PENGESAHAN SKRIPSI

Judul Skripsi	: Karakteristik Fisik dan Kimia Mie Kering Ubi Banggai Ungu (*Dioscorea alata*) Termodifikasi dengan Metode *Autoclaving-Cooling*
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Tanggal Ujian : 29 Oktober 2021

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Judul Skripsi : Karakteristik Fisik dan Kimia Mie Kering Ubi Banggai Ungu (*Dioscorea alata*) Termodifikasi dengan Metode *Autoclaving-Cooling*

Nama : Asdianto

Nim : 651416008

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di Depan Komisi Penguji

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ABSTRAK

Asdianto, 651416008. 2021. Karakteristik Fisik dan Kimia Mie Kering Ubi Banggai Ungu (*Dioscorea alata*) Termodifikasi dengan Metode *Autoclaving-Cooling*. Skripsi, Jurusan Ilmu dan Teknologi Pangan, Program Studi S1 Teknologi Pangan, Fakultas Pertanian, Universitas Negeri Gorontalo. Pembimbing I, Marleni Limonu, SP.,M.Si. Pembimbing II, Suryani Une, S.TP., M.Sc

Penelitian ini bertujuan untuk mengetahui karakteristik fisik dan kimia mie kering ubi banggai ungu termodifikasi dengan metode *autoclaving-cooling* 2 siklus. Penelitian ini dilaksanakan selama 2 bulan dari bulan April-Mei 2021, dimana tahapan pertama adalah persiapan bahan, pengeringan, pembuatan tepung, modifikasi *autoclaving-cooling* 2 siklus, dan pembuatan mie kering. Metode yang digunakan adalah rancangan acak lengkap (RAL) 1 faktor yaitu pengaruh ubi banggai ungu (*Dioscorea alata*) termodifikasi. Data dianalisis uji organoleptik, uji kadar air, kadar protein, *swelling power*, pati resisten, kehilangan padatan akibat perebusan (KPAP), renggang putus dan daya serap air (DSA). Data penelitian ini akan dianalisis dengan diuji ANOVA (*Analisis of Variance*) α = 0,05% dan Apabila memiliki perbedaan nyata antara perlakuan, dilanjutkan dengan uji lanjut Duncan pada taraf a = 0,05%. Hasil penelitian menunjukkan bahwa perlakuan mie kering ubi banggai ungu termodifikasi berpengaruh nyata terhadap kadar air, kadar protein, *swelling power*, kehilangan padatan akibat perebusan (KPAP), renggang putus, daya serap air (DSA), warna, tekstur, rasa, dan aroma namun tidak berpengaruh nyata terhadap kadar pati resisten. Perlakuan terbaik berada pada perlakuan dengan kosentrasi 250g TUBUT : 250g Tepung Terigu dengan kadar air 6,12%, kadar protein 16,64%, *swelling power* 5,47g/g, renggang putus 8,33% dan daya serap air 84,40%.

Kata kunci : Ubi Banggai Ungu (*Dioscorea alata*), *Autoclaving-Cooling*, Tepung Terigu, Mie Kering.

ABSTRACT

Asdianto, 651416008. 2021. Physical and Chemical Characteristics of Dried Noodles made of *Ubi Banggai Ungu* (*Dioscorea Alata*) Modified with Autoclaving-Cooling Method. Undergraduate Thesis, Department of Food Sciences and Technology, Bachelor's Degree Program in Food Technology, Faculty of Agriculture, State University of Gorontalo. The Principal Supervisor is Marleni Limonu, SP., M.Si, and the Co-supervisor is Suryani Une, S.TP., M.Sc.

The study aimed to determine the physical and chemical characteristics of dried noodles made of *ubi banggai ungu* (*Dioscorea alata*) modified with the two cycles autoclaving-cooling method. The study was carried out for two months from April to May 2021, in which the phases were starting from materials preparation, drying, making of flour, modification of two cycles autoclaving-cooling, to the making of dried noodles. It employed one-factor Randomized Block Design (RBD), namely the effect of modified *ubi banggai ungu* (Dioscorea alata). The data were tested through organoleptic tests: water content, protein content, swelling power, resistant starch, solid loss due to cooking (KPAP), tensile strength, and water absorption. Then, the data were analyzed with ANOVA (Analysis of Variance) in the significance level of $\alpha = 0.05\%$, due to a significant difference between the treatment; thus, it continued with Duncan's further test in the level of $\alpha = 0.05\%$. Findings revealed that the treatment of modified dried noodles made of *ubi banggai ungu* significantly affected water content, protein content, swelling power, solid loss due to cooking (KPAP), tensile strength, water absorption, and color, texture, taste, and aroma. However, it had no significant effect on resistant starch content. In the meantime, the best treatment was the treatment with the concentration of 250 g TUBUT: 250 g flour with 6.12% water content, 16.64% protein content, 5.47 g/g swelling power, 8.33% tensile strength, and 84.40% water absorption.

Keywords: *Ubi Banggai Ungu* (*Dioscorea alata*), Autoclaving-Cooling, Flour, Dried Noodles.