

## ABSTRACT

Rohmatin , Iva . 2015. **The effect of addition of sugar and pH Substrates At Nata de Ipomoea Skin With Skin Substrate of Purple Sweet Potato (*Ipomoea batatas*)** . Thesis , Department of Biology, Faculty of Science and Technology of the State Islamic University of Maulana Malik Ibrahim of Malang . Supervisor: Ir . Liliek Harianie AR , M.P and Dr. Ahmad Barizi , M.A

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**Keywords :** Nata *de Ipomoea Skin* , added sugars , pH substart , Anthocyanin

Purple sweet potato skin is waste that can contaminate the environment. In the purple sweet potato peel waste still contains a number of potential bioactive components that is natural pigments called anthocyanins. Anthocyanins is useful as natural dye and antioxidant which is able to fight free radical, anthocyanins has function as antioxidant in the body for preventing atherosclerosis, blood vessels obstruction disease. Anthocyanins work for hampering atherogenesis process by oxidizing nasty fatty in the body, namely lipoprotein low density. Waste which still has a bioactive component can be processed into products which benefit to produce nata. Nata is fermented with the help of bacteria *Acetobacter xylinum* . High fiber content in nata can improve blood sugar levels. The purpose of this study is to determine the effect of pH on the sugars and thickness, fiber and anthocyanins levels of nata *de Ipomoea skin*.

This research is an experimental laboratory using a randomized block design (RBD ) consisting of 2 factors with 12 treatment and 3 replications . The first factor is the addition of sugar 0% (w/v), 5% (w/v), 10% (w/v), and 15% (w/v). The second factor pH of the substrate (3,4, and 5). Data is analyzed by two-way ANOVA. If it is show significant difference the researcher will do further study of Least Significant Difference (LSD) at the 5 % significance level.

The results of this study show that there are interactions addition of sugar and pH of the substrate thickness and fiber but there is no interaction of added sugars and the pH of the anthocyanin substrate. However, the addition of sugar treatment effect on anthocyanin. In the treatment of the substrate pH effect on anthocyanin analysis results show that the highest thickness of 12.67 mm and 3 mm lowest, 10.49 % crude fiber highest and the lowest 6.24% , the highest anthocyanin 98.96 mg / 100 g and 69.22 mg lowest / 100gr .