Prasetiyoningsih, Sulis, 2019, Effect of Additives on Activity of a *Dictyoglomus thermophilum* H-6-12 α-L-arabinofuranosidase, Prof. Dr. Ni Nyoman Tri Puspaningsih, M.Si., Department of Chemistry, Faculty of Science and Technology, Airlangga University.

ABSTRACT

α-L-arabinofuranosidase is a thermophile enzyme from *Dictyoglomus thermophilum* H-6-12 (Dt-Ara1). α-L-arabinofuranosidase was expressed in *E.coli* BL21-pET-15b expression system. Dt-Ara1 is well expressed by adding IPTG as inducer. To obtain the pure enzyme, the enzyme was purified by affinity chromatography then continued by anion exchange chromatography. SDS-PAGE analysis was performed to proof that pure enzyme had been obtained by showing single band. The activity of Dt-Ara1 was examined with the addition of *p*-NPA substrate with an activity of 353,21 U/mL. The effect of additives on Dt-Ara1 activity was done by adding some metals, organic molecule, and other additives. Additives addition could increase and decrease Dt-Ara1 activity. The highest activity was revealed by addition Ba^{2+} with its activity of 423,71 U/mL. The lowest activity was revealed by addition Ag+ with its activity of 0,22 U/mL.

Keywords: α-L-arabinofuranosidase, *Dictyoglomus thermophilum*, Dt-Ara1, additives