

ABSTRACT

Interest in the extraction of bioactive compounds from natural sources has increased in recent years due to the potential applications of these compounds in food, chemical, and pharmaceutical industries. The methanolic extract of the fungus *Engleromyces goetzei* was investigated for the presence of phytochemicals and the antibacterial properties. The study shows that the extract has flavonoids, coumarins, saponins, terpenoids and steroids. *Engleromyces goetzei* has potential as a source of useful antibacterial compounds active against phytopathogenic bacteria. Disk diffusion assay was used to analyze the susceptibility of an organism which help in identifying the proper antibacterial biopesticide. In this experiment, this was done by placing the antimicrobial disks impregnated with *E. goetzei* on the NA plates swabbed with *Xanthomonas campestris*, *Pseudomonas sryingae* pv *phaseolicola*, *Erwinia carotovora* and *Xanthomonas axonopodis* pv. *phaseoli*. After twenty-four hours of incubation, there were areas around the antimicrobial disks with no bacterial growth. The MIC of *E. goetzei* against *X. axonopodis* pv. *phaseoli*, *Ps. syringae* pv *phaseolicola* and *X. campestris* was found to be 1mg/ml while that of *E. carotovora* was 10mg/ml.

Keywords: Phytochemicals, *Engleromyces goetzei*, *X. axonopodis* pv. *phaseoli*, *E. carotovora*, *Ps. syringae* pv *phaseolicola*, *X. campestris*