

Antimicrobial Effect of the Crude Extract of *Hermetia illucens* Larva (Black Soldier Fly) on Selected Fungi and Bacteria.

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Abstract

The larval antimicrobial components of the black soldier fly (BSF) are the key elements allowing these larvae to inhibit bacterial growths in the wastes they are thriving in. To study the antimicrobial effect of locally cultured BSF larvae, crude extracts were prepared using methanol and phosphate buffered saline. The crude extracts were then inoculated on selected bacterial and fungal culture plates using agar well diffusion assay to compare their susceptibility. Two of the three bacterial cultures inoculated with methanol crude extract exhibited significant ($p < 0.05$) inhibition in their growth, while those inoculated with PBS extract didn't show any observable inhibition. Both extracts were found not to exhibit significant inhibition on fungi ($p > 0.05$). The control experiments using methanol alone and PBS alone on the bacterial and fungal cultures also didn't exhibit any significant inhibition.

Keywords - Black Soldier Fly Larva, Antimicrobial compounds, Growth inhibition