

## **ABSTRACT**

### **PIGMENTATION TEST OF NANOENCAPSULATED PURPLE SWEET**

#### **POTATO LEAF EXTRACT (*Ipomoea batatas* L.) ANTIN-3 VARIETY In Vitro**

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*Indonesia is a tropical country that gets higher. So that can induce a pigmentation ultraviolet (UV) radiation rays. UV rays can cause pigmentation if exposed to UV waves 320-400 nm. It is necessary to use sunscreen preparations that have flavonoid and polyphenol active ingredients. The material used as sunscreen is purple sweet potato leaves (*Ipomoea batatas* L). It is necessary to do nanoencapsulation with the aim of protecting the active substance from external factors, increasing stability, and increasing the absorption of the active substance so that it is maintained in storage. In this study using two types of samples, namely Antin-3 leaf extract and Nanoencapsulated Antin-3 leaf a series of them sample solutions were made at concentrations of 100 ppm, 300 ppm, 500 ppm, 700 ppm, and 900 ppm. measuring the percent transmittance value of pigmentation using a UV VIS spectrophotometer at a wavelength of 320 nm-375 nm. The pigmentation value at 100 ppm concentration resulted in 8.551729, 300 ppm concentration resulted in 0.678605%, 500 ppm concentration resulted in 0.196471%, 700 ppm concentration resulted in 0.082166%, and 900 ppm concentration resulted in 0.036481%. While the nanoencapsulation of Antin-3 leaf extract at a concentration of 100 ppm yielded 26.21635%, a concentration of 300 ppm yielded 0.082166%, and a concentration of 0.036481%. The result of Antin-3 leaf extract and nanoencapsulation of Antin-3 leaf extract are both included in the sunblock category.*

**Keywords :** *UV light, varieties Antin-3, nanoencapsulation, sunscreen, pigmentation.*

