Antibiotics vs. Essential Oils

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Antibiotic resistance is becoming a large problem across the United States. 2.8 million people are affected by antibiotic resistance each year and 35,000 patients affected die. This project was tested by preparing 21 nutrient agar plates. Dip a sterile swab into Escherichia coli tryptic soy broth mixture. Dilute antibiotics and dip the sterile disks into the solution. Apply sterile disk onto the center of the petri dish. Apply one drop of the essential oil onto the sterile disk and apply it to the center of the petri dish. Measure the zones of inhibition. Collect the surviving bacteria along the border of the inhibition zone, and then apply them to the new petri dish. Repeat these steps from diluting the medicine for six days. Cephalexin was the best working antibiotic. It had the least amount of resistance starting at 3.7cm and ending at 3.2cm. Oregano was the best working essential; it started at 3.2 cm and ended at 1.6 cm. Cephalexin worked the best out of all trials. Oregano was the next best. Cephalexin could have had a different outcome if a different bacteria was used.

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