

Isolation and screening of actinomycetes from Malaysian soil for their enzymatic and antimicrobial activities

ABSTRACT

Actinomycetes, a slow growing gram positive bacteria, are known as an organism that is useful in the search for bioactive compounds. In this study, 212 isolates of actinomycetes were isolated from soil samples collected in the area of Serdang, Bangi, Petaling Jaya and Putrajaya. From the total of 212 isolates, 91 showed the ability to degrade cellulose; 16 for mannan and 90 for xylan. The 212 isolates were then subjected to anti-microbial testing, where they were tested for their ability to produce anti-microbial activity against selected phytopathogens. From the test, only two strains of isolates (strain 161 and 176) showed positive result towards *Xanthomonas campestris*. These two isolates were then identified using research microscope.

Keyword: Actinomycetes; Biodegradation agent; Biocontrol agent; Bioactive compounds