

ABSTRACT

Complementation of *Cucurbita moschata, ex. Poir* Flour and *Glycine max* Germ Flour Combination At Biscuit Evaluated From Content of Carotene, Protein, Fat and Water Content

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This research was aimed to study the nutrient value (carotene, protein, fat and water content) and quality of organoleptic (color, aroma, texture and taste) complementation of combination of *Cucurbita moschata, ex. Poir* flour and *Glycine max* germ flour at biscuit. This research was an experimental study, with two variables of treatment those were: (1). Combination concentration of *Cucurbita moschata, ex. Poir* flour and *Glycine max* germ flour, and (2). Wheat flour. Five treatments were on proportion and combination of *Cucurbita moschata, ex. Poir* flour and *Glycine max* germ flour with four replications.

Cucurbita moschata, ex. Poir got from Lawang market in Malang City with the criteria as follows: fresh, didn't faulty, not overage, not under age with the yellowish rose colored and thick kernel. Soy which germinated come from Balitkabi in KendalPayak Malang City, with the type of varietas Wilis. Those two material processed to become the flour, then was mixed with by composition which have been determined to be processed to become biscuit.

Assessment value of carotene were using the Spectrofotometri method, the protein value were using the Mikro-Kjeldahl method, the fat value were using the Soxhlet method and the water value using the Oven method. Organoleptic quality were using the Hedonic Scale in the questionnair, best treatment assessment used the wight calculation from all variables of nutrient value and quality of organoleptic. Assessment the nutrient value of all treatments at biscuit product executed in Laboratory of Health Surabaya.

Result of this study showed that the treatment T3 the best represented treatment (50% Wheat flour:20% *Cucurbita moschata, ex. Poir* flour: 30% *Glycine max* germ flour)total value 341.24 with the nutrient value of carotene 323,958 ug; 10.925% protein; 16.8% fat and 4,623% water and also its making charges Rp 827,- per 100 gr biscuit. Result of research showed that the highest value of color was treatment T3 (50%-20%-30%) with the average 4,560. The best value of aroma organoleptic was also at treatment T3 with the average 4,480. The best value of texture organoleptic shown at treatment T3 with the average 4,440. Best quality of taste also at treatment T3 with the average 4,480. Test of Friedman and Wilcoxon ($\alpha= 0,05$) showed difference the organoleptic value (color, aroma, texture and taste) biscuit in all treatments.

Keywords: Biscuit, *Cucurbita moschata, ex. Poir* flour, *Glycine max* germ flour, Wheat flour.