

ABSTRAK

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh perbandingan rumput laut *Eucheuma cottonii* dengan sari wortel dan konsentrasi sukrosa terhadap karakteristik *marshmallow* wortel.

Metode penelitian yang dilakukan terdiri atas dua tahap, yaitu penelitian pendahuluan dan penelitian utama. Penelitian pendahuluan yaitu menentukan formula yang paling tepat pada pembuatan *marshmallow* wortel.

Rancangan percobaan yang digunakan dalam penelitian ini adalah rancangan acak kelompok (RAK) dengan pola faktorial 3x3 dan diulang sebanyak 3 kali. Rancangan perlakuan yang dilakukan terdiri dari dua faktor meliputi : perbandingan rumput laut *Eucheuma cottonii* dengan sari wortel (A) yang terdiri dari 3 taraf, yaitu a1 (1:0,5), a2 (1:1), a3 (1,5:1) dan konsentrasi sukrosa (B) yang terdiri dari 3 taraf, yaitu b1 (25%), b2 (30%), b3 (35%).

Hasil penelitian pendahuluan menunjukkan formula 1 yang akan digunakan pada penelitian utama. Hasil penelitian utama menunjukkan perbandingan rumput laut *Eucheuma cottonii* dengan sari wortel berpengaruh terhadap organoleptik dalam hal warna, aroma, rasa, dan tekstur, serta kadar air. Konsentrasi sukrosa berpengaruh terhadap organoleptik dalam hal warna, aroma, rasa, dan tekstur, serta kadar air dan kadar gula reduksi. Interaksi antara perbandingan rumput laut *Eucheuma cottonii* dengan sari wortel dan konsentrasi sukrosa berpengaruh terhadap organoleptik dalam hal warna, aroma, rasa, dan tekstur.

Berdasarkan respon organoleptik didapatkan produk terpilih yaitu a2b3 (perbandingan rumput laut *Eucheuma cottonii* dengan sari wortel 1:1 dan konsentrasi sukrosa 35%). Produk terpilih tersebut memiliki kadar air 26,99%, kadar gula reduksi 5,6%, kadar karotenoid 19,54 ppm, nilai uji warna ($L^* = 54,55$; $a^* = 6,60$; $b^* = 13,47$), kadar vitamin C 0,85 mg/100 g, kadar serat kasar 2,6%, kadar kalsium 14,22 mg/100 g, nilai elastisitas (*springiness*) 0,614, nilai kekenyalan (*chewiness*) 2,0622 g.sec dan nilai organoleptik rata-rata suka.

Kata kunci : rumput laut *Eucheuma cottonii*, wortel, sukrosa, *marshmallow*.

ABSTRACT

The purpose of this research was to know the effect of comparison between Eucheuma cottonii seaweed with carrot extract and concentration of sucrose toward carrot marshmallow characteristics.

The method of the researched consist of two stages, preliminary research and primary research. The preliminary research determined the most appropriate formula for making carrot marshmallow.

The experimental design in this research used 3x3 factorial design in a randomized block design (RBD) with 3 times repetition. There were two factors that used in this research : comparison of Eucheuma cottonii seaweed with carrot extract (A) consist of 3 levels which were a1 (1:0,5), a2 (1:1), a3 (1,5:1) and concentration of sucrose (B) consist of 3 levels which were b1 (25%), b2 (30%), b3 (35%).

The result of preliminary research showed that formula 1 will be used in the primary research. The result of primary research showed that comparison of Eucheuma cottonii seaweed with carrot extract affected organoleptic against color, flavor, taste and texture and water content. The concentration of sucrose affected organoleptic against color, flavor, taste and texture, water content and reducing sugar content. The interaction between the comparison of Eucheuma cottonii seaweed with carrot extract and concentration of sucrose affected organoleptic against color, flavor, taste and texture.

Based on organoleptic response found that the selected product was a2b3 (comparison of Eucheuma cottonii seaweed with carrot extract 1:1 and concentration of sucrose 35%). The selected product has 26,99% water content; 5,6% reducing sugar content; 19,54 ppm carotenoid content; value of color test ($L^ = 54,55$; $a^* = 6,60$; $b^* = 13,47$); 0,85 mg/100g vitamin C content; 2,6% crude fiber content; 14,22 mg/100g calcium content; value of springiness 0,614; value of chewiness 2,0622 g.sec and the average value of organoleptic was like.*

Keywords : Eucheuma cottonii seaweed, carrot, sucrose, marshmallow.