CALIFORNIA STATE SCIENCE FAIR
2010 PROJECT SUMMARY

Name(s)
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Project Number
J2127

Project Title
Does Lip Gloss/ Balm Increase the Ability of Ultraviolet (UV) Light to Kill Saccharomyces cerevisiae (Yeast)?

Abstract

Objectives/Goals
To determine if lip gloss/ balm will increase the ability of ultraviolet (UV) light to kill Saccharomyces cerevisiae. To compare the abilities of various lip glosses/ balms to provide protection against UV exposure by comparing their abilities to protect Saccharomyces cerevisiae from UV exposure.

Methods/Materials
For each product the surfaces of Sabouraud dextrose agar plates were inoculated to contain approximately 50-100 cells of a UV sensitive strain of Saccharomyces cerevisiae. Lip glosses/ balms were then spread across the surfaces of lids of Petri dishes which were placed on the inoculated plates. Plates were then exposed to UV light (254 nm) for 30 seconds and for 4 minutes. After being exposed the lids containing gloss/ balm were removed and were then replaced with clean lids. Plates were incubated for 72 hours at room temperature. After incubation the number of colonies on each plate were counted and recorded. Results were compared to control plates, containing no lip gloss/ lip balm, that were exposed to the same conditions.

Results
Test results indicated that there were differences seen between the products. Better protection was displayed by the products that contained higher SPF ratings. Test results indicated that lip gloss/ balm did not increase the ability of UV light to kill yeast.

Conclusions/Discussion
Even though lip gloss/ balm did not increase the ability of UV light to kill yeast, data generated shows that different products provide different degrees of protection. Consumers should therefore use caution and select lip care products with high SPF ratings.

Summary Statement
To determine if lip gloss/ balm will increase the ability of ultraviolet (UV) light to kill Saccharomyces cerevisiae.

Help Received
My teacher, Mrs. Donna Harbison, and my parents helped guide me in designing my experiment and offered suggestions. My parents proofread my poster and report.