Study of the Use of Epipremnum aureum in the Restoration of Water Quality Parameters

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The purpose of this investigation was to find a natural process to restore water quality parameters when chlorine and pH levels were altered. Using the common household plant Epipremnum aureum (Golden Pothos), the researchers were able to see how this plant species reacted to three groups of containers filled with different water quality parameters during a 30 day period: Group #1 had no changes made to the water, Group #2 had raised pH levels (by adding sodium bicarbonate) and Group #3 had raised chlorine levels (pool chlorine tablets were added). It was thought that due to Epipremnum aureum's natural purifying abilities it would lower the high levels of chlorine and pH in the water. The results showed that the plant thrived in Group #1 while in Group #2, the pH was raised and the plant died (A theory for this is that some nutrients, such as phosphorus, calcium and magnesium, can't be dissolved in water; thus making the plant unable to absorb them). Finally, Group #3 proved successful in reducing the amount of Chlorine in the water and the plant remained healthy. These results prove that the hypothesis was only partially correct and that the Epipremnum aureum can restore water quality of any Chlorine abundance but cannot help reduce water alkalinity when pH levels are intolerable. In the future, the investigators want to use their research to develop a natural water filter using the aforementioned plant while further investigating the purifying capabilities of the subject.

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