CALIFORNIA SCIENCE & ENGINEERING FAIR
2019 PROJECT SUMMARY

Name(s)

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Project Number

J1317

Project Title

How Does Chemical Lightening Affect the Structure of Human Hair?

Abstract

Objectives

This study examines the damages of chemical lightening on the structure of human hair by testing hair's elasticity.

Methods

Human hair, styrofoam boards, pins, chemical lightening solution (3% hydrogen peroxide). Hair was lightened for different periods of time and used the hair to make hygrometers. Measured the length of the hair from the hygrometers after being placed in a humid area.

Results

After placing the hygrometers in a humid area, the length of the chemically lightened hair from the hygrometer increased. The hair that was lightened for the longest period of time increased its length the most.

Conclusions

The longer the time of chemical lightening on hair, the more the growth of the hair. This means that the hydrogen peroxide solution caused more damage on the structure of human hair because there was more growth taking place for the lightened hair.

Summary Statement

I showed the damage of chemical lightening on the structure of human hair through its elasticity.

Help Received

None. I did all the parts of my project/experiment by myself.