

Abstract

Project Title: The Effect of High-Fructose Corn Syrup 55 on the Heart Rate of *Daphnia magna*

Project ID: 228

Abstract

A brief explanation of your project. Enables judges to receive a base understanding of your project and work.

ABSTRACT

The purpose of this experiment was to determine if High Fructose Corn Syrup 55 (HFCS 55) effects the heart rate of *Daphnia magna* because of the role it plays in ailments such as heart disease and diabetes. The heart rate of *Daphnia magna* was recorded after being placed in different concentrations of stock solution created from spring water and HFCS 55. Five trials were conducted for each concentration, ranging from 0.3g/L- 0.8g/L, and spring water (negative control), each totaling 10ml. The *Daphnia magna* was extracted from the culture using a different pipette for each trial to avoid cross contamination. In each trial, the *Daphnia magna* was placed in the specific solution and the heart rate of the *Daphnia magna* was observed under the microscope for a minute using a ticker. The average heart rate of *Daphnia magna* in spring water was found to be 177 beats per minute. In 0.3g/L, it was 163.8 beats per minute. In 0.4g/L, it was 163 beats per minute. In 0.5g/L, it was 161.2 beats per minute. In 0.6g/L, it was 142.6 beats per minute. In 0.7g/L, it was 141.4 beats per minute. In 0.8g/L, it was 136.4 beats per minute. From these findings, it was concluded that the heart rate of *Daphnia magna* decreased as the dosage of HFCS 55 increased. This supports the hypothesis.

Items to Include:

Introduction: Why did you do this project and why is it important? How will this effect people and why is it needed. Inspire the reader to continue learning more about your research and read your report.

Problem Statement and Engineering Goal / Hypothesis: What is the problem you were solving and what was your engineering goal or hypothesis.

Procedures: How did you solve the problem and or test your hypothesis. Don't go into details, provide a broad, conceptual view of what you did. For engineering, what was your design criteria.

Results: What was the outcome? Use your data and numbers to describe your result.

Conclusion: Was your hypothesis supported or the engineering goal met?