# CALIFORNIA STATE SCIENCE FAIR
## 2003 PROJECT SUMMARY

**Name(s)**
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**Project Number**
**S1315**

**Project Title**
## How Much Honey Is Needed to Inhibit Bacterial Growth?

**Abstract**

**Objectives/Goals**
The objective is to determine if different amounts of honey

**Methods/Materials**
Bacteria from my fingers were grown over night in nutrient agar. One colony was transferred into 250ml of water to create a bacterial suspension. 7.5g, 15g, 30g, and 60g of honey was added respectively to 200ml of nutrient agar to create 3.75%, 7.5%, 15%, and 30% plates. 1ml of the bacterial suspension was transferred to three sets of seven plates each. Each set was held for two days at 4¢ªC, 20¢ªC, and 35¢ªC. Two Petri-dishes containing nutrient agar only were used as controls. After two days, observations were taken and colonies of bacteria were measured and counted.

**Results**
At 20¢ªC and 35¢ªC, more bacteria grew on Petri-dishes containing 3.75% and 7.5% honey. Some colonies were observed at 15¢ªC while no colonies were observed on Petri-dishes with 30% honey.

**Conclusions/Discussion**
The hypothesis of this experiment was supported. That is, bacterial growth was inhibited with the increasing addition of honey. 30% honey was able to prevent any bacterial growth.

**Summary Statement**
A quantitative analyisis of the percentage needed to inhibit bacterial growth.

**Help Received**
With preperation of Petri-dishes, help was received fro Mr. Rober Cobb, current bilogy teacher.