CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J2319

Project Title
Do Different Levels of Salt Affect Brine Shrimp?

Abstract

Objectives/Goals
The purpose of this project was to discover if different levels of salt affect Brine Shrimp. I built 4 different brine shrimp habitats my controls are Oxygen given, amount of water, same size habitat, food given, temperature, and duration of testing. I am testing to see which salinity level works best using a hydrometer. Brine Shrimp can tolerate a vast range of salinity from 25 to 250 grams per liter, with an optimal range of 60 to 100 grams per liter. They prefer a range from 30 to 35 grams per liter, the problem is Brine Shrimp encounter more predators at that level of salinity. Many different levels of salinity can have an effect on Brine Shrimp different such as, difference in color, sizes, and shapes. Currently the only possibility on how Brine Shrimp environments are going to get a higher salinity level, is through a drought. Because during a drought the water wouldn't stay in the environment, the salt will, which increases the salinity level.

Methods/Materials
Materials :
> 4 Teaspoons of Brine Shrimp eggs; > 4 Two liter bottles; > 4 Air pumps; > 16.8 grams of spirulina powder; > 6.8 liters of water (1.7 per habitat); > 9 Petri dishes; > 2 Pipets; > 1 lamp; > 1 Microscope; > 4 mason jars; > 4 pieces of tubing.

Procedure:
Step 1: Organise materials
Step 2: Drill holes on top of the mason jars
Step 3: Fit tubing through drilled hole
Step 4: Attach other side of tubing to air pump
Step 5: Use Hydrometer and salt to get salinity levels of 0, 20, 30, and 44
Step 6: Get a teaspoon of Brine Shrimp eggs and put one into each mason jar
Step 7: Turn air pump on
Step 8: Make sure they have a light source

Results
The data was that the salinity of 44 had the best result in terms of most amount of Brine shrimp, least amount of dead Brne shrimp, and least amount of eggs unhached.

Conclusions/Discussion
In conclusion, my hypothesis, #Brine Shrimp in salinity levels of 30 and 44 parts per thousand will have

Summary Statement
This project investigates how different levels of salt affect Brine Shrimp.

Help Received
Alex Hofsteen, Jim Barry