15 by mouth and 15 by straw) grew bacterial colonies on the culture plates. The drinking by mouth method contaminated the water bottles more than the drinking by straw method.

#### Conclusions/Discussion

I concluded that drinking water by mouth or by straw will contaminate the remaining water in the bottle. My experiment suggests that the way you drink the water will effect the amount of bacteria that is backwashed. Sharing other people's water, after sporting events, will expose you to illnesses from their backwashed bacteria and viruses.

# **Summary Statement**

My project is about how water bottles are contaminated with bacteria after drinking.

## **Help Received**

My mom typed for me and my dad bought the supplies. Guidance from Mr. Schottlach.