

ABSTRACT

Afrizal Araaf Majid. B1810339. Sensory and Chemical Characteristics of *Marshmallow* With Addition of Nutmeg Juice (*Myristica Fragrans*). Supervised by Rosy Hutami and Distya Riski Hapsari.

Nutmeg is a commodity native to the archipelago and nutmeg originating from Indonesia is the best quality nutmeg in the world with a high phenolic content. Marshmallow is a product whose processing does not require high heating so that the juice added to this product does not suffer much damage to functional compounds. This study aims to study the effect of differences in nutmeg juice concentration on the chemical characteristics (moisture content, ash content, reduction sugar, sucrose, and total phenol) and sensory (sensory and hedonic quality) of nutmeg juice marshmallows. The research method was carried out using a Complete Randomized Design (CRD) of one factor, namely the difference in nutmeg juice concentration with three treatment levels of 25%, 50%, and 75%. The product analysis carried out in the form of chemical testing of water content, ash content, reduced sugar, and sucrose has met the standards of SNI 3547.2-2008 concerning Soft Confectionery. The results of chemical testing in the form of water content, ash content, and sucrose content did not have a real effect on the treatment of nutmeg juice addition, while the reduction sugar content had a significant effect on the factor of adding nutmeg juice. The average total phenol in the nutmeg juice addition treatment was 25% at 9,705 mg GAE / 100 g, the treatment of adding nutmeg juice was 50% at 11,615 mg GAE / 100 g, and the treatment of adding nutmeg juice was 75% at 12.8 mg GAE / 100 g. The results of the ANOVA total phenol testing stated that the treatment of differences in nutmeg juice concentrations had a noticeable effect. The results of the sensory quality test state that the parameters of aroma, color, taste, and aftertaste have a significant effect on the quality of marshmallows. The hedonic quality test stated that the parameters of aroma, taste, texture, aftertaste, and overalls affected the panelists' liking for marshmallows. The selected product from this study is marshmallow with the addition of nutmeg juice with a concentration of 50% because all chemical tests are in accordance with SNI 3547.2-2008, the total phenol content of 11,615 mg GAE / 100 g is equivalent to an antioxidant of 261,017 ppm, in accordance with the expected sensory quality, and received a high score in the hedonic test.

Keywords: nutmeg, *marshmallow*, chemical, sensory, total phenol

ABSTRAK

Afrizal Araaf Majid. B1810339. Karakteristik Kimia dan Sensori *Marshmallow* dengan Penambahan Sari Buah Pala (*Myristica fragrans*). Skripsi. Di bawah bimbingan Rosy Hutami dan Distya Riski Hapsari.

Pala merupakan komoditas asli Nusantara dan pala yang berasal dari Indonesia merupakan buah pala dengan kualitas terbaik di dunia dengan kandungan fenolik yang tinggi. *Marshmallow* merupakan produk yang pengolahannya tidak memerlukan pemanasan yang tinggi sehingga sari buah yang ditambahkan pada produk ini tidak banyak mengalami kerusakan senyawa fungsional. Penelitian ini bertujuan untuk mempelajari pengaruh perbedaan konsentrasi sari buah pala terhadap karakteristik kimia (kadar air, kadar abu, gula reduksi, sukrosa, dan total fenol) dan sensori (mutu sensori dan hedonik) *marshmallow* sari buah pala. Metode penelitian dilakukan menggunakan Rancangan Acak Lengkap (RAL) satu faktor yaitu perbedaan konsentrasi sari buah pala dengan tiga taraf perlakuan 25%, 50%, dan 75%. Analisis produk yang dilakukan berupa pengujian kimia kadar air, kadar abu, gula reduksi, dan sukrosa sudah memenuhi standar SNI 3547.2-2008 tentang Kembang Gula Lunak. Hasil pengujian kimia berupa kadar air, kadar abu, dan kadar sukrosa tidak berpengaruh nyata terhadap perlakuan penambahan sari buah pala, sedangkan kadar gulareduksi berpengaruh nyata terhadap faktor penambahan sari buah pala. Rata-rata total fenol pada perlakuan penambahan sari buah pala 25% sebesar 9,705 mg GAE/100 g, perlakuan penambahan sari buah pala 50% sebesar 11,615 mg GAE/100 g, dan perlakuan penambahan sari buah pala 75% sebesar 12,8 mg GAE/100 g. Hasil ANOVA pengujian total fenol menyatakan perlakuan perbedaan konsentrasi sari buah pala berpengaruh nyata. Hasil uji mutu sensori menyatakan parameter aroma, warna, rasa, dan *aftertaste* berpengaruh nyata terhadap mutu *marshmallow*. Uji mutu hedonik menyatakan parameter aroma, rasa, tekstur, *aftertaste*, dan *overall* berpengaruh terhadap kesukaan panelis terhadap *marshmallow*. Produk terpilih dari penelitian ini adalah *marshmallow* dengan penambahan sari buah pala dengan konsentrasi 50% karena seluruh pengujian kimia sudah sesuai dengan SNI 3547.2-2008, kadar total fenol sebesar 11,615 mg GAE/100 g setara dengan antioksidan 261,017 ppm, sesuai dengan mutu sensori yang diharapkan, dan mendapat skor tinggi pada uji hedonik.

Kata kunci: pala, *marshmallow*, sensori, kimia, total fenol