

Riska Wahyu Wardhani. NPM 190331100081. *Flakes* Sorgum Nikstamal dengan Ekstrak Semanggi (*Marcilea crenata*): Sumber Antioksidan, Mineral dan Kalori. Dibawah bimbingan **Prof. Ir. Umi Purwandari, M. App. Sc., PhD. dan Rakhmawati S.TP., MT.**

ABSTRAK

Flakes merupakan sereal dari olahan biji-bijian atau sereal yang berbentuk lempengan atau serpihan, dikonsumsi sebagai sarapan siap saji atau membutuhkan pemasakan. Pemanfaatan sorgum sebagai *flakes* diharapkan mampu meningkatkan nilai tambah, serta meningkatkan citra sorgum sebagai alternatif sumber pangan potensial dan fungsional. Untuk melengkapi kekurangan serta meningkatkan kandungan nutrisi pada sorgum dalam pembuatan *flakes*, perlu adanya komposit bahan lain, yaitu semanggi. Semanggi memiliki kandungan fitokimia seperti alkaloid, steroid, flavonoid, karbohidrat, gula pereduksi serta asam amino. Selain itu semanggi juga memiliki kandungan mineral pada daun dan tangkai. Penelitian ini dilakukan dengan menggunakan model Rancangan Acak Lengkap faktorial (RAL) yang terdiri dari 2 faktor yaitu komposisi tepung sorgum dan jagung (1:1, 1:2, 2:1) serta konsentrasi ekstrak semanggi (25%, 30%, 35%) sehingga diperoleh sebanyak 9 perlakuan. Parameter yang diujikan diantaranya kadar air, tekstur, warna dan sensoris hedonik, abu, protein, lemak, karbohidrat, kalori, aktivitas antioksidan dan mineral. Uji kadar air menunjukkan nilai kadar air berkisar antara 1,77%-3,05%, nilai hardness uji tekstur berkisar antara 476,49 – 814,65, sedangkan uji warna menunjukkan nilai L berkisar antara 44,22-53,12, nilai a (-16,07)-9,40 dan nilai b (-2,47)-9,90. Data uji sensoris hedonik dianalisis efektivitas sehingga diperoleh perlakuan terbaik yaitu P6 dengan komposisi 2(sorgum):1(jagung) dengan 30% konsentrasi ekstrak semanggi. Pengujian selanjutnya untuk mengetahui profil nutrisi flakes perlakuan terbaik dengan nilai kadar abu 1,79% (bb) dan 1,82% (bk), nilai protein 10,34%, nilai lemak 6,75%, karbohidrat 81,09%, kalori 426,47 kkal/100g, aktivitas antioksidan 36,64% dan mineral berupa kalium (K) 248,74 mg/100mg, kalsium (Ca) 150mg/100g dan natrium (Na) 171,06 mg/100g.

Kata Kunci: *Flakes*, sorgum, semanggi

Riska Wahyu Wardhani. NPM 190331100081. *Nyxtamal Sorghum Flakes with Clover Extract (Marcilea crenata): Source of Antioxidants, Minerals and Calories.* Under The Guidance of **Prof. Ir. Umi Purwandari, M. App. Sc., PhD. and Rakhmawati S.TP., MT.**

ABSTRACT

Flakes are cereals made from processed grains or cereals in the form of plates or flakes, which are consumed as a ready-to-eat breakfast or require cooking. Utilization of sorghum as flakes is expected to increase added value, as well as improve the image of sorghum as a potential and functional alternative food source. To complete the deficiency and increase the nutritional content of sorghum in the manufacture of flakes, it is necessary to have another composite material, namely clover. Clover contains phytochemicals such as alkaloids, steroids, flavonoids, carbohydrates, reducing sugars and amino acids. In addition, clover also contains minerals in the leaves and stalks. This research was conducted using a completely randomized design (CRD) model consisting of 2 factors, namely the composition of sorghum and corn flour (1:1, 1:2, 2:1) and the concentration of clover extract (25%, 30%, 35%) so that as many as 9 treatments were obtained. Parameters tested included moisture content, texture, color and hedonic sensory, ash, protein, fat, carbohydrates, calories, antioxidant activity and minerals. The water content test showed the water content values ranged from 1.77% -3.05%, the texture test hardness values ranged from 476.49 – 814.65, while the color test showed the L value ranged from 44.22 to 53.12, the a (-16.07)-9.40 and a value of b (-2.47)-9.90. The effectiveness of hedonic sensory test data was analyzed so that the best treatment was obtained, namely P6 with a composition of 2(sorghum): 1(corn) with 30% concentration of clover extract. Subsequent tests to determine the nutritional profile of the best treated flakes with an ash content value of 1.79% (ww) and 1.82% (wk), protein value 10.34%, fat value 6.75%, carbohydrates 81.09%, calories 426.47 kcal/100g, antioxidant activity 36.64% and minerals in the form of potassium (K) 248.74 mg/100mg, calcium (Ca) 150mg/100g and sodium (Na) 171.06 mg/100g.

Keywords: *Flakes, sorghum, clover*