

## **ABSTRACT**

### **THE INFLUENCE OF TEMPERATURE AND LONG OF DURATION ROASTING ON BONE MEAL CHARACTERISTICS**

**By**

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Roasting is a method that uses high-temperature drying. High temperature capable of changing the chemical components and the physical structure of a material. Roasting aims to britling bone for easily powdered. The aim of this research is to know characteristics of bone meal produced from roasting process. This research was design using completely randomized factorial design consisting of two treatment factor with each of three levels. The first factor was temperature which consist of 160, 180 and 200 °C; and the second factor was duration which consist of 90, 120 and 150 minutes. Both of treatment factors has combined with each other in order to get nine combinations of treatment and repeated on three times so have obtained 27 experimental units. Parameters observation were moisture content, yield, fineness modulus, color, calcium levels and phosphor levels. The result showed that moisture content is obtained under 8%, so it has fullfilled the Indonesia National Standard (SNI). Fineness modulus is 2,91 – 3,21 on a scale of 0 - 4 with the color of bone meal was dark brown, average calcium levels of 39,9 % and phospor levels of 11,7 %. Levels of variance test with  $\alpha$  0,05 showed that temperature and duration has no effect on moisture content, yield and fineness modulus of bone meal.

*Key words : bone meal, roasting, influence of temperature and duration.*