CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
Alec T. Balabanis

Project Number
J1901

Project Title
Household Filtered Water and Plant Growth

Abstract

Objectives/Goals
To find out if using two types of filtered water (potassium softened water or reverse osmosis water) has an affect on seedling growth (height and weight) compared to city water.

Methods/Materials
3 groups of 31 pole bean seeds planted in the same organic soil and containers were watered with different water: potassium conditioned or softened water, reverse osmosis water and city tap water. Plant height measured at week 1 and week 2; wet weight measured at end (2 1/2) weeks. Average height and weight were taken for each group and compared.

Results
The results did not conclusively show that the filtered water had a significant affect on the growth. There was so much variability within the samples that the differences that appear to be there are not likely significant.

Conclusions/Discussion
While I thought that the filtered water might cause a the plants to have a lower average height and weight, it appears they did not. I thought using filtered water might be bad for plants, but these results show that at least for at least these 2 weeks, the plants will grow just fine with filtered water. However, to conclude this with more certainty that they would grow well over a period of time, I would need to make some experimental design changes and retest

Summary Statement
Measured Seedling height and weight (from 3 groups of 30 seeds each) when watered with potassium filtered water, reverse osmosis water compared to city tap and found no significant difference at end of 2 weeks.

Help Received
Belmont Nursery for help with seeds, soil and pots. Help from my parents with initial planting, daily plant care, and computer data analysis.