

# Abstract

**Project Title:** The Effects of Perchlorate and Turmeric on the Heart Rate of *Daphnia magna*

**Project ID:** 226

## Abstract

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

The purpose of this project is to see whether turmeric can reverse the effects of perchlorate on *Daphnia magna*. Turmeric is used in this experiment, because it is an antioxidant and has many health benefits. Perchlorate is used in this experiment because it is harmful to humans and infants. Perchlorate contamination of the rivers poses a huge threat to humans because humans drinking this water will have negative health effects. Three trials of spring water (the control) were conducted on *Daphnia magna* to obtain the normal heart rate of *Daphnia magna*. One concentration of turmeric was used and three trials were conducted with turmeric. Three concentrations of perchlorate were used and three trials for each perchlorate concentration were conducted. Turmeric and the three different concentrations of perchlorate were combined, conducting three trials for each different concentration. The heart rate was recorded by counting the number of heart beats per minute (bpm). The perchlorate trials reduced the number of heart beats in the *Daphnia magna*, implying negative effects. These effects were reversed by the addition of Turmeric as shown in the trials with turmeric combined with perchlorate. The results of this project showed that turmeric really does help reverse the effect of perchlorate on *Daphnia magna*.

## 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?