

**A STUDY ON THE OPTIMUM CONCENTRATION  
OF COPPER SULFATE AND BIOMASS OF  
VALISNERIA PLANT IN CONTROLLING GREEN  
ALGAE UNDER AQUARIUM CONDITION.**

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## ABSTRACT

Ornamental fish industry plays a considerable role in the economy of Sri Lanka since the globalization ornamental fish industry. Maintenance of aquariums with ornamental fish has become a hobby of people and aquarium owners but the controlling excessive algal bloom has become a hindrance. Excessive algal growth is a nuisance for aquarists, due to decreasing dissolved oxygen level, absorbing the nutrients. It is also hazardous to fish and plants. Present study attempts to develop a method to control excessive green algal blooms in aquariums combining the effects of Copper Sulfate and aquatic plant *Valisneria*.

Complete randomized design was used under laboratory condition. Thirty six tanks were used for the experiment and seventy two *Betta Splendens* fishes were used. five treatments (concentrations) for Copper Sulfate, *Valisneria spiralis* plants and controls for both treatments were used in triplicate. This survey was done using ANOVA and Minitab 14 software. Results indicate that both the Copper Sulfate and the *Valisneria* plants are effective in controlling algae under aquarium condition. Tukey's pairwise comparison has shown that all the treatments with Copper sulfate were significantly different from the control ( $P < 0.05$ ). The highest algal decline level was shown in 0.5 ppm significant level. And also it can be concluded that biomass of 7.12 g /in 6 l of water is adequate for controlling algae in a volume of 230 l water containing 0.12 mg/l Chlorophyll a.

### Key words,

Aquariums, Chlorophyll, Copper Sulfate, Green algae, *Valisneria* biomass