ABSTRACT

Endophytic bacteria are bacteria that live in symbiosis with the internal tissues of plants without harming their hosts. Endophytic bacteria can produce the amylase enzymes to obtain nutrients from their host plants by hydrolyzing starch into glucose, maltose and maltodextrin. The aim of this research is to obtain a crude extract of the amylase enzyme from the endophytic bacteria of the hibiscus plant (Hibiscus tiliaceus), obtain characterization of the amylase enzyme in the form of temperature, pH and optimum incubation time from the endophytic bacteria of the waru plant (Hibiscus tiliaceus), and obtain data on enzyme activity and Specific activity of the amylase enzyme from endophytic bacteria of hibiscus plants (Hibiscus tiliaceus). The results obtained in this study were crude extracts of the amylase enzyme from endophytic bacteria (Acinetobacter junii Z3, Delftia lacustris Z8, Acinetobacter ursingii Z10, Pseudomonas hibiscicola WK, and Staphylococcus warneri WR) with an optimum pH of 6 and an optimum temperature of 30°C for all endophytic bacteria. , the optimum incubation time was 15 minutes for Acinetobacter junii Z3, Delftia lacustris Z8, Acinetobacter ursingii Z10, and 10 minutes for Pseudomonas hibiscicola WK, and Staphylococcus warneri WR, and obtained the optimum amylase activity and the highest specific activity of amylase from Staphylococcus warneri WR of 0,063 U/mL and 0,090 U/mg.

Keywords: *Amylase, endophytic bacteria, hibiscus plant*