

**PENGARUH PENAMBAHAN MALTODEKSTRIN
TERHADAP KARAKTERISTIK MINUMAN SERBUK INSTAN
KULIT BUAH NAGA MERAH (*Hylocereus polyrhizus*) DAN
SARI JAHE EMPRIT (*Zingiber officinale* var. *Amarum*)
MENGUNAKAN METODE *FOAM MAT DRYING***

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**FAKULTAS TEKNOLOGI PERTANIAN
UNIVERSITAS ANDALAS
PADANG
2023**

Pengaruh Penambahan Maltodekstrin terhadap Karakteristik Minuman Serbuk Instan Kulit Buah Naga Merah (*Hylocereus polyrhizus*) dan Sari Jahe Emprit (*Zingiber officinale* var. *Amarum*) menggunakan Metode *Foam Mat Drying*

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh penambahan maltodekstrin terhadap karakteristik fisik, kimia serta sensori minuman serbuk instan kulit buah naga merah dan sari jahe emprit dan untuk mengetahui penambahan maltodekstrin terbaik berdasarkan analisis fisik, analisis kimia dan analisis sensori. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) dengan 5 perlakuan dan 3 ulangan. Perlakuan yang dilakukan pada penelitian yaitu penambahan maltodekstrin dengan konsentrasi 5%, 10%, 15%, 20%, dan 25%. Data yang diperoleh dianalisis menggunakan *Analysis of Variance* (Anova) yang diikuti dengan uji *Duncan's New Multiple Range Test* (DNMRT) pada taraf 5%. Hasil penelitian menunjukkan penambahan maltodekstrin memberikan pengaruh nyata terhadap bagian tidak larut air, waktu larut air, warna, kadar air, kadar abu, kadar betasianin, aktivitas antioksidan dan uji organoleptik (warna), dan tidak memberikan pengaruh nyata terhadap nilai pH dan uji organoleptik (rasa dan aroma). Perlakuan terbaik berdasarkan karakteristik fisik, kimia, mikrobiologi dan organoleptik adalah perlakuan dengan penambahan maltodekstrin konsentrasi 10% dengan hasil dari uji bagian tidak larut air (0,37%), waktu larut air (59 detik), warna (16,25°Hue), kadar air (2,38%), kadar abu (1,33%), nilai pH (5,17), kadar betasianin (1,97 mg/100g), aktivitas antioksidan (35,18%), ALT (7,31 x 10² CFU/g) dan analisis organoleptik rasa 3,90 (suka), warna 4,30 (suka) dan aroma 3,60 (suka).

Kata kunci – kulit buah naga merah, jahe emprit, maltodekstrin, foam mat drying, minuman serbuk instan.

The Effect of Maltodextrin Addition on Characteristics of Instant Powder Drink of Red Dragon Fruit Peel (*Hylocereus polyrhizus*) and Emprit Ginger Juice (*Zingiber officinale* var. *Amarum*) using Foam Mat Drying Method

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ABSTRACT

This study aim to determine the effect of the addition of maltodextrin on the physical, chemical and sensory characteristics of instant powder drink red dragon fruit peel and emprit ginger juice and to determine the best addition of maltodextrin based on physical, chemical, and sensory analysis. This study used a completely randomized design (CRD) with 5 treatments and 3 replications. The treatments in this study was the addition of maltodextrin with concentrations of 5%, 10%, 15%, 20% and 25%. The data obtained were analyzed using Analysis of Variance (Anova) followed by Duncan's New Multiple Range Test (DNMRT) analysis at the 5% level. The results showed that the addition of maltodextrin had a significant effect on water insoluble portion, water soluble time, color test, water content, ash content, betacyanin levels, antioxidant activity and organoleptic tests (color), and had no significant effect on pH value and organoleptic test (taste and aroma). The best treatment based on physical, chemical, microbiological and organoleptic characteristics was the addition of maltodextrin with a concentration of 10% with the results of the water insoluble portion test of 0.37%, water soluble time of 59 seconds, color of 16.25°Hue, water content of 2.38%, ash content of 1.33%, pH value of 5.17, betacyanin content of 1.97 mg/100g, antioxidant activity of 35.185%, the total plate number of 7.31×10^2 CFU/g and organoleptic analysis of taste 3.90 (like), color 4.30 (like) and aroma 3.60 (like).

Keywords – red dragon fruit peel, emprit ginger, maltodextrin, foam mat drying, instant powder drink.