

ABSTRACT

EFFECT OF CONCENTRATION OF EGG WHITE ON THE PHYSICAL PROPERTIES, ANTHOCYANINS CONTENT, ACTIVITIES ANTIOXIDANTS EXTRACT POWDER INSTANT SKIN MANGOSTEEN (*Garcinia mangostana*. L.) WITH FOAM MAT DRYING METHOD

By

BAMBANG HARYANTO

Mangosteen fruit (*Garcinia mangostana*. L.) is a fruit that has many health benefits compared to other fruits. The skin of the mangosteen fruit that contains anthocyanins can be used as natural dyes and acts as an antioxidant. This study aimed to determine the effect of concentration of egg white on the physical properties, anthocyanin content and antioxidant activity of instant powder mangosteen skin and get the best concentration of egg white as foam agent that produces instant powder with *foam mat drying* method.

Research in the form of a single treatment arranged in a randomized block design with six treatments complete and four replications. Single treatment is the concentration of egg white as foam agent which consists of 6 levels P0 (without egg whites), P1 (5 % concentration of egg white), P2 (10 % concentration of egg white), P3 (concentration of egg white 15 %), P4 (concentration of egg whites 20 %) and P5 (concentration of egg whites 25 %). Data were analyzed in common variance with Bartlett and kemenambahan test data by Tukey test. Further analysis of variance to determine the effect of treatment. If there is a real effect, the data were analyzed further to test the Least Significant Difference (LSD) at the 5% significance level. Observations were made to the yield, solubility, soluble speed, levels of anthocyanins, antioxidant activity, the degree of brightness and degree of redness instant powder with mangosteen peel extract .

The results showed that the concentration of egg white as the foam agent provides significant effect on yield, antioxidant activity, the degree of brightness and degree of redness instant powdered extract of mangosteen peel. The concentration of egg white as foam agent that produces instant powder mangosteen peel is best obtained at treatment concentrations of egg whites 15 % with yield of 20.48 %, 73.39 % rate of solubility , soluble speed of 0.0055 / sec, the anthocyanin content of 2.12 %, the antioxidant activity of 56.00 %, the degree of brightness (L*) of 56.33, and the degree of redness (a*) of 17.83.

Keywords : mangosteen skin, anthocyanins, *foam mat drying*