



**CALIFORNIA STATE SCIENCE FAIR  
2006 PROJECT SUMMARY**

<b>Name(s)</b> <b>Kaitlin Wilcox</b>	<b>Project Number</b> <b>J1138</b>
<b>Project Title</b> <b>Fishing for Relief: A Remedy for Ichthyosis</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> Ichthyosis is a human skin disorder which causes unusual dryness, discomfort, cracking and occasional bleeding. Various remedies and lotions can be used to alleviate the symptoms of Ichthyosis. The objective of this project was to determine which lotion was the most effective at keeping the moisture within gelatin, which acted as simulated skin.</p> <p><b>Methods/Materials</b> The materials included 10 tablespoons of each of six different lotions, 10 tablespoons of petroleum jelly, 40 Petri dishes, and 3 boxes of Jell-o brand gelatin. Into each Petri dish, 50mL of gelatin was cast and chilled. Two tablespoons of each of the lotions and the petroleum jelly were applied separately in a thin layer on top of the gelatin in each dish. As the control, five dishes of gelatin had no lotion or petroleum jelly applied to them. The dishes were weighed after 1 hour, 2 hours, 3 hours, 4 hours, 8 hours, 12 hours, 24 hours, and every 24 hours thereafter, for 14 days. The amount of weight lost over time for each dish was attributed to water loss. The dish which lost the least amount of water would be considered the best at retaining moisture in the gelatin, or simulated skin.</p> <p><b>Results</b> Eucerin Plus proved to be the most effective lotion with its samples losing the smallest percent of weight, 4.4%, after two weeks. Vaseline Intensive Care samples lost the largest percent of weight, 47.8%, after two weeks. The control dishes lost slightly more than 70% of their weight.</p> <p><b>Conclusions/Discussion</b> Of the six moisturizers tested, Eucerin Plus lost the smallest amount of weight after two weeks. Eucerin Plus had an ingredient in it that differed from the others called alpha-hydroxy acids. I believe that the alpha-hydroxy acids were responsible for the superior water retention in the gelatin and therefore would be the most effective lotion to use in order to relieve the symptoms of dryness associated with Ichthyosis.</p>	
<b>Summary Statement</b> The project compares the effectiveness of various lotions on retaining moisture in gelatin (simulated skin).	
<b>Help Received</b> Mother helped with Excel chart formatting; Mr. Kim (Science teacher) oversaw project production.	