ABSTRACT

THE EFFECT OF GELATIN AND CARRAGENAN CONCENTRATION ON SENSORY AND PHYSICAL PROPERTIES OF MANGO GINGER JELLY CANDY (*Curcuma mangga* Val.)

By

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The study aims to determine the effect of the addition of gelatin concentration, carrageenan concentration, the interaction between the two parameters and determine the best concentration used for making mango ginger jelly candy. This research was arranged in a factorial Complete Randomized Block Design (RCBD) with three replications. The first factor was gelatin concentration (10%, 15%, and 20%) and the second factor was carrageenan concentration (2%, 3%, and 4%). The data were analyzed for similarity in variance with the Barlett test and the test for data addition was tested by the Tuckey test, then ANOVA was analyzed to determine the effect between treatments, at last data were analyzed with orthogonal polynomials (OP) at a level of 5%. The results showed that the addition of gelatin concentrations (10%, 15%, and 20%) had an effect on increasing texture, sensory acceptance and physical properties (texture) but reducing the aroma, taste and likeness of color in the jelly candies.

Other than that, the addition of carrageenan concentration (2%, 3%, and 4%) had an effect on increasing the sensory texture and physical texture value but decreasing the taste and likeness of the colors in the jelly candy and there was an interaction between the two treatments of gelatin and carrageenan concentration on the mango ginger jelly candy and tntersection on overall acceptance parameters. The best concentration for the manufacture of mango ginger jelly candy was 15% gelatin and 3% carrageenan with a sensory aroma score of 3.39 (somewhat typical of mango ginger), a taste of 3.50 (typical of mango ginger), texture of 3.33 (somewhat springy), color 3.61 (likes), overall acceptance 3.61 (likes) and hardness 113.91 gf.

Keywords: *carragenan, gelatin, jelly candy, mango ginger.*

ABSTRAK

PENGARUH KONSENTRASI GELATIN DAN KARAGENAN TERHADAP SIFAT SENSORI DAN SIFAT FISIK PERMEN JELLY TEMU MANGGA (*Curcuma mangga* Val.)

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Penelitian bertujuan untuk mengetahui pengaruh penambahan konsentrasi gelatin, karagenan dan interaksi antara keduanya serta mengetahui konsentrasi terbaik yang digunakan untuk pembuatan permen jelly temu mangga. Penelitian ini disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) faktorial dengan tiga kali ulangan. Faktor pertama yaitu konsentrasi gelatin (10%,15%, dan 20%) dan faktor kedua yaitu konsentrasi karagenan (2%,3%, dan 4%). Data yang diperoleh dianalisis kesamaan ragamnya dengan uji Barlett dan uji kemenambahan data diuji dengan uji Tuckey, selanjutnya dianalisis ragam untuk mengetahui pengaruh antar perlakuan dan uji lanjut dengan polinomial ortogonal (OP) pada taraf 5%. Hasil penelitian menunjukkan bahwa penambahan konsentrasi gelatin (10%, 15%, dan 20%) berpengaruh menaikkan tekstur, penerimaan sensori dan sifat fisik (tekstur) namun menurunkan aroma, rasa dan kesukaan terhadap warna pada permen jelly ekstrak temu manga. Selain itu,

penambahan konsentrasi karagenan (2%, 3%, dan 4%) berpengaruh menaikkan tekstur secara sensori dan nilai tekstur secara fisik namun menurunkan rasa dan kesukaan terhadap warna pada permen jelly ekstrak temu manga serta terjadi interaksi antar kedua perlakuan konsentrasi gelatin dan karagenan terhadap permen jelly temu mangga pada parameter penerimaan keseluruhan. Konsentrasi terbaik untuk pembuatan permen jelly temu mangga adalah gelatin 15% dan karagenan 3% dengan skor sensori aroma 3,39 (agak khas temu mangga), rasa 3,50 (khas temu mangga), tekstur 3,33 (agak kenyal), warna 3,61 (suka), penerimaan keseluruhan 3,61 (suka) dan kekerasan 113,91 gf.

Kata kunci: *karagenan, gelatin, permen jelly, temu mangga.*