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WV, 26554. Expanding the traditional Microbiology Disk Diffusion Lab.

Determining the effect of antimicrobials using the disk diffusion (Kirby-Baur) method is a common laboratory exercise in first year microbiology course. This exercise is usually done with commercially available antibiotic containing disks, mimicking what would be done in a clinical microbiology lab. The goal of this work was to look for ways to make this standard lab more open ended and investigative. Plant essential oils are readily available and are known to have antimicrobial activity. The effect of Peppermint, Tea Tree, and Lavender essential oils on *Staphylococcus aureus*, *Escherichia coli*, *Proteus vulgaris*, and *Enterobacter aerogenes* was determined using a disk diffusion assay and compared to effect of ampicillin. Overall, the essential oils did not show a significant effect on bacterial growth and would not be appropriate for an introductory microbiology lab.