

# CALIFORNIA STATE SCIENCE FAIR 2002 PROJECT SUMMARY

Name(s)

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**Project Number** 

**J1309** 

## **Project Title**

# Do Bactericides Affect the Growth of E. coli and Streptococcus lactis Bacteria?

## **Objectives/Goals**

## **Abstract**

The project will test if bacteria prone to variables such as Lactose Agar, Nutrient Agar and plates containing Ampicillin. The bacteria would either die or continue to grow, showing that the bacteria are resistant to that certain bactericide.

#### Methods/Materials

E.Coli and Streptococcus Lactis Bacteria are inoculated in Lactose Agar, Nutrient Agar and plates containing Ampicillin. Bactericides such as Isopropyl Alcohol, Hydrogen Peroxide, Bleach, Mouthwash, Iodine, Disinfectant disk and Antibiotic Disk were given to each bacteria species. After 48 hours, plates were checked for inhibition and measured.

#### Results

In result antibiotics affect the growth of bacteria in different ways. The most affective bactericides were disinfectant disk and bleach. Bleach kills all bacteria found on Earth that is known. Cross contamination may be a reasonable explanation of not so accurate results. The sterile section, the control, may have inhibition because of other bactericides in the other sections that were strong enough to reach to section 1.

#### Conclusions/Discussion

In conclusion bactericides do not affect the same way to the same bacteria. Bacteria were resistant to some of the bactericides. Many considerations were taken to keep the plates clean from other bacteria found in the air. Bactericides are used for different purposes and are very helpful in many things in life. In the future, new bactericides will be made to prevent bacteria growth, which are resistant to bactericides.

## **Summary Statement**

E. Coli and Streptococcus Lactis bacteria are tested with different antibiotics to see if the bactericides affect the growth of the different bacteria species.

### **Help Received**