



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Alondra Ruiz	Project Number J1517
Project Title Pressuring Microalgae	
<p style="text-align: center;">Abstract</p> <p>Objectives The purpose of this experiment is to figure out in what air pressure will the microalgae grow or reproduce. I hypothesize that if I increase the air pressure then the microalgae will significantly reproduce. My independent variable is the air pressure, while my dependent variable is how many cells reproduced. I added about 4ml of microalgae into a falcon tube and then added 1 ml of ethanol do kill the cells in order to count then. Take a sample and place in on a hemocytometer. My results states that when I decreased the air pressure the microalgae reproduced significantly than when I increase the air pressure. On my first trial I forgot to add micronutrients, which could have affected my results. Also, on my second trial I dropped some of my microalgae, which could have affected my counting. My hypothesis was rejected because the microalgae reproduced significantly when I decreased the air pressure. If I wanted to do further research I could do more trials, I can also conduct this experiment with a different microalgae.</p> <p>Methods</p> <p>Materials:</p> <ol style="list-style-type: none">1. 500 ml flasks2. Airline3. Compound Microscope4. Microalgae (Isochrysis Galbana)5. Hemocytometer <p>Procedures:</p> <ol style="list-style-type: none">1. In a 15 ml, falcon tube, add 4 ml of isochrysis and a 1 ml of ethanol using transfer pipettes (adding ethanol will keep the algae cells from moving, your killing them) and let it sit for about a minute to make sure its mixed.2. Get a glass pipette and carefully take up some volume and load it onto one side of the hemocytometer.3. When you place the hemocytometer onto the microscope and adjust it to your liking you will see something as depicted below. <p>Results My data states that when I decreased the air pressure I got a higher average, which means the microalgae reproduced significantly. Their were factors that could have affected my results. On my first trial I forgot to add micronutrients which could have affected my results. As I was setting my second culture I accidentally</p>	
Summary Statement I showed their will be no increase to reproduction rate of microalgae when air is decreased nor increased.	
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