Oh! How You Affect My Heart! (Again)

Theriot, Samantha

Problem: To determine if Turmeric or Motherwort is more successful in lowering the heart rate of a Daphnia. Hypothesis: If we are to expose the Daphnia to the Motherwort it will be a bit more successful in order to lower the heart rate. Experiment: Place all Daphnia in a container of distilled water. Label it control. Prepare 3 more containers with distilled water. Label one as caffeine, one as turmeric, and one as motherwort. Create the solutions for each of the above and let sit overnight. Take 20 mL of each solution and place into labeled petri dishes for each solution. Take a daphnia from the control and measure the heart rate by beats per 10 seconds. Then place that Daphnia into the Turmeric for 15 minutes, and then record the heartrate. Repeat for Motherwort solution. Next take Daphnia from control and measure its heart rate. Place in caffeine solution for 15 minutes and measure heart rate. Then place in Turmeric solution for 15 minutes and measure the heart rate. Repeat these steps for the Motherwort. Do all of the above steps for 10 Daphnia each. Results: After leaving group 1 in the caffeine for 35 minutes, the average heartrate decreased. Group 2 also saw a decrease. In experiment 2, the motherwort group saw a decrease in heart rate. The turmeric group also saw a decrease. In experiment 3, all groups saw a decrease in heart rate. Conclusion: Even after enhancing the caffeine solution, the heart rates of the daphnia did not seem to be affected. The motherwort did successfully drop the heart rates, but did not have a greater outcome than the turmeric. Therefore, I do not accept my hypothesis in saying that the motherwort would have a better affect on the daphnia than the turmeric.

Awards Won: