

LIVE USE OF OIL-CENTED LIQUID STOCK FROM PRAWN
Penaeopenaeus indicus) PROCESSING WASTE

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DEVELOPMENT OF CONCENTRATED LIQUID STOCK FROM PRAWN (*Fenneropenaeus indicus*) PROCESSING WASTE

BY:

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ABSTRACT

Waste from shrimp processing such as of head, shell and tail may account for approximately 50% of the catch. The purpose of this study is to develop the best formulation of concentrated liquid stock from prawn processing waste. In this study, waste material consists of prawn's head and shell was used as a base for the formulation of concentrated liquid stock. The method used is the preparation of prawn waste stock (boiled with water (1:2) at 80-90 °C for 1½ hours). Then, the prawn waste stock was used as a base to develop concentrated liquid stock together with other ingredients. Five formulations were produced using different percentage of prawn waste stock which is 73%, 76%, 79%, 82% and 85% (F1, F2, F3, F4 and F5). Physical analysis, proximate analysis and sensory evaluation were determined for each formulation. Results from physical analysis showed that there were significant different ($p>0.05$) for color and viscosity analysis for prawn concentrated stock samples. Results from proximate analysis showed that samples contain high percentage of moisture content compare than other substances. Sensory evaluation shows that there were no significant different ($p>0.05$) for five formulated samples for color, appearance, aroma, taste, foreign taste and overall acceptance attributes. Results from sensory evaluation showed that F1, 73% of prawn waste stock used was the most acceptable product in terms of panelist's acceptance. Studies on the microbiological aspect should be carried out to predict the shelf life of these products.

ABSTRAK

Bahan buangan daripada pemprosesan udang iaitu kepala, kulit dan ekor mewakili kira-kira 50% daripada hasil tangkapan. Kajian ini bertujuan untuk menghasilkan formulasi terbaik bagi stok pekat (cecair) dari bahan buangan pemprosesan udang. Dalam kajian ini, bahan buangan yang terdiri daripada kepala and kulit udang telah digunakan sebagai bahan asas bagi formulasi stok pekat (cecair). Kaedah yang digunakan ialah dengan menyediakan stok daripada kulit udang (didiih dengan air (1:2) pada 80-90°C selama 1½ jam). Kemudian stok kulit udang digunakan sebagai bahan asas untuk menghasilkan stok pekat dengan penambahan bahan-bahan lain. Lima jenis formulasi dihasilkan menggunakan peratusan stok kulit udang yang berbeza iaitu 73%, 76%, 79%, 82% dan 85% (F1,F2,F3,F4 dan F5). Analisa fizikal, proksimat dan penilaian sensori telah dijalankan bagi setiap formulasi. Keputusan daripada analisa fizikal menunjukkan terdapat perbezaan signifikan ($p<0.05$) untuk analisis warna dan kepekatan bagi sampel stok udang pekat. Keputusan daripada analisa proksimat mendapati sampel mengandungi peratus lembapan yang tinggi berbanding bahan lain. Penilaian sensori telah menunjukkan tiada perbezaan signifikan ($p>0.05$) bagi kelima-lima formulasi untuk atribut warna, rupa, aroma, rasa, rasa asing dan penerimaan keseluruhan. Keputusan daripada penilaian sensori menunjukkan bahawa F1, yang menggunakan 73% stok kulit udang mendapat penerimaan tertinggi daripada panelis. Kajian ini mencadangkan kajian dalam aspek mikrobiologi dilakukan untuk meramal jangka hayat produk ini.