

ABSTRACT

Dryer Performance and Characteristics of Cassava Leaf Flour (*Manihot Esculenta C*)

By

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Cassava is one of the agricultural products that is abundant in Indonesia. The potential for cassava processing is very large along with the development of industry and leaving waste in the form of cassava leaves whose utilization is still limited. Cassava leaves are green vegetables that have nutritional content of protein, vitamins, and minerals. However, cassava leaves have the characteristic of being easily damaged because cassava leaves have a highwater content, allowing enzyme activity to occur. This causes cassava leaves not to be utilized optimally even though cassava leaves have a high protein content. Drying using a convection oven is an effective way to increase shelf life. The use of a hybrid dryer is an effective choice for drying cassava leaves. Material testing using electricity and solar power (hybrid) is carried out for 6 hours. Material testing using an oven is carried out for 4 hours. Testing using direct solar power (traditional) is carried out by drying for 6 hours. Proximate analysis is one method that has often been used to determine the nutritional content of raw materials or food. From the results of testing the proximate content of cassava leaf flour using a hybrid dryer, it was obtained; water content 3.18%, ash content 4.92%, fiber content 13.12%, protein 20.06%, fat content 5.18%, and BETN 66.66%. Drying using an oven, namely, water content 5.96%, ash content 5.99%, fiber content 15.72%, protein 16.132%, fat content 4.35%, and BETN 67.58%. Drying using solar energy (traditional), namely, water content 6.94%, ash content 4.98%, fiber content 16.48%, protein 16.84%, fat content 3.66%, and BETN 67.58%.

Keywords:

Drying, Hybrid, Proximate Test, Cassava leaves.

ABSTRAK

KINERJA PENGERING DAN KARAKTERISTIK PENEPUNGAN DAUN SINGKONG (*Manihot Esculenta* C)

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Singkong merupakan salah satu hasil pertanian yang melimpah di Indonesia. Potensi pengolahan Singkong sangat besar seiring dengan berkembangnya industri dan menyisakan limbah berupa daun Singkong yang pemanfaatannya masih terbatas. Daun Singkong merupakan sayuran hijau yang memiliki kandungan gizi berupa protein, vitamin, dan mineral. Akan tetapi, daun Singkong memiliki karakteristik mudah rusak karena daun Singkong memiliki kadar air yang tinggi sehingga memungkinkan terjadinya aktivitas enzim. Hal ini menyebabkan daun Singkong tidak dapat dimanfaatkan secara optimal padahal daun Singkong memiliki kandungan protein yang tinggi. Pengeringan menggunakan oven konveksi merupakan salah satu cara yang efektif untuk meningkatkan masa simpan. Penggunaan pengering hybrid merupakan pilihan yang efektif untuk mengeringkan daun Singkong. Pengujian bahan menggunakan listrik dan tenaga surya (hybrid) dilakukan selama 6 jam. Pengujian bahan menggunakan oven dilakukan selama 4 jam. Pengujian menggunakan tenaga surya langsung (tradisional) dilakukan dengan cara pengeringan selama 6 jam. Analisis proksimat merupakan salah satu metode yang selama ini sering digunakan untuk mengetahui kandungan gizi bahan baku atau pangan. Dari hasil pengujian kadar proksimat tepung daun singkong menggunakan pengering hybrid diperoleh kadar air 3,18%, kadar abu 4,92%, kadar serat 13,12%, protein 20,06%, kadar lemak 5,18%, dan BETN 66,66%. Pengeringan menggunakan oven yaitu kadar air 5,96%, kadar abu 5,99%, kadar serat 15,72%, protein 16,132%, kadar lemak 4,35%, dan BETN 67,58%. Pengeringan menggunakan tenaga surya (tradisional) yaitu kadar air 6,94%, kadar abu 4,98%, kadar serat 16,48%, protein 16,84%, kadar lemak 3,66%, dan BETN 67,58%.

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