

ABSTRAK

ANALISIS KANDUNGAN GIZI DAN AKTIVITAS ANTIOKSIDAN SNACK BAR BERBASIS BIJI LABU KUNING (*Cucurbita moschata*) DAN BIJI HANJELI (*Coix lacryma jobi*)

Pangan fungsional merupakan olahan pangan yang mengandung senyawa komponen fungsional yang berdasarkan kajian-kajian ilmiah memiliki fungsi fisiologis dan bermanfaat bagi kesehatan serta terbukti tidak membahayakan. Biji labu kuning dan biji hanjeli berpotensi dijadikan sebagai pangan fungsional karena mengandung senyawa metabolit sekunder bersifat antioksidan golongan flavonoid, seperti flavonol, apigenin, luteolin, nobiletin, isoliquiritigenin, quersetin, kaempferol, dan naringenin. Maka dari itu, dilakukan inovasi pengolahan pangan berupa *snack bar* berbasis biji labu kuning dan biji hanjeli yang memiliki kandungan gizi baik dan bersifat antioksidan. Pada penelitian ini dilakukan analisis aktivitas antioksidan terhadap biji labu kuning dan biji hanjeli, kemudian pembuatan *snack bar* dengan lima variasi penambahan biji labu kuning dan biji hanjeli yaitu 30 : 70, 40 : 60, 50 : 50, 60 : 40, dan 70 : 30% lalu dilakukan analisis aktivitas antioksidan, kandungan gizi, dan organoleptik. Metode yang dilakukan untuk mengetahui aktivitas antioksidan, yaitu metode DPPH (*2,2-diphenyl-1-pikrilhidrazil*). Metode yang digunakan untuk mengetahui nilai gizi dari *snack bar* ialah analisis proksimat, meliputi penentuan kadar air (metode *thermogravimetri*), kadar abu (metode pengabuan langsung), kadar protein (metode Kjeldahl), kadar lemak (metode *Soxhlet*), dan kadar karbohidrat (metode *by difference*). Hasil penelitian menunjukkan nilai aktivitas antioksidan biji labu kuning sebesar 52,46% dan biji hanjeli sebesar 50,55%. Sedangkan *snack bar* yang memiliki nilai aktivitas antioksidan tertinggi, yakni variasi 70 : 30% sebesar 83,27%. Variasi rasio penambahan biji labu kuning dan biji hanjeli mempengaruhi nilai gizi *snack bar*. Semakin besar penambahan biji labu kuning meningkatkan nilai kadar air, abu, protein, dan lemak tetapi menurunkan nilai kadar karbohidrat. Selain itu, variasi rasio penambahan biji labu kuning dan biji hanjeli mempengaruhi juga karakteristik sensoris *snack bar* yang dapat dilihat dari parameter warna, rasa, tekstur, dan aroma. Variasi *snack bar* yang paling banyak disukai panelis, yakni variasi 70 : 30% dengan rasio penambahan biji labu kuning terbesar.

Kata kunci: aktivitas antioksidan; analisis proksimat; biji hanjeli; biji labu kuning; organoleptik; *snack bar*

ABSTRACT

ANALYSIS OF NUTRITIONAL CONTENT AND ANTIOXIDANT ACTIVITY OF SNACK BAR BASED PUMPKIN SEEDS (*Cucurbita moschata*) AND HANJELI SEEDS (*Coix lacryma jobi*)

Functional food is processed food that contains functional component compounds which based on scientific studies have physiological functions and are beneficial to health and are proven not to be harmful. Pumpkin seeds and hanjeli seeds have the potential to be used as functional food because they are contain antioxidant secondary metabolites in the form of flavonoids such as flavonol, apigenine, luteolin, nobiletin, isoliquiritigenin, quersetin, kaempferol, and naringenin. Therefore, food processing innovations are carried out in the form of snack bars based on pumpkin seeds and hanjeli seeds which has good nutritional content and is an antioxidant. This study analyzed the antioxidant activity of pumpkin seeds and hanjeli seeds, then made a snack bar with five variations of adding pumpkin seeds and hanjeli seeds, namely 30: 70, 40: 60, 50: 50, 60 : 40, and 70: 30% and then analyzed for antioxidant activity, nutritional content, and organoleptic. The method used to determine the antioxidant activity is the DPPH method (2,2-diphenyl-1-picrylhydrazil). The method used to determine the nutritional value of the snack bar is proximate analysis, includes the determination of water content (thermogravimetric method), ash content (direct ashing method), protein content (Kjeldahl method), fat content (Soxhlet method), and carbohydrate content (by difference method). The results showed that the antioxidant activity of pumpkin seeds was 52.46% and hanjeli seeds were 50.55%. While the snack bar which has the highest antioxidant activity value, which is a variation of 70: 30%, is 83.27%. Variations in the ratio of the addition of pumpkin seeds and hanjeli seeds affect the nutritional value of the snack bar. The greater the addition of pumpkin seeds increases the value of water, ash, protein, and fat content but decreases the value of carbohydrate content. In addition, variations in the ratio of the addition of pumpkin seeds and hanjeli seeds also affect the sensory characteristics of the snack bar which can be seen from the parameters of color, taste, texture, and aroma. The snack bar variation that the panelists liked the most was the 70: 30% variation with the largest ratio of adding pumpkin seeds.

Keywords: antioxidant activity; proximate analysis; hanjeli seeds; pumpkin seeds; organoleptic; snack bars