KARAKTERISTIK SIFAT FISIK, KIMIA, DAN SENSORIS MI KERING TEPUNG TALAS (*Xanthosoma sagittifolium*) var. MERAPI DENGAN VARIASI KONSENTRASI TAPIOKA

INTISARI

Oleh

DIKA ANGGRANI
20/456861/TP/12769

Mi kering tepung talas merupakan makanan berbahan dasar tepung talas Merapi yang memiliki kandungan karbohidrat tinggi dan termasuk dalam mi bebas gluten. Mi bebas gluten tidak memiliki gluten secara alami sehingga penambahan pati tapioka digunakan untuk memperbaiki sifat fisik mi. Tujuan penelitian ini adalah menganalisis pengaruh variasi penambahan konsentrasi tapioka terhadap karakteristik sifat fisik (warna, *hardness*, *springiness*, *cohesiveness*, *adhesiveness*, elongasi, daya rehidrasi, dan *cooking loss*), tingkat kesukaan panelis, dan mengevaluasi kandungan proksimat dari variasi terbaik. Mi dibuat dari pencampuran tepung talas Merapi, tapioka, maizena, garam, dan pewarna makanan yang diperoleh melalui proses *trial* and *error*. Adanya variasi konsentrasi tapioka, yaitu 25%, 35%, dan 45% memiliki pengaruh yang berbeda terhadap karakteristik sifat fisik, sensoris, dan kimia mi kering tepung talas yang dihasilkan. Peningkatan konsentrasi tapioka berkontribusi pada sifat fisik mi kering tepung talas dengan menunjukkan perbedaan signifikan ($P<0,5$) pada peningkatan nilai warna, tekstur *hardness*, *springiness*, *cohesiveness*, daya rehidrasi, dan menurunkan tekstur *adhesiveness* serta *cooking loss* pada sifat mi. Berdasarkan hasil uji sensoris, mi kering tepung talas dengan 35% penambahan tapioka lebih disukai oleh panelis dari aspek warna, kekerasan, kelengketan, tekstur keseluruhan, dan keseluruhan atribut. Formula terbaik berdasarkan analisis fisik dan sensoris didapatkan pada penambahan tapioka sebesar 35% dengan analisis kimia kadar air 9,158%, kadar abu 2,553%, kadar lemak 0,255%, kadar protein 3,059%, dan kadar karbohidrat *by difference* 84,975%. Penggunaan pati tapioka pada mi kering tepung talas dapat memperbaiki sifat fisik mi dan menjadi suatu inovasi untuk menghasilkan mi bebas gluten.

Kata kunci : mi kering, talas Merapi, tapioka, karakteristik

PHYSICAL, CHEMICAL, AND SENSORY CHARACTERISTICS OF COCOYAM FLOUR (*Xanthosoma sagittifolium*) var. MERAPI DRIED NOODLES WITH VARIATION OF TAPIOCA CONCENTRATIONS

ABSTRACT

By

DIKA ANGGRANI
20/456861/TP/12769

Cocoyam flour dry noodles are a food made from Merapi cocoyam flour which has a high carbohydrate content and is included in gluten-free noodles. Gluten-free noodles do not have gluten naturally, so the addition of tapioca starch is used to improve the physical properties of the noodles. The purpose of this study was to analyze the effect of variations in the addition of tapioca concentration on the characteristics of physical properties (color, *hardness*, *springiness*, *cohesiveness*, *adhesiveness*, elongation, rehydration power, and cooking loss), sensory properties, and evaluate the proximate content of the best variation. The noodles were made by mixing Merapi cocoyam flour, tapioca starch, cornstarch, salt, and food coloring obtained through a trial and error process. In this study, different level of tapioca starch is 25%, 35%, and 45%, had different effects on the physical, sensory, and chemical characteristics of the dried cocoyam flour noodles produced. Increasing tapioca concentration contributed to the physical properties of cocoyam flour dry noodles by showing significant differences ($P<0.5$) in increasing the value of color, texture hardness, springiness, cohesiveness, rehydration power, and decreasing texture adhesiveness and cooking loss in noodle properties. Based on the sensory test, cocoyam flour dry noodles with 35% tapioca addition were preferred by panelists in terms of color, hardness, stickiness, overall texture, and overall attributes. The best formula based on physical and sensory analysis was obtained at 35% tapioca addition with chemical analysis of moisture content of 9.158%, ash content of 2.553%, fat content of 0.255%, protein content of 3.059%, and carbohydrate content by difference of 84.975%. The use of tapioca starch in cocoyam flour dry noodles can improve the physical properties of the noodles and become an innovation to produce gluten-free noodles.

Keyword : dried noodles, Merapi cocoyam, tapioca, characteristics