

ABSTRAK

KAJIAN PERBANDINGAN KONSENTRASI GULA DAN ASAM SITRAT TERHADAP SIFAT KIMIA DAN ORGANOLEPTIK SELAI KULIT BUAH NAGA MERAH (*Hylocereus polyrhizus*)

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Penelitian ini bertujuan untuk mendapatkan konsentrasi gula dan asam sitrat yang menghasilkan sifat kimia dan organoleptik selai kulit buah naga merah (*Hylocereus polyrhizus*) terbaik . Penelitian disusun dalam Rancangan Acak Kelompok Lengkap dengan dua faktor dan tiga ulangan. Faktor pertama yaitu penambahan gula dengan 5 taraf konsentrasi 20%, 30%, 40%, 50%, dan 60% , sedangkan faktor kedua yaitu asam sitrat dengan 3 taraf konsentrasi 0,6%, 0,9%, dan 1,2% . Kombinasi untuk kedua faktor yaitu (0,6%:20%), (0,6%:30%), (0,6%:40%), (0,6%:50%), (0,6%:60%), (0,9%:20%), (0,9%:30%), (0,9%:40%), (0,9%:50%), (0,9%:60%), (1,2%:20%), (1,2%:30%), (1,2%:40%), (1,2%:50%), (1,2%:60%). Data dianalisis dengan analisis sidik ragam serta uji ortogonal polinomial. Hasil penelitian menunjukkan bahwa penambahan gula berpengaruh sangat nyata terhadap aroma, daya oles, kadar air, total padatan terlarut, dan pH serta tidak berpengaruh nyata terhadap rasa, warna, dan penerimaan keseluruhan. Penambahan asam sitrat berpengaruh sangat nyata terhadap rasa, penerimaan

keseluruhan, daya oles, kadar air, total padatan terlarut, dan pH serta tidak berpengaruh nyata terhadap warna dan aroma. Interaksi gula dan asam sitrat menghasilkan selai kulit buah naga merah terbaik pada perlakuan penambahan gula 50% dan asam sitrat 0,9% yang menghasilkan skor rasa 3,42 (agak manis dan agak asam), skor aroma 3,52 (agak disukai), skor warna 3,92 (merah keunguan), skor penerimaan keseluruhan 3,62 (agak disukai), kadar air 23,23% ; total padatan terlarut 94,33% ; pH 3,23 ; dan daya oles 9,1 cm.

Kata kunci: asam sitrat, gula, kulit buah naga merah, selai.

ABSTRACT

COMPARATION OF SUGAR CONCENTRATION AND CITRIC ACID ON THE CHEMICAL AND ORGANOLEPTIC PROPERTIES OF RED DRAGON FRUIT (*Hylocereus polyrhizus*) PEEL JAM

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The objective of this research was to find the optimum concentration of sugar and citric acid on the chemical and organoleptic properties of red dragon fruit (*Hylocereus polyrhizus*) peel jam. The research was designed as two factorial experiments, arranged in a Randomized Complete Block Design with three replications. The first factor was addition of sugar 20%, 30%, 40%, 50%, and 60%, and the second factor was the addition of citric acid 0,6%, 0,9%, and 1,2%. The combination of the factors consist of fifteen level (0,6%:20%), (0,6%:30%), (0,6%:40%), (0,6%:50%), (0,6%:60%), (0,9%:20%), (0,9%:30%), (0,9%:40%), (0,9%:50%), (0,9%:60%), (1,2%:20%), (1,2%:30%), (1,2%:40%), (1,2%:50%), (1,2%:60%). The data were analyzed using ANOVA and orthogonal polynomial. The result showed that the addition of sugar very significantly affected flavor, spreadness, moisture content, total dissolved solid, pH, and did not significantly affected the taste, color, and overall acceptance. The addition of citric acid very significantly affected on taste, overall acceptance, spreadness, moisture content,

total dissolved solid, pH, and did not significantly affected the color and flavor. The interaction of sugar and citric acid to produce the best red dragon fruit peel jam was form in the treatment with addition of sugar 50% and citric acid 0,9% with a taste of 3,42 (slightly sweet and slightly sour), flavor of 3,52 (slightly like), color of 3,92 (reddish purple), overall acceptance of 3,62 (slightly like), moisture content 23,23%; total dissolved solid 94,33%; pH 3,23; and spreadness 9,1 cm.

Keywords: citric acid, jam, red dragon fruit peel, sugar.