

**PENGARUH RASIO BUAH NAGA MERAH (*Hylocereus polyrhizus*) DAN LIDAH
BUAYA (*Aloe vera*) SERTA KONSENTRASI *Carboxymethyl Cellulose* TERHADAP
SIFAT FISIK, KIMIA, DAN TINGKAT KESUKAAN SELAI**

INTISARI

Buah naga dan lidah buaya umumnya bersifat musiman, mudah rusak, sehingga umur simpannya relatif pendek, perlu dilakukan inovasi pengolahan lidah buaya dan buah naga merah untuk meningkatkan penganekaragaman produk dan fungsi fisiologis yang dapat diterima oleh konsumen, seperti halnya pembuatan menjadi makanan yaitu : sirup, pudding, dan selai. Selai campuran lidah buaya dan buah naga merah adalah produk pangan dibuat dari buah lidah buaya dan buah naga merah yang segar dan matang yang memiliki gizi dan manfaat bagi tubuh salah satunya antioksidan yang berguna untuk mencegah penuaan dini, serangan jantung, dan berbagai penyakit degeneratif sehingga kedua buah ini sangat berpotensi untuk ditingkatkan komoditasnya dengan diolah menjadi selai dan pangan fungsional. Tujuan penelitian ini adalah mengetahui rasio antara lidah buaya dan buah naga merah serta konsentrasi CMC terhadap sifat fisik, kimia dan tingkat kesukaan selai.

Rancangan penelitian yang digunakan pada penelitian ini adalah Rancangan acak lengkap dengan pola faktorial (RAL faktorial) dengan 2 faktor. Faktor pertama adalah konsentrasi CMC yang digunakan dalam pembuatan selai campuran lidah buaya & buah naga merah dengan tiga konsentrasi yaitu 0,75%, 1% dan 1,25%. Faktor kedua adalah perbandingan proporsi lidah buaya dan buah naga merah dengan tiga perbandingan yaitu 75%: 25%, 50%:50% dan 25%:75%. Selai campuran lidah buaya dan buah naga merah dibuat dari lidah buaya dan buah naga merah yang melalui proses sortasi, penimbangan, pencucian I, pengupasan, pemotongan, pencucian II, perebusan, penghancuran, penyaringan dan analisa yang dilakukan adalah uji fisik yaitu: Viskositas dan warna, uji kimia antara lain: pH, gula total, aktivitas antioksidan, total padatan terlarut, dan kadar air), dan uji sensoris meliputi: warna, rasa, daya oles, kekentalan dan keseluruhan.

Hasil dari penelitian menunjukkan bahwa penambahan CMC 1,25% dan perbandingan bubuk lidah buaya 25% dan buah naga 75% merupakan perlakuan yang memenuhi standar selai buah dan disukai panelis karena menghasilkan selai buah naga dengan nilai pH 3,45, aktivitas antioksidan paling tinggi, yaitu 77,26%, gula total 68,20, viskositas 9288 cP, kandungan zat padatan terlarut 68,20%, kandungan air 31,71% dan kecerahan (L^*) 40,94 warna merah (a^*) 2,48 warna kuning (b^*) -0,57.

kata kunci : Selai buah, lidah buaya, buah naga merah, CMC, antioksidan

The Effect of Red Dragon Fruit (*Hylocereus polyrhizus*) and Aloe vera Ratio and Concentration of Carboxymethyl Cellulose on the Physical and Chemical Properties and Preference Level of Jam

Abstract

Dragon fruit and aloe vera are generally seasonal, easily damaged, so that their shelf life is relatively short. Therefore, it is necessary to innovate the processing of aloe vera and red dragon fruit to increase product diversity and physiological functions that are acceptable by consumers, such as making them into food, for example: syrup, pudding, and jam. A mixture of aloe vera and red dragon fruit jam is a food product made from fresh and ripe aloe vera and red dragon fruit that are rich of nutrients and give benefit for the body, one of which is antioxidant that is useful for preventing premature aging, heart attack, and various degenerative diseases so that these two fruits are very potential to be increased in its commodity by processing them into jam and functional food. The purpose of this study is to determine the ratio between aloe vera and red dragon fruit as well as the concentration of CMC on the physical, chemical characteristics and the preferred level of jam.

The research design used in this study was a completely randomized design with a factorial pattern (RAL factorial) with 2 factors. The first factor was the concentration of CMC which was used in the manufacture of mixed aloe vera & red dragon fruit jam with three concentrations, that were 0,75%, 1% and 1,25%. The second factor was the ratio of the proportion of aloe vera and red dragon fruit with three ratios, that were 75%: 25%, 50%: 50% and 25%: 75%. The mixture of aloe vera and red dragon fruit jam was made from aloe vera and red dragon fruit which went through the process of sorting, weighing, washing I, peeling, cutting, washing II, boiling, crushing, filtering and the analysis that was carried out was the physical tests, such as: viscosity and color, chemical tests including: pH, total sugar, antioxidant activity, total dissolved solid, and water content), and sensory tests including: color, taste, smear power, viscosity and overall.

The results of the study showed that the addition of CMC 1,25% and the ratio of 25% aloe vera pulp and 75% dragon fruit was a treatment that met the standard of fruit jam and was preferred by the panelists because it produced dragon fruit jam with a pH value of 3,45, the highest antioxidant activity was 77,26%, the total sugar was 68,20, the viscosity was 9288 cP, 68,20% of dissolved solids content, 31,71% of water content and the brightness (L^*) was 40,94, the red (a^*) was 2,48, the yellow (b^*) was -0,57.

Keywords: fruit jam, aloe vera, red dragon fruit, CMC, antioxidants