



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

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Project Title Soaps	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of this experiment was to test different types of homemade soaps and a brand name soap for their different characteristics, such as forming bubbles, moisturizing ability, cleaning ability, scent, and color.</p> <p>Methods/Materials Once all four of the soaps were ready, they were tested on a random group of students. 100 students were surveyed, ranging between grades 6-12. Volunteers were asked to apply dirt to their hands. They were then each given a sample of soap. After washing their hands with the soap they were given a survey to fill out.</p> <p>MATERIALS Lye (Sodium Hydroxide), Distilled Water, Shea Butter, Coconut Oil, Jojoba Oil, Sweet Almond Oil, Avocado Oil, Castor Oil, Vitamin E Oil, Aloe Vera Gel, Olive Oil Essential Oils (fragrances), Food Coloring; Beaker, Bunsen Burner, Ring Stand, Scale, Thermometer, Stirring Stick, Stick Blender, Goggles, Latex Gloves.</p> <p>Results The results based on the survey showed that the soap that created the most bubbles was the peach-tangerine soap. The best moisturizer was also the peach-tangerine soap, and for getting rid of dirt the lavender AND peach-tangerine soaps tied. For hands feeling clean the avocado soap came out to be the best. The most fragrant soap turned out to be the "Irish Spring" soap, and the best colored soap was the baby soap. Overall, the most liked soap was the avocado soap.</p> <p>Conclusions/Discussion In the soap survey that was made for the students to take, there were many noticeable variations. A. All the soaps ranked pretty high in cleaning ability. This is because all the soaps that were tested (store bought and handmade) had extremely effective cleansing ingredients. The handmade soaps all had different fats that were very good for skin and hands, and the Irish Spring brand name soap has many lab approved substances which aren't available in stores. B. All the soaps ranked low on bubble formation. This, however, was not surprising because hand soaps aren't known for making bubbles. C. It was definitely obvious that the Peach-Tangerine Soap would rank high on moisturizing, because it has olive oil in it. According to an article olive oil, palm kernel oil, and hydrogenated soybean oil are the best moisturizers for the skin.</p>	
Summary Statement In this experiment different soaps were made by HAND, and their characteristics were compared by using a survey of 100 students.	
Help Received Ms. Azadian supervised my project, and my parents helped me make the display board.	