

# THE EFFECT OF COFFEE AND SUGAR EXTRACT RATIO ON INSTANT COFFEE MANUFACTURING USING THE CRYSTALLIZATION METHOD

Supervised : Rizky Nirmala Kusumaningtyas, S.TP., M.Sc

Putri Bella Sophia

[dutbel08@gmail.com](mailto:dutbel08@gmail.com)

Coffee Plantation Management Study Program

Department of Agricultural Production

## ABSTRACT

*Instant coffee is one of the processed coffee products that is popularly consumed because it can provide practicality in consuming it. The basic principle in making instant coffee is using coffee extract which is then dried. Making instant coffee can be done by several methods, namely the conventional method, spray drying method, and freeze drying method. The conventional method or crystallisation method is one of the methods of making instant coffee using simple tools and does not require expensive costs. The purpose of this study was to determine the effect of the ratio of coffee extract and sugar on the manufacture of instant coffee by crystallisation method. The research method used was the factorial completely randomised design (CRD) method. There were 2 factors observed in the study, namely the ratio of coffee extract and sugar. The coffee extract ratio factor (coffee powder: water) is K1: 1:5 and K2: 1:4. The sugar ratio factor (sugar: coffee extract) is G1: 5:10, G2: 7:10, and G3: 9:10. Both factors were combined, so there were 6 treatment combinations. Parameters in this study were water content, yield, pH, TPT, colour, aroma, taste, and after taste. The data were analysed using ANOVA with DMRT 5% further test. The results showed that the treatment of coffee extract ratio had a very significant effect on the parameters of water content and a significant effect on the parameters of yield, pH, and TPT. The sugar ratio had a very significant effect on the water content parameter and a significant effect on the yield, pH, TPT, and colour parameters. The combination of the two treatments had a very significant effect on the parameters of water content and a significant effect on the parameters of yield, pH, TPT, aroma, and after taste.*

**Keywords:** *Granulated Sugar, Instant Coffee, Crystallization, pH, TPT*