



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Sage L. Liem	Project Number 34139
Project Title Temperature Brew-Ha-Ha: Monitoring Kombucha SCOBY Growth at Different Temperatures	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals To evaluate the optimal temperature at which to grow a kombucha SCOBY. I hypothesized that a higher temperature within the range recommended by many kombucha brewers would be a more suitable environment, because most bacteria and yeasts have a higher metabolism at higher temperatures.</p> <p>Methods/Materials The manner in which I tested this hypothesis involved using aquarium heaters with thermostats to keep the SCOBYs at consistent temperatures. Since the recommended temperature is between 65°-85°F, the four temperatures I chose for brewing the kombucha were 70°F, 76°F, 82°F and Room Temperature. I weighed each SCOBY before the ferment, and then observed the changes over the course of one week.</p> <p>Results After a week of brewing, I re-weighed them. The results were definitive. At room temperature, the SCOBY grew 29 grams. At 70°F it grew 48 grams; at 76°F, growth was 57 grams; and at 82°F, the SCOBY grew 73 grams.</p> <p>Conclusions/Discussion From this data, I concluded that my hypothesis was correct, but I was unable to establish an optimal temperature. So, I decided to repeat the experiment at higher temperatures to determine the temperature where the SCOBY's health starts to decline. These experiments are currently in progress and will be complete at the time of the fair.</p>	
Summary Statement My project's purpose is to observe the effects of temperature on kombucha SCOBY growth and determine an optimal temperature at which to grow a SCOBY.	
Help Received A friend donated her starter SCOBY and my parents purchased the equipment.	