ABSTRACT

COMPARATIVE EFFECT OF CARAGENAN-CONJAC CONCENTRATIONS ON THE PHYSICOCHEMICAL AND SENSORY CHARACTERISTICS OF JELLY DRINK PAPAYA FRUIT JUICE (*Carica papaya*. (L) var. Calina)

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Papaya fruit is susceptible to damage and has a shorter shelf life so product diversification efforts are needed to extend the shelf life of papaya fruit. Efforts to diversify papaya fruit by innovating it into a papaya juice jelly drink. Making jelly drinks requires two gelling agents, namely carrageenan and konjac. This research was carried out to find the effect and appropriate formulation of carrageenan and konjac on the sensory, physical and chemical properties of papaya juice jelly drink. Formulation of carrageenan and konjac at 55%:45% (P1), 60%:40% (P2), 65%:35% (P3), 70%:30% (P4), 75%:25% (P5) , 80%:20% (P6). Making papaya juice jelly drink is obtained from the process of making papaya juice, mixing the fruit juice with sugar, carrageenan and konjac according to the formulation, cooking at a temperature of 70-80˚C for 5 minutes, cooling, adding citric acid, and inserting the jelly drink into cups. The formulation of the 6 samples was then tested for viscosity, syneresis, water content, pH, suction power scoring test, hedonic test based on taste, color, aroma and overall acceptability parameters. P3 is the most preferred and best formulation of carrageenan and konjac 70%:30% based on the quality of the chemical content. Scoring test results suction power value 3.31 (like), hedonic test taste 3.70 (like), aroma 3.33 (like), color 3.68 (like), overall acceptance 3.98 (very like), viscosity 12.00 dPa.s, syneresis 0.77 %, water content 80.35%, pH 3.92, total plate count 24.5x 102 and beta-carotene of 0.057 mg/ 100g.

Keywords: papaya, carrageenan, konjac, jelly drink, viscosity

ABSTRAK

PENGARUH PERBANDINGAN KONSENTRASI KARAGENAN-KONJAK TERHADAP KARAKTERISTIK FISIKOKIMIA DAN SENSORI JELLY DRINK SARI BUAH PEPAYA (*Carica papaya*. (L). var. Calina)

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Buah pepaya rentan terhadap kerusakan dan memiliki daya umur simpan yang lebih pendek sehingga diperlukan upaya diversifikasi produk untuk memperpanjang umur simpan buah pepaya. Upaya diversifikasi buah pepaya dengan menginovasikannya menjadi jelly drink sari buah pepaya. Pembuatan jelly drink diperlukan dua bahan *gelling agent* yaitu karagenan dan konjak. Penelitian ini dilaksanakan untuk menemukan pengaruh dan formulasi yang tepat antara karagenan dan konjak terhadap sifat sensori, fisik dan kimia jelly drink sari buah pepaya. Formulasi dari karagenan dan konjak sebesar 55%:45% (P1), 60%:40% (P2), 65%:35% (P3), 70%:30% (P4), 75%:25% (P5), 80%:20% (P6). Pembuatan jelly drink sari buah pepaya didapatkan dari proses pembuatan sari buah pepaya, pencampuran sari buah dengan gula, karagenan dan konjak sesuai formulasi, pemasakan dengan suhu 70-80˚C selama 5 menit, pendinginan, penambahan asam sitrat, dan pemasukan jelly drink ke dalam cup. Formulasi ke 6 sampel di uji viskositas, sineresis, kadar air, pH, uji skoring daya sedot, uji hedonik berdasarkan parameter rasa, warna, aroma, dan penerimaan keseluruhan. P3 adalah formulasi karagenan dan konjak sebesar 70%:30% yang paling disukai dan terbaik berdasarkan mutu kandungan kimia. Hasil uji skoring nilai daya sedot 3,31 (suka), uji hedonik rasa 3,70 (suka), aroma 3,33 (suka), warna 3,68 (suka), penerimaan keseluruhan 3,98 (sangat suka), viskositas 12,00 dPa.s, sineresis 0,77 %, kadar air 80,35%, pH 3,92, uji angka lempeng total 24,5x 10^2 dan beta-karoten sebesar 0,057 mg/100g.

Kata kunci: pepaya, karagenan, konjak, jelly drink, viskositas