

ABSTRACT

THE EFFECT OF BLANCHING TREATMENT ON THE PHYSICAL AND CHEMICAL CHARACTERISTICS OF RED DRAGON FRUIT STEM FLOUR (*Hylocereus polyrhizus*)

By

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This research aimed to determine the effect of various blanching treatments on the physical and chemical characteristics of red dragon fruit stem flour (*Hylocereus polyrhizus*) and to identify the best blanching treatment. The research was arranged in a non-factorial design using a Randomized Completely Group Design (RAKL) with four treatments: no blanching, hot water blanching, blanching with the addition of 1% ascorbic acid, and steam blanching, each with six replications. The data obtained were tested for homogeneity using Bartlett's test and for additivity using Tukey's test. The data were analyzed using analysis of variance to estimate errors and test significance to determine the effect of the treatments. The data were further analyzed using the Honest Real Difference Test (BNJ) test at the 5% level to determine differences between treatments. The results showed that blanching treatments had a significant effect on the physical and chemical characteristics of red dragon fruit stem flour. Steam blanching produced flour with the best physical and chemical characteristics, as indicated by a yield of 68.85%, low moisture content (6.38%), high antioxidant activity (85.10%), and color values of L 80.65, a* -19.55, and b* 25.55. Therefore, steam blanching was recommended as the best processing method for producing high-quality red dragon fruit stem flour, which could enhance agricultural value and support the diversification of flour-based local foods.

Keywords: ascorbic acid, blanching, flour, red dragon fruit stem, steam blanching

ABSTRAK

PENGARUH PERLAKUAN BLANCHING TERHADAP KARAKTERISTIK FISIK DAN KIMIA TEPUNG BATANG BUAH NAGA MERAH (*Hylocereus polyrhizus*)

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Penelitian ini bertujuan untuk mengetahui pengaruh berbagai perlakuan blanching terhadap karakteristik fisik dan kimia tepung batang buah naga merah (*Hylocereus polyrhizus*) serta menentukan perlakuan *blanching* terbaik. Penelitian ini disusun secara non faktorial menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan 4 taraf, yaitu tanpa blanching, blanching air panas, blanching dengan penambahan asam askorbat 1%, dan steam blanching, masing-masing dengan 6 ulangan. Data yang diperoleh diuji kehomogenannya dengan uji Barlett dan kemenambahan data dengan uji Tuckey. Data dianalisis ragam untuk mendapatkan pendugaan galat dan uji signifikansi untuk mengetahui pengaruh perlakuan. Data diuji lebih lanjut dengan uji BNJ pada taraf 5% untuk mengetahui perbedaan antar perlakuan. Hasil penelitian menunjukkan bahwa perlakuan blanching berpengaruh signifikan terhadap karakteristik fisik dan kimia tepung batang buah naga merah. Steam blanching menghasilkan tepung dengan karakteristik fisik dan kimia yang paling baik, ditandai dengan rendemen 68,85%, kadar air rendah 6,38%, aktivitas antioksidan tinggi 85,10%, dan L 80,65, a* - 19,55, b* 25,55. Dengan demikian, steam blanching direkomendasikan sebagai metode pengolahan batang buah naga merah menjadi tepung yang berkualitas, sehingga dapat meningkatkan nilai tambah pertanian dan mendukung diversifikasi pangan berbasis tepung lokal.

Kata kunci: asam askorbat, blanching, tepung, batang buah naga merah, steam blanching