

# CALIFORNIA STATE SCIENCE FAIR 2003 PROJECT SUMMARY

Name(s)

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**Project Number** 

**J0506** 

**Project Title** 

Ready... Set... Ferment!

### Abstract

## **Objectives/Goals**

My hypothesis is that there is a relationship between the initial sugar level of grapes and the ultimate alcohol level of wine. I believe the ratio of sugar percentage by volume to alcohol percentage by volume is around 2:1 (.50). To test my hypothesis I will replicate the fermentation process with yeast and sugar water.

#### Methods/Materials

- I. Materials
- 1 hydrometer
- 1 thermometer
- 1 funnel
- 5 325 ml bottles
- 1 graduate
- 1 refracometer
- 1 vinometer
- 1.000 ml of water

Fermentation yeast

Graph paper

1 fish tank water heater

Sugar

Water

#### II. Procedure

- 1) Created volume of sugar water with 32% sugar
- a. poured sugar into one gallon of water
- b. used refracometer to get to 32% sugar
- 2) Washed and dried five 250 ml bottles
- 3) Poured 200 ml sugar water with percentages at: 32%, 30%, 28%,26%,and 24% into bottles
- a. diluted sugar water by adding more water
- b. water brought down sugar level
- 4) Added ½ tsp. yeast to each bottle of sugar water

### **Summary Statement**

My project is about sugar and alcohol and the relationship between them.

### Help Received

My mom and dad helped me type my report. I used wine equipment given to me by Royce Townsend to help me do my experiment