

Rene Carter

Junior Division Microbiology

Dandelion Root and Peppermint Leaf vs. Penicillin

For this project, I'm trying to find whether dandelion root or peppermint leaf is as effective as killing E. coli as penicillin. If my project was successful, then we could use these natural herbs as alternatives to penicillin so we wouldn't have to kill the good bacteria in our body. For my project's procedure, I brewed dandelion root and peppermint leaf tea bags and soak disks made out of punched note cards in the tea. While the tea was brewing, I prepared three Petri dishes by smearing E. coli into each one. Once the disks sat in the tea long enough, I took a few from the dandelion root tea and placed them in a Petri dish. I did the same with the peppermint tea in the second Petri dish. I took the last dish and filled it with pre-made penicillin soaked disks. Finally, I sealed the Petri dishes and put them in an incubator for 48 hours. Once the dishes sat for the appropriate amount of time, I compared my results by measuring and averaging each remedies zone of inhibitions together. When I averaged each remedy's measurements together, penicillin's average zone was 1.9 cm, peppermint leaf's was 0.39 cm, and dandelion root's average zone was 0 cm. My results show that penicillin killed the most E. coli, peppermint leaf the second most, and dandelion root killed the least. This conclusion shows that my natural herb remedies were as effective as killing E. coli as penicillin.