



**CALIFORNIA STATE SCIENCE FAIR
2013 PROJECT SUMMARY**

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Project Title Glowing Green: The Effects of Acidification on Egeria densa's Chlorophyll B Levels	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of the experiment was to determine whether the acidity level in water would greatly affect the chlorophyll b levels in Egeria Densa.</p> <p>Methods/Materials Three plastic containers were cleaned. 3.8 grams of Elodea Densa was added into each container. Each container was filled with 1500 ml of water. The ph. level 5 container was given 20 drops of 0.1%Hydrogen-Chloride. The ph. level 3.5 container was given 50 drops of 0.1% Hydrogen-Chloride. Both of the containers were placed outside and their ph. levels were measured using ph. tape. The plants were observed and after no visible disturbance, 1 g of the control plant was taken and paper toweled dried. The sample was cut into little and small pieces and then added into the mortar. Using a pestle, the leaves were crushed into small pieces and the liquid coloring from the leaves was released. 3 ml of acetone was added into the mortar and more crushing was done. The liquid was added into the micro centrifuge tube with a small sampling of the leaves. The exact same process is done for the ph. level 5 and 3.5 samples. The micro centrifuge tubes were placed in the centrifuge until all leaf samplings were collected at the bottom. The micro centrifuge tubes were placed in a rack and set to rest. Three microscope slides were obtained and cleaned. 250 ml of ethanol was added into the Silica gel and it was mixed until all substance at the bottom was gone. The slides were quickly dipped into the silica gel and then left hanging above, allowing all of the excess liquid to drop. This was done to all three slides and once they were dried, the slides were placed on a clean paper towel. Using a pipette, 6 ml of 95% ethanol was added into three 250 ml beakers. One side of the dipped slides was cleaned using acetone. The micropipette tip was dipped inside the micro centrifuge tube filled with the ph. level 7 liquid sample. Gently, the tip was tapped on the side of the dipped slide. The tip was tapped in the same place 20 times. The slide was then placed into the 250 ml beaker filled with ethanol with the green spot closest to the bottom. The same was done for the ph. level 3.5 and 5.</p> <p>Conclusions/Discussion Since the plants were able to survive, chlorophyll b must not be as important role as previously believed. The plants must have a factor contributing to its survival. If the unknown variable can be added to other plants, then survival strength will rise.</p>	
Summary Statement The project will determine whether the chlorophyll b levels in egeria densa will be effected by the acidity of water.	
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