

CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

Project Number

J2001

Name(s)

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Project Title

The Effect of Moisturizers on Skin Moisture Retention

Abstract

Objectives/Goals To find what type of skin moisturizer keeps the skin hydrated the most and why, using Jell-O as a human skin model.

Methods/Materials

Material:

 Moisturizers - Cocoa Butter, Baby Oil, Aruba Aloe, Elite, Petroleum Jelly  Jell-O (green)  Graduated cylinder

 Petri dishes (18 of them)

Method:

18 petri dishes filled with 60 mL of Jell-O each were prepared to experiment the effect of 5 different moisturizers, as well as no moisturizer, on Jell-O weight and height retention through time (15 days).

Results

1. Petroleum jelly retained 100% of the weight and most of the height.

- 2. Baby Oil retained almost 100% of the weight but lost a little height.
- 3. Aruba Aloe retained 93% of the weight with some height loss.
- 4. Cocoa Butter retained 77% of the weight and 72% of the height.
- 5. Elite Citrus Coconut retained 74% of the weight and the height.
- 6. Jell-O with no moisturizer retained only 62% of the weight and 37% of the height.

Conclusions/Discussion

Petroleum Jelly has retained moisture in the Jell-O the longest.

If I do this experiment again, I would pick darker colored Jell-O, to improve the contrast with the light colored moisturizers. I would also use different types of moisturizers, some in the market with prescription, and one that I will make myself with Petroleum Jelly and Cocoa Butter.

Summary Statement

Finding skin moisturizer and it's ingredient that retains moisture in Jell-O (used as human skin model) the longest.

Help Received

Parents helped prepare the Jell-Os and take pictures.