ABSTRACT

The purpose of this research was to determine the effect of acid type and concentration of acid as well as its interaction to the characteristic red bean protein isolates

The preliminary study was to determine the temperature of the heating and drying methods appropriate to the chemical responses that were analysis of water content and protein content. Main research conducted by using a randomized block design (RBD), which consists of two factor A (acids), which consists of three levels a_1 (citric acid), a2 (acetic acid), a3 (hydrochloric acid) and K factor (acid concentration) which consists of three levels k_1 (1 N), k2 (1.5 N), k3 (2 N). The responses are used in the main study is a response to a chemical analysis of protein content and for selected samples do chemical response that consists of the analysis of water content, fat content, ash content, fiber content, and carbohydrate content.

Based on preliminary research results, the best heating temperature was at 70 ° C with a foam - mat drying method. Based on the results of primary research, it is known that acid type influenced the protein content and yield of protein isolate red beans, acid concentration influenced the protein content of red bean protein isolate, the interaction of acids and acid concentration influenced the protein content of red bean protein isolates.

The best treatment was protein isolate product using hydrochloric acid at a concentration 1N that has a protein content of 75.64 % , 7.43% moisture content, ash content of 2.00% , 1.20 % fat content, fiber content of 1.48 %, carbohydrate content of 12.25 %, and a solubility of 30%..

Keywords: Red bean, protein isolate, type of acids, acid concentration