

PEMBUATAN KONSENTRAT PROTEIN DARI BUNGKIL KEMIRI DENGAN PERBEDAAN KONSENTRASI LARUTAN HCl

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Abstrak

Tujuan penelitian ini adalah (1) untuk mengetahui pengaruh perbedaan konsentrasi HCl pada pembuatan konsentrat protein dari bungkil kemiri, (2) untuk mengetahui konsentrasi HCl yang paling optimum pada pembuatan konsentrat protein dari bungkil kemiri, (3) untuk mengetahui karakteristik konsentrat protein dari bungkil kemiri, (4) untuk mengetahui karakteristik konsentrat protein bungkil kemiri yang dihasilkan sesuai dengan SNI. Metode penelitian ini menggunakan Rancangan Acak Lengkap (RAL) 5 taraf dengan 3 kali ulangan. Perlakuan pada penelitian ini adalah perbedaan konsentrasi HCl pada ekstraksi protein dari bungkil kemiri. Perlakuan A : Konsentrasi HCl 0,1 N, Perlakuan B : Konsentrasi HCl 0,2 N, Perlakuan C : Konsentrasi HCl 0,3 N, Perlakuan D : Konsentrasi HCl 0,4 N, Perlakuan E : Konsentrasi HCl 0,5 N. Data yang diperoleh dianalisa menggunakan uji Anova (*Analysis Of Variance*), jika berbeda nyata dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DNMRT) pada taraf nyata 5%. Hasil penelitian menunjukkan Perbedaan konsentrasi HCl pada pembuatan konsentrat protein dari bungkil kemiri mempengaruhi karakteristik konsentrat protein yang dihasilkan yaitu rendemen, kadar air, kadar protein, kadar abu, kadar lemak dan karbohidrat. Penggunaan konsentrasi HCl yang optimum terhadap pembuatan konsentrat protein bungkil kemiri terdapat pada perlakuan C (Konsentrasi HCl 0,3 N) karena menghasilkan rendemen tertinggi 73.74% dengan kadar protein terlarut 83.31%. Hasil penelitian limbah bungkil kemiri berpotensi dapat menjadi sumber konsentrat protein yang potensial. Perbedaan konsentrasi HCl pada pembuatan konsentrat protein bungkil kemiri memberikan nilai rendemen 48,36-73,44%, kadar air 3,040-3,054%, kadar protein 75,11-84,22%, kadar abu 0,140-0,180%, kadar lemak 0,342-0,533%, dan karbohidrat 12,02-21,22%. Serta dapat diaplikasikan kedalam produk pangan maupun pakan. Konsentrat protein bungkil kemiri memenuhi SNI 2715:2013 mengenai Tepung Ikan dari karakteristik kadar air, kadar protein, kadar abu, kadar lemak.

Kata Kunci : Bungkil Kemiri, Konsentrasi HCl, Konsentrat Protein

PREPARATION OF PROTEIN CONCENTRATE FROM CANDLENUT DREGS WITH DIFFERENCES IN THE CONCENTRATION OF HCl SOLUTION

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Abstract

The aims of this research are (1) to determine the effect of different concentrations of HCl on the manufacture of protein concentrate from candlenut dregs, (2) to determine the most optimum HCl concentration in the manufacture of protein concentrate from candlenut dregs, (3) to determine the characteristics of protein concentrate from candlenut dregs, (4) to determine the characteristics of the candlenut dregs protein concentrate produced in accordance with SNI. This research method uses a 5-stage Completely Randomized Design (CRD) with 3 replications. The treatments in this study were different concentrations of HCl in protein extraction from candlenut dregs. Treatment A: HCl concentration 0.1 N, Treatment B: HCl concentration 0.2 N, Treatment C: HCl concentration 0.3 N, Treatment D: HCl concentration 0.4 N, Treatment E: HCl concentration 0.5 N. The data obtained were analyzed using the Anova test (Analysis of Variance), if they were significantly different, continued with the Duncan's New Multiple Range Test (DNMRT) at a significance level of 5%. The results of the research show that differences in HCl concentration in making protein concentrate from candlenut dregs affect the characteristics of the resulting protein concentrate, namely yield, water content, protein content, ash content, fat and carbohydrate content. The optimum use of HCl concentration for making candlenut dregs protein concentrate is in treatment C (0.3 N HCl concentration) because it produces the highest yield of 73.74% with a dissolved protein content of 83.31%. The results of research on candlenut dregs waste have the potential to become a potential source of protein concentrate. The difference in HCl concentration in making candlenut dregs protein concentrate gives a yield value of 48.36-73.44%, water content 3.040-3.054%, protein content 75.11-84.22%, ash content 0.140-0.180%, fat content 0.342- 0.533%, and carbohydrates 12.02-21.22%. And can be applied to food and feed products. Candlenut dregs protein concentrate meets SNI 2715:2013 concerning Fish Meal in terms of the characteristics of water content, protein content, ash content, and fat content.

Keywords: *Candlenut Dregs, HCl Concentration, Protein Concentrate*