PRODUKSI DAN ANALISIS KEJU CHEDDAR BERBASIS HIDROLISAT PUTIH TELUR AYAM (*Gallus domesticus*)

SKRIPSI

Diajukan untuk memenuhi sebagian syarat dalam memperoleh gelar Sarjana Sains
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PROGRAM STUDI KIMIA
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Sebuah skripsi yang diajukan untuk memenuhi salah satu syarat memperoleh gelar Sarjana Sains (S.Si.) pada Program Studi Kimia di Fakutas Pendidikan Matematika dan Ilmu Pengetahuan Alam Universitas Pendidikan Indonesia

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LEMBAR PENGESAHAN

Produksi dan Analisis Keju Cheddar Berbasis Hidrolisat Putih Telur Ayam (*Gallus domesticus*)

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ABSTRAK

Keju merupakan produk fermentasi susu yang banyak dimanfaatkan masyarakat karena nilai gizinya tinggi, namun berharga relatif mahal, disebabkan karena produksi susu sebagai bahan utama pembuatan keju masih sedikit. Maka dari itu digunakan hidrolisat putih telur (HPT) sebagai alternatif pengganti susu dalam produksi keju. HPT merupakan produk hasil hidrolisis protein putih telur menggunakan enzim protease, atau asam, atau basa yang dapat dimanfaatkan sebagai bahan produksi keju cheddar. Penelitian ini bertujuan untuk memproduksi dan menganalisis keju cheddar berbasis hidrolisat putih telur ayam. Metode penelitian yang dilakukan meliputi pembuatan hidrolisat putih telur serta produksi keju cheddar dengan varian perbandingan antara susu skim dan HPT (%) berturut-turut adalah K_A (100:0); K_B (75:25); K_C (50:50). Analisis proksimat keju cheddar meliputi kadar air dan abu dengan metode gravimetri, protein dengan metode Kjeldahl, lemak dengan metode ekstraksi soxhlet; serta analisis sensori dengan uji hedonik meliputi atribut warna, aroma, tekstur, keberterimaan secara keseluruhan. Hasil penelitian menunjukkan bahwa perbandingan susu skim dan HPT terpilih adalah 50%:50% (keju cheddar K_C) berdasarkan hasil analisis proksimat dengan nilai kadar air 37,80%; abu 3,45%; protein 28,77% yang telah memenuhi standar USDA, namun kadar lemak masih berada di bawah standar USDA yaitu 28,56%. Perbandingan susu skim dan HPT terbaik adalah 50%:50% (keju cheddar K_C) berdasarkan hasil analisis sensori dengan nilai atribut warna 3,70; aroma 3,10; tekstur 3,85; keberterimaan secara keseluruhan 3,60. Dapat disimpulkan bahwa telah diproduksi keju cheddar dengan varian perbandingan susu skim dan HPT sebesar 50%:50% yang telah memenuhi standar USDA berdasarkan analisis proksimat dan sensori.

Kata kunci: keju cheddar, hidrolisat putih telur, analisis proksimat, analisis sensori

ABSTRACT

Cheese is fermented milk product that widely utilized by public due to its high nutritional value, but relatively expensive, due to the low production of milk as main ingredient for cheese making. Therefore, egg white hydrolysate (EWH) is used as an alternative to milk in cheese production. EWH is a product of egg white protein hydrolysis using protease enzymes, acids, or bases that can be utilized as ingredient for cheddar cheese production. This study aims to produce and analyze cheddar cheese based on egg white hydrolysate. The research methods included preparation of EWH and production of cheddar cheese with variants of skim milk and EWH ratio (%) as K_A (100:0); K_B (75:25); K_C (50:50), respectively. Proximates analysis of cheddar cheese are moisture and ash content using gravimetric method, protein using Kjeldahl method, fat using soxhlet extraction method; and sensory analysis using hedonic test attributes of color, aroma, texture, overall acceptance. The results show that the selected skim milk and EWH ratio is 50%:50% (K_C cheddar cheese) based on proximate analysis results with moisture content of 37.80%; ash 3.45%; protein 28.77% which met USDA standards, but fat content still below USDA standards at 28.56%. The best skim milk and EWH ratio is 50%:50% (K_C cheddar cheese) based on sensory analysis results with color attribute value 3.70; aroma 3.10; texture 3.85; overall acceptability 3.60. It can be concluded that cheddar cheese has been produced with skim milk and EWH ratio of 50%:50% that meets USDA standards based on proximate and sensory analysis.

Keywords: *cheddar cheese, egg white hydrolysate, proximate analysis, sensory analysis*

DAFTAR ISI

DAFTAR GAMBAR

DAFTAR TABEL

DAFTAR LAMPIRAN

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