***ABSTRACT***

*Secang wood extract (Caesalpinia sappan L.) containing brazillin, flavonoids, phenolic and other chemical contents with foam mat drying method was investigated as an alternative to natural red coloring which has a function / benefit for health. The purpose of this study was to determine the effect of maltodextrin concentration and drying temperature on color stability and anti-bacterial activity in secang wood coloring powder (Caesalpinia sappan L.). The research method consisted of 3 stages, namely stage I. Preliminary research, Phase II main research and Phase III application of the secang coloring product as a result of drying the foam mat drying method on food. The extraction process of secang wood maceration with 50% alcohol for 7 days, then in the evaporation, the extract results was made of powder, variations of maltodextrin fillers are 2.5, 5, 7.5, 10 and 12.5%. with 3 drying temperature treatments namely 50OC, 60OC and 70OC. The experimental design uses a randomized block design (RBD). The products produce were tested in Physics, Chemistry and Microbiological Tests. Test results with analysis of variance (p <0.05) showed that the concentration of maltodextrin significantly affected (p <0.05) on yields, moisture content, color intensity (L \*, a \* , b \*) and pH and have no significant effect on solubility. And different temperature treatments affect the yield, water content, color intensity (L \*, a \*, b \*), pH and solubility. The interaction of the two treatments significantly affected (p <0.05) on color brightness (L \*) and pH. From the microbiological test results, Secang extract was proven to have antibacterial activity against S. aureus and Shigella sp, but there was no evidence of antibacterial activity in the secang coloring powder foam mat drying method. However, the secang powder coloring method foam mat drying method still had health benefits from the antioxidant properties. it has an IC50 value of 67.78ppm classified as a powerful antioxidant. The application of food gives a red to purplish red color with the raw material of green bean flour using the steaming process.*

*Keywords: secang wood (Caesalpinia sappan L.), foam mat drying, maltodextrin,*

*antibacterial activity*