## Project Title

## Effect of YO12N on Hymenochirus Eggs and Ankistrodesmus Algae

## Objectives/Goals

Abstract
The object is to test if YO12N the affects Hymenochirus frog eggs and Ankistrodesmus algae growth. Methods/Materials

Ankistrodesmus algae growth
40 test specimens; 10ea x 3 independent variables and 10 control group specimen. 30 ml of
Ankistrodesmus living algae will be placed in each of 40 individual 8 oz plastic containers. YO12N will be diluted with water to $10 \mathrm{ppm}, 20 \mathrm{ppm}$, and 30 ppm , and then added to the algae specimen. A spectrophotometer will be calibrated to 540 nanometers. 7 ml of algae will be drawn from each specimen and placed into spectrophotometer. Readings will be taken on day 1 and every 2 days for 15 days. Hymenochirus frog eggs
40 test specimens; 10ea x 3 independent variables and 10 control group specimen. 10 eggs will be placed into each cup and the cups placed into a warm water bath. YO12N will be diluted with water to 10 ppm , 20ppm, and 30ppm, and then added to the frog egg specimen. Frog egg hatch rates will be counted daily for 5 days.

## Results

Ankistrodesmus algae growth
Control- 84.0, 1\%-78.3, 2\%-83.0, 3\%-80.8
Hymenochirus frog eggs
Control- 5.80, 1\%-4.98, 2\%-4.10, 3\% -3.02
The $2 \%$ solution had the lowest algae growth when compared to the other solutions tested, but did not show lower growth than the control. The $1 \%$ solution had the highest egg hatch rate when compared to the other solutions tested, with $85 \%$ of the control hatch rate.
Conclusions/Discussion
With our clean water supplies decreasing, a study of YO12N (Yellow Out\#) as a remediation application for eutrophication is important. YO12N shows promise in reducing eutrophication without harming other species.

Summary Statement
Can YO12N be applied to an aquatic environment as a treatment for eutrophication?

## Help Received

Borrowed spectrophotometer from Mr. Aalto, Sanger High School science teacher.

