The Effects of Plant Essential Oils on the Growth of E. coli (Bacteria)  Ben Ottman

Research Question: Which essential oil, sage, oregano, lemon, lime, and garlic, will have the strongest antibacterial properties as determined by a zone of inhibition test?

Hypothesis: If a zone of inhibition test is used to measure the antibacterial properties of lemon, lime, garlic, sage, and oregano, then garlic will have the strongest antibacterial properties.

3 interesting facts:
1) Bacteria can be killed by plant oils
2) Bacteria grow on a gel called agar
3) Bacteria are resistant to many antibiotic drugs

Procedure: A filter disc was placed in the center of each bacteria plate. The plate was then put in an incubator for 24 hours. After being taken out, the area of dead bacteria around the disc was measured.

Results: The oregano oils killed the most bacteria (pictured on the left). All of the other oils were very close.

Suggestions for future research: Try using different plant oils and a different bacteria such as Salmonella.