

Uji aktivitas antioksidan formulasi dan evaluasi sabun wajah transparan dari sari buah belimbing manis (*Averrhoa carambola* L.) = Antioxidant activity test formulation and evaluation of transparent facial soap of starfruit (*Averrhoa carambola* L.) fruit extract

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Abstrak

Berdasarkan data Badan Pusat Statistik Provinsi Jawa Barat tahun 2012, Depok merupakan produsen buah belimbing manis (*Averrhoa carambola* L.) terbesar di Jawa Barat, yakni sekitar 33% belimbing di Jawa Barat dihasilkan oleh Kota Depok. Belimbing mengandung senyawa antioksidan alami seperti asam L-askorbat, epikatekin, dan asam gallat dalam bentuk gallotanin. Penelitian ini bertujuan untuk melakukan pengujian aktivitas antioksidan sari buah belimbing manis dan membuat sediaan sabun wajah transparan dari sari buah belimbing yang berfungsi sebagai antioksidan serta mengevaluasi sabun yang telah dibuat. Sari buah belimbing diperoleh dengan metode pengepresan dan dilanjutkan dengan sentrifugasi 3000 rpm selama 15 menit lalu digunakan bagian supernatannya.

Uji aktivitas antioksidan dilakukan dengan metode DPPH (1,1-Diphenyl-2-picrylhydrazyl) terhadap sari buah belimbing mentah dan sari buah belimbing matang. IC₅₀ sari buah belimbing mentah adalah 95,5947 ppm. Sedangkan IC₅₀ sari buah belimbing matang adalah 107,3812 ppm. Hasil evaluasi sabun wajah transparan menunjukkan sabun yang berwarna kuning transparan; pH 10,45-10,54; ketinggian busa 4,2-4,7 cm; kekerasan 60-70 1/10 mm, tidak terjadi oksidasi asam lemak selama penyimpanan 8 minggu pada suhu kamar (hasil Uji Kreis negatif), titik leleh 51-54,1°C, persen transmisi (%T) 76,6320–92,0730, dan hasil uji stabilitas fisik yang baik.

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Based on data from Central Bureau of Statistics of West Java Province in 2012, Depok is the biggest producer of starfruit (*Averrhoa carambola* L.) in West Java, which is approximately 33% of starfruit in West Java produced by Depok. Starfruit contains natural antioxidant compounds such as L-ascorbic acid, epicatechin, and gallic acid in the form of gallotanin. The aims of this study were to test the antioxidant activity of starfruit fruit extract and to make transparent facial soap of starfruit fruit extract as antioxidant. Starfruit fruit extract obtained by pressing method and followed by centrifugating at 3000 rpm for 15 minutes.

Antioxidant activity test was conducted using DPPH (1,1-Diphenyl-2-picrylhydrazyl) against unripe and ripe starfruit fruit extract. IC₅₀ of unripe starfruit fruit extract was 95,5947 ppm. While IC₅₀ of ripe starfruit fruit extract was 107,3812 ppm. The resulting facial soap showed transparent yellow soap; pH values between 10,45 to 10,54; foam height of 4,2 to 4,7 cm; and hardness ranging from 60 to 70 1/10 mm. There was no oxidation of fatty acids during the 8 weeks of storage at room temperature (Kreis Test result was negative), melting point of 51 to 54,1° C, percent transmission (%T) of 76,6320 to 92,0730, and showed good physical stability.