

**ANALISIS KIMIA NUTRIEN TERLARUT HASIL DEPROTEINASI
TEPUNG LIMBAH UDANG BEBAS MINERAL MENGGUNAKAN
NATRIUM HIDROKSIDA (NaOH) DAN
SUHU YANG BERBEDA**

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INTISARI

Tujuan dari penelitian ini adalah untuk mengetahui kandungan nutrisi terlarut dalam supernatan hasil deproteinasi tepung limbah udang bebas mineral dengan menggunakan NaOH dan suhu yang berbeda. Tepung limbah udang didemineralisasi dengan HCl, kemudian dideproteinasi dengan konsentrasi NaOH (0, 1, 2, 3, 4 dan 5%) dibawah suhu 30, 40, 50, 60 dan 70 °C. Replikasi sebanyak tiga kali. Kadar gula reduksi, protein dan asam amino yang terkandung dalam supernatan hasil dari deproteinasi, dianalisis dengan analisis variansi rancangan acak lengkap pola faktorial. Variabel yang berbeda karena perlakuan dilanjutkan uji Duncant Multiple Range Test (DMRT). Hasil penelitian menunjukkan bahwa perbedaan konsentrasi NaOH, suhu dan interaksi antara kedua faktor berpengaruh sangat nyata($P < 0,01$) terhadap kadar gula reduksi, protein dan asam amino. Penggunaan konsentrasi NaOH sampai 5% dapat menaikkan kadar gula reduksi, protein dan asam amino sebesar 92,45%, 100% dan 99,10%. Suhu berpengaruh dalam menaikkan kadar gula reduksi dan kadar asam amino yaitu terjadi kenaikan tertinggi pada suhu 40°C sebesar 14,24% dan 25,64%, sedangkan Kadar protein terjadi kenaikan tertinggi pada suhu 60°C sebesar 20,8%. Dari hasil penelitian dapat disimpulkan bahwa konsentrasi NaOH 5% dan suhu 40 °C memberikan hasil yang terbaik dari proses deproteinasi.

(Kata kunci: nutrisi terlarut, deproteinasi, tepung limbah udang, bebas mineral, NaOH, suhu)

**SOLUBLE NUTRIENT CHEMICAL ANALYSIS FROM THE
DEPROTEINATION OF THE SHRIMP WASTE MEAL
FREE MINERAL USING DIFFERENCE NATRIUM
HIDROKSIDA (NaOH) AND TEMPERATURE**

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ABSTRACT

This research was done to find out the soluble nutrient contain in the supernatans as the result of deproteination of demineralized shrimp waste meal due to differences of NaOH and temperature. The shrimp waste meal was demineralized by concentrated HCl, and then it was deproteinated by concentrated NaOH rise the concetrated of 0, 1, 2, 3, 4 and 5% under temperature of 30, 40, 50, 60 dan 70°C. The treatments were done in 3 replications. The reducing sugar, protein and amino acid contained in the supernatan as the result of deproteination were analized by analysis of variance with Randomized completely Design. The variable which were significantly differente were analized by Duncant Multiple Range Test (DMRT). The result showed that the differences of NaOH concentration, temperature and their interaction significantly ($P < 0,01$) affected the concentration of reducing sugar, protein and amino acid. The NaOH treatment increased the concetration of reducing sugar, protein and amino acid contain up to 92,45%, 100% and 99,10%. The highest reducing sugar and amino acid concetration were found at the temperature of 40°C with the value of 14,24% and 25,64%. The highest protein concentration was shown at 60°C. It could be concluded that the NaOH concentration of 5% and the temperature of 40°C gave the best result of deproteination.

(Key word: soluble nutrien, deproteination, shrimp waste meal, free mineral, NaOH, temperature