

PENGARUH RASIO BUAH NANAS (*Ananas comosus* L.) DAN BUAH NAGA MERAH (*Hylocereus polyrhizus*) SERTA VARIASI PENAMBAHAN ASAM SITRAT TERHADAP SIFAT FISIK, KIMIA DAN TINGKAT KESUKAAN SELAI

INTISARI

Nanas merupakan buah yang mengandung zat aktif diantaranya adalah antosianin, vitamin C dan flavonoid yang dapat meningkatkan daya tahan tubuh. Buah naga merah mengandung zat bioaktif yang bermanfaat bagi tubuh diantaranya adalah beta karoten, dan antosianin. Buah naga merah segar tidak dapat disimpan lama karena mengandung kadar air tinggi, diperlukan pengolahan lanjutan untuk memperpanjang daya simpan, salah satunya adalah pengolahan menjadi selai, selain dapat memberikan campuran warna dari kedua bahan tersebut kelebihan lainnya adalah salah satunya mengandung antioksidan yang tinggi. Tujuan penelitian adalah menghasilkan selai dengan variasi campuran buah nanas dan buah naga merah serta variasi penambahan asam sitrat yang mempunyai sifat fisik, kimia, yang memenuhi syarat dan disukai panelis.

Rancangan penelitian yang digunakan adalah Rancangan Acak Lengkap (RAL) pola faktorial 2 faktor dengan 2 ulangan. Faktor perlakuan yang digunakan pada penelitian ini adalah variasi campuran buah nanas dan buah naga merah 25%:75%, 50%:50%, dan 75%:25% dan variasi penambahan asam sitrat hingga mendapatkan pH 3,5, 4,0 dan 4,5. Penelitian diulang sebanyak 2 kali ulangan. Data yang diperoleh diuji secara statistika menggunakan metode *Univariate Analysis of Variance* dan *One Way Anova* dengan tingkat kepercayaan 95%.

Hasil penelitian menunjukkan bahwa variasi campuran buah nanas dan buah naga merah serta variasi penambahan asam sitrat berpengaruh nyata terhadap fisik, kimia dan tingkat kesukaan selai. Pengujian variasi campuran buah nanas dan buah naga merah 25%:75% serta variasi penambahan asam sitrat dengan pH 4,5 menghasilkan selai dengan nilai kadar air 34,78% b/b, pH 4,65, gula reduksi 23,74%, gula total 64,11%, total padatan terlarut 60,94%, dan aktivitas antioksidan 29,68% RSA, sehingga sebagian hasil analisa yang telah dilakukan telah sesuai dengan standar syarat mutu selai buah dan disukai panelis.

Kata Kunci: Selai nanas, buah naga merah, asam sitrat, aktivitas antioksidan

THE EFFECT OF THE RATIO OF PINEAPPLE (*Ananas comosus L.*) AND RED DRAGON FRUIT (*Hylocereus polyrhizus*) AND VARIATIONS OF CITRIC ACID ADDITIONAL ON THE PHYSICAL, CHEMICAL PROPERTIES AND PREFERENCE LEVEL OF JAM

ABSTRACT

Pineapple is a fruit that contains active substances, including anthocyanins, vitamin C, and flavonoids, that can increase body endurance. Red dragon fruit contains bioactive substances that are beneficial to the body, including beta carotene and anthocyanins. Fresh red dragon fruit cannot be stored for long because it contains high water content. Further processing is needed to extend the shelf life, one of which is processing into jam. The combination provides a mixture of colors from the two ingredients. Another advantage is that one of them contains high antioxidants. The purpose of the research was to produce jam with a variation of pineapple and red dragon fruit mixture and variations in the addition of citric acid, which had physical, chemical properties, which met the requirements and was preferred by the panelists.

The research design used was a Completely Randomized Design (CRD) with a factorial pattern of two factors with two repetitions. The treatment factors used in this study were variations in the mixture of pineapple and red dragon fruit 25%: 75%, 50%: 50%, and 75%: 25%, and variations in the addition of citric acid to get a pH of 3.5, 4.0, and 4.5. The study was repeated two times. The data obtained were tested statistically using the Univariate Analysis of Variance and One Way Anova methods with a 95% confidence level.

The results showed that variations in the mixture of pineapple and red dragon fruit and variations in the addition of citric acid had a significant effect on the physical, chemical, and preferences level of jam. Tests of variations in the mixture of pineapple and red dragon fruit 25%:75% and variations in the addition of citric acid with a pH of 4.5 produced jam with a water content value of fresh mass 34.78%, pH 4.65, reducing sugar 23.74%, total sugar 64.11%, total soluble solids 60.94%, and antioxidant activity 29.68% RSA. According to the data above, some of the analysis results that have been carried out have been following the quality standards of fruit jam and preferred by the panelists.

Keywords: Pineapple jam, red dragon fruit, citric acid, antioxidant activity