

## **Sintesis senyawa flavonoid- $\alpha$ -Glikosida secara reaksi transglukosilasi enzimatik dan aktivitasnya sebagai antioksidan**

### **Abstract**

Flavonoid- $\alpha$ - glycoside was synthesized using enzyme of CGT-ase (EC.2.4.1.19) which was isolated from cultivated of *Aspergillus oryzae*. CGT-ase enzyme has optimum capability at the temperature of 40°C, pH 7 yielded 1.87 unit/mL while at pH 6 was 1.11 unit/mL. The pretest of CGT-ase transfer activity was carried out using resorcinol as an acceptor and commercial starch solution as the glucosyl donor. Subsequently, acceptor was replaced by crude extract of ginger, and wheat starch as donor. The other product of hydrolysis was separated by column chromatography, monitored by TLC which was showed a single spot. The Rf value was compared with the Rf value of arbutin standard, the Rf values were about the same which were 0.85 for product and 0.87 for arbutin standard. The sugar total of product synthesis was determined by the Dubois method, which was 628.0 ppm. The value is equivalent to 0.032% of the original starch. The antioxidant activity was analyzed by  $\beta$ -carotene method discoloration. The result showed that the strong antioxidant activities were in the following order: BHT>product>arbutin>crude extract of ginger.