

**TEKNIK PROSES DAN KARAKTERISASI FISIK COKELAT HITAM
(DARK CHOCOLATE) COUVERTURE PRALINE DENGAN ISIAN
HIDROGEL KARAGENAN 5% SELAMA PENYIMPANAN
DALAM KEMASAN YANG BERVARIASI**

INTISARI

Oleh :
SYILA APRILIANI
20/456403/TP/12698

Cokelat *praline* merupakan produk diversifikasi cokelat yang memiliki isian terselimuti oleh cangkang cokelat. Selama penyimpanan cokelat *praline* rentan mengalami migrasi isian dan pembentukan *bloom* sehingga berpengaruh terhadap stabilitas dan umur simpannya. Penelitian ini bertujuan untuk mengetahui pengaruh jenis bahan pengemas dan kondisi penyimpanan terhadap karakteristik fisik cokelat *praline* dengan penambahan isian berupa hidrogel berbasis karagenan 5%. Metode yang digunakan dengan mengkaji pengaruh jenis bahan kemasan, kondisi penyimpanan, dan lama penyimpanan terhadap parameter kualitas (kadar air, titik leleh, kekerasan, ukuran partikel, komponen warna, dan *glossiness*). Perlakuan jenis bahan kemasan menggunakan 4 variasi (*aluminium foil* + kardus *corrugated*, kertas *wax* + kardus *corrugated*, plastik *wrap* + kardus *corrugated*, dan kotak *thinwall*), kondisi penyimpanan menggunakan 2 variasi (penyimpanan dalam dengan suhu 20°C RH 55-60% dan penyimpanan luar dengan suhu 26,9-33,9°C RH 53-85%). Sampel disimpan selama 8 minggu dan setiap satu minggu sekali dilakukan pengujian parameter kualitas. Hasil penelitian menunjukkan bahwa interaksi perlakuan jenis bahan kemasan, kondisi penyimpanan, dan lama penyimpanan berpengaruh nyata ($p < 0,05$) terhadap seluruh parameter kualitas fisik cokelat *praline*. Kombinasi perlakuan terbaik diperoleh pada cokelat *praline* kemasan *aluminium foil* + kardus *corrugated* yang disimpan pada penyimpanan dalam dengan nilai preferensi sebesar 0,544. Parameter kadar air, titik leleh, dan ukuran partikel diperoleh memiliki laju meningkat selama penyimpanan, sedangkan parameter CIE L^* , a^* , b^* , dan *chroma* memiliki laju menurun selama penyimpanan. Nilai konstanta (k) laju perubahan parameter *lightness*, titik leleh, dan ukuran partikel cokelat *praline* kemasan *aluminium foil* dan kardus *corrugated* yang disimpan pada penyimpanan dalam diperoleh paling kecil dan menunjukkan kesesuaian dengan hasil analisa *Technique for Others Preference by Similarity to Ideal Solution* (TOPSIS).

Kata kunci: Cokelat *praline couverture*, jenis bahan kemasan, kondisi penyimpanan, lama penyimpanan, umur simpan

Dosen Pembimbing I : Dr. Arifin Dwi Saputro, S.T.P., M.Sc., IPM. ASEAN Eng.
II : Dr. Sri Rahayoe, S.T.P., M.P.

**TECHNIQUES OF PROCESS AND PHYSICAL CHARACTERIZATION
OF DARK CHOCOLATE PRALINE COUVERTURE WITH 5%
CARRAGEENAN HYDROGEL FILLING DURING
STORAGE IN VARIOUS PACKAGES**

ABSTRACT

**By :
SYILA APRILIANI
20/456403/TP/12698**

Praline is a diversified chocolate product that has a filling enveloped by a chocolate shell. During storage, praline is susceptible to filling migration and bloom formation, affecting its stability and shelf life. This study aims to determine the effect of packaging material type and storage conditions on the physical characteristics of praline chocolate with the addition of 5% carrageenan-based hydrogel filling. The approach involved examining the impact of packaging materials, storage conditions, and storage duration on various quality parameters such as moisture content, melting point, hardness, particle size, color components, and glossiness. The study examined four variations of packaging materials (aluminum foil + corrugated cardboard, waxed paper + corrugated cardboard, plastic wrap + corrugated cardboard, and thin-wall boxes) and two storage conditions (inside storage at a temperature of 20°C, RH 55-60% and outside storage at a temperature of 26,9-33,9°C, RH 53-85%). Samples were stored for 8 weeks and quality parameters were tested once a week. The results showed that the interaction of packaging material, storage conditions, and storage duration had a significant effect ($p < 0,05$) on all physical quality parameters of praline chocolate. The most effective treatment combination was achieved with aluminum foil and corrugated cardboard for storing praline chocolate in inside storage, resulting in a remarkable preference value of 0,544. During storage, the moisture content, melting point, and particle size parameters have all shown an increase, while the CIE L^* , a^* , b^* , and chroma parameters have exhibited a decrease. An analysis of the rate of change of the parameters of lightness, melting point, and particle size in aluminum foil and corrugated cardboard packaging in cold condition (inside storage) showed that the constant value (k) has the smallest value and was consistent with the results of the Technique for Others Preference by Similarity to Ideal Solution (TOPSIS) analysis.

Keywords : chocolate praline couverture, type of packaging material, storage conditions, storage duration, shelf life

Mentors I : Dr. Arifin Dwi Saputro, S.T.P., M.Sc., IPM. ASEAN Eng.
II : Dr. Sri Rahayoe, S.T.P., M.P.