Bacterial Warfare

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In this experiment, the chemicals bacteria emit were collected with a solid-phase microextraction fiber (SPME). These chemicals were then identified on the Gas Chromatography Mass Spectrometer (GCMS). The chemicals ortho, meta, and para Tolunitrile were identified along with indole. Bacteria, (Escherichia coli, Proteus mirabilis, and Staphylococcus epidermidis) were then grown in the presence of the chemicals following the Kirby Bauer protocol along with in-solution experiments. The degree of bacterial inhibition was measured. In the end, every chemical showed indications of bacterial inhibition. These chemicals even surpassed the positive control, ampicillin, in certain conditions. The chemicals did inhibit or kill the bacteria.They also inhibited the formation of a bio-film.

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