

PENGARUH WAKTU *BLANCHING* TERHADAP TINGKAT KECERAHAN DAN KARAKTERISTIK FISIKOKIMIA TEPUNG APEL

HIJAU GRANNY SMITH

INTISARI

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Buah apel merupakan buah klimaterik yang kegiatan metabolismenya masih berlanjut setelah panen, sehingga umur simpannya pendek. Untuk mengatasi masalah tersebut, buah apel diolah menjadi tepung yang memiliki daya simpan yang baik. Selain itu, buah apel juga mengalami proses *browning* yang menyebabkan pencoklatan dan hilangnya rasa buah. Maka dari itu, dilakukan *blanching* sebagai perlakuan pendahuluan pada pembuatan tepung apel untuk mencegah terjadinya *browning*.

Pada penelitian ini, buah apel di-*blanching* dengan lama waktu yang berbeda yaitu 0 menit (kontrol), 5 menit, 10 menit, dan 15 menit, lalu diiris dengan ketebalan 3 mm, dikeringkan dengan suhu 55-60 °C selama 24 jam, digiling, dan diayak. Setelah itu dilakukan analisis warna, analisis karakteristik fisik yang meliputi rendemen, daya serap air, densitas kamba, dan analisis karakteristik kimia yang meliputi analisis kadar air, kadar abu, kadar gula reduksi, kadar gula total, dan kadar serat kasar.

Hasil penelitian menunjukkan bahwa tepung apel *Granny Smith* dengan tingkat kecerahan tertinggi terdapat pada lama waktu *blanching* 5 menit ($L^* = 63,38$, $a^* = 3,93$, $b^* = 25,78$), dan yang terendah yaitu *blanching* 0 menit ($L^* = 56,33$, $a^* = 6,86$, $b^* = 25,73$). Kemudian dilakukan menurunkan nilai rendemen (10,90-7,51%), sedangkan daya serap air (104,23-198,12%) dan densitas kamba (0,28-0,33 g/mL) meningkat. Pada analisis karakteristik kimia, didapatkan bahwa waktu *blanching* yang meningkat menurunkan kadar air (6,59-4,97%), kadar abu (2,48-2,11%), kadar gula reduksi (62,00-40,37%), kadar gula total (67,67-49,20%), dan kadar serat kasar (7,61-6,65%) tepung apel *Granny Smith*. Berdasarkan analisis perlakuan terbaik metode De Garmo, didapatkan bahwa lama waktu *blanching* yang terbaik untuk pembuatan tepung apel *Granny Smith* yaitu 5 menit.

Kata Kunci: Tepung apel, Apel *Granny Smith*, *browning*, *blanching*, tingkat kecerahan

EFFECTS OF BLANCHING TIME ON BRIGHTNESS LEVEL AND PHYSICOCHEMICAL CHARACTERISTICS OF GRANNY SMITH APPLE FLOUR

ABSTRACT

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Apples are climacteric fruits of which metabolic activities still continue after harvest, meaning that the nutritional content contained in apples will change along with its physiological development resulting in damage and causing a short shelf life. To overcome this problem, apples are processed into flour which has a longer shelf life. In addition, apples also undergo a browning process which causes the change of color and loss of taste. Therefore, blanching is carried out as a preliminary treatment to prevent browning.

In this study, apples were blanched for different lengths of time, namely 0 minutes (control), 5 minutes, 10 minutes, and 15 minutes, then sliced with a thickness of 3 mm, dried at 55-60 °C for 24 hours, milled, and sifted. A colour analysis was then carried out. Then an analysis of physical characteristics was carried out which included analysis of color, yield, water absorption, bulk density, and analysis of chemical characteristics which included analysis of water content, ash content, reducing sugar content, total sugar content, and crude fiber content.

The results shows that apple flour with the highest brightness level is obtained at 5 minutes of blanching time ($L^* = 63.38$, $a^* = 3.93$, $b^* = 25.78$), and the lowest was 0 minutes ($L^* = 56.33$, $a^* = 6.86$, $b^* = 25.73$). Increasing *blanching* time decreased the yield value (10,90-7,51%), while water absorption (104.23-198.12%) and bulk density (0.28-0.33 g/mL) increased. As for the analysis of chemical characteristics, it was found that increased blanching time reduced the water content (6.59-4.97%), ash content (2.48-2.11%), reducing sugar content (62.00-40.37%), total sugar content (67.67-49.20%), and crude fiber content (7.61-6.65%) of Granny Smith apple flour. Based on the analysis of the best treatment using the De Garmo method, it was found that the best blanching time to produce *Granny Smith* apple flour was 5 minutes.

Keywords: Apple flour, Granny Smith apples, browning, blanching, brightness level