ABSTRAK

Tujuan penelitian ini adalah untuk menentukan konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) dan pektin yang tepat agar dihasilkan karakteristik selai kelapa serbuk instan yang paling baik.

Penelitian pendahuluan bertujuan untuk menentukan kandungan metoksil pektin, menentukan konsentrasi pektin dan menentukan konsentrasi sukrosa. Penelitian utama bertujuan untuk mengetahui konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) dan pektin terbaik yang digunakan dalam pembuatan selai kelapa serbuk instan.

Rancangan percobaan yang digunakan pada penelitian ini menggunakan pola faktorial 3x3 dalam Rancangan Acak Kelompok (RAK) dengan ulangan sebanyak 3 kali, sehingga diperoleh 27 satuan percobaan. Rancangan perlakuan yang dilakukan pada penelitian ini terdiri dari dua faktor yaitu faktor konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) yang terdiri dari 3 taraf, yaitu a_1 (0,1%), a_2 (0,3%) dan a_3 (0,5%) dan faktor konsentrasi pektin b_1 (1,1%), b_2 (1,2%) dan b_3 (1,3%). Rancangan respon meliputi respon organoleptik dengan atribut warna,rasa, tekstur, aroma dan daya oles, respon fisik yaitu volume pengembangan, sineresis dan *cooking time,* respon kimia yaitu pH dan kadar air. Produk terpilih dilakukan analisis kadar asam lemak bebas dan viskositas.

Hasil penelitian menunjukkan bahwa konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) berpengaruh nyata terhadap warna, rasa, aroma, konsistensi, volume pengembangan, *cooking time*, pH dan kadar air selai kelapa serbuk instan. Konsentrasi pektin berpengaruh nyata terhadap rasa, konsistensi, daya oles, volume pengembangan, sineresis, pH dan kadar air selai kelapa serbuk instan. Interaksi antara konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) dan pektin berpengaruh nyata terhadap warna, rasa, daya oles, *cooking time*, pH dan kadar air selai kelapa serbuk instan.

Berdasarkan hasil respon kimia (kadar air dan pH) maka perlakuan terpilih adalah a_2b_3 (konsentrasi dinatrium hidrogen phosfat (Na_2HPO_4) 0,3% dan konsentrasi pektin 1,3%) dengan pH 3,44, kadar air 5,88%, volume pengembangan 18,34%, sineresis 16,67%, *cooking time* 6,63 detik, kadar asam lemak bebas 0,47% dan viskositas pada perbandingan selai : air panas 3:1 adalah 190 mPas.

Kata kunci : dinatrium hidrogen phosfat (Na_2HPO_4), pektin, daya oles, volume pengembangan, sineresis, *cooking time*, pH, kadar air, asam lemak bebas, viskositas

ABSTRACT

The purpose of this research was to obtain the right concentration of sodium hydrogen phosphate (Na_2HPO_4) and concentration of pectin to produce the best characteristics of instant powdered coconut jam.

Preliminary research was to obtain the methoxyl content of pectin, concentration of pectin and concentration of sucrose. The main research was to determine the concentration of sodium hydrogen phosphate (Na_2HPO_4) and the concentration of pectin used in the production of instant powdered coconut jam.

The experimental design used in this research was a 3x3 factorial design in Randomized Block Designs (RBD) with 3 repetitions, in order to obtain 27 units of trial. The design of the treatment carried out in this research consisted of two factors, namely concentration of sodium hydrogen phosphate (Na_2HPO_4) a_1 (0,1%), a_2 (0,3%) dan a_3 (0,5%) and concentration of pectin b_1 (1,1%), b_2 (1,2%) dan b_3 (1,3%). The response designs included organoleptic responses with attributes of color, flavor, consistency, aroma and smearing power, physical responses that were development volume, syneresis and cooking time, chemical response that were pH and water content. The chosen product were analyzed free fatty acid content and viscosity.

The results shower that the concentration of sodium hydrogen phosphate (Na_2HPO_4) significantly affected that was color, flavor, aroma, consistency, development volume, cooking time, pH and water content of coconut jam instant powder . The concentration of pectin significantly affected the taste, consistency, smearing power, development volume, syneresis, pH and water content of instant powdered coconut jam. The interaction between the concentration of disodium hydrogen phosphate (Na_2HPO_4) and pectin significantly affected the color, taste, smearing power, cooking time, pH and water content of instant coconut powder.

Based on the result of chemical response (water content and pH), then the chosen treatment was a_2b_3 (concentration of sodium hydrogen phosphate (Na_2HPO_4) 0,3% and concentration of pectin 1,3%) with pH 3,44, water content 5,88%, development volume 18,34%, syneresis 16,67%, cooking time 6,63 seconds, free fatty acid 0,47% dan viscosity in the ratio of jam : hot water 3: 1 are 190 mPas.

Keywords : sodium hydrogen phosphate (Na_2HPO_4), pectin, smearing power, development volume, syneresis, cooking time, pH, water content, free fatty acid, viscosity