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*How Do the Different Components of Grey Water Affect Plant Health and Growth?*

In an effort to use household water more efficiently, this project looked at how different components in grey water affect plant growth and health. My hypothesis was that some components could kill or damage plants while others could be beneficial or have no effect. I used 16 philodendron plants in soil, and another 16 as cuttings. Solutions for various household chemicals that would be in grey water, such as bleach, shampoo, and dish soap, were made based on their proportions that would be found in household water for each average use. The plants were watered weekly with the solutions, and the cuttings were suspended directly in the solutions. Observations were made weekly. I found that dishwasher detergent is a poison to plants, the lotion used was beneficial, and that the remaining components did not harm the plant compared to the control plant that did well.