

ABSTRACT

EVALUATION OF THE EFFECT OF PROCESSING METHODS ON THE CHEMICAL AND SENSORY QUALITY OF PALM LIQUID GLUCOSE WITH THE ADDITION OF OR WITHOUT THE ADDITION OF LIME Ca(OH)_2

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Sap of old oil palm trunk contains appreciable amount sugar, but it has not been considered as potential source of sugar. This study aims to determine the effect of evaporation of oil palm sap with the addition of Ca(OH)_2 lime and without the addition of lime on chemical and sensory qualities. The study was arranged in a Complete Group Randomized Design (CRBD) with a single factor, and was repeated 6 times. The factors observed were the addition or absence of Ca(OH)_2 lime with atmospheric evaporation treatment and vacuum evaporator with a temperature of 70°C. The parameters observed were chemical quality (pH, °brix, and reduction sugar), sensory (color, and aroma), and overall acceptance. The data obtained are then tested for homogeneity with the Bartlett test and the sixthness of the data is tested by the Tuckey test. The data is processed by various fingerprints to determine the effect of treatment. The data was then tested further with the Honest Real Difference (HSD) test at the level of α 0.05 to determine the difference between treatments. The best research result of this study was atmospheric evaporation treatment with the addition of lime (AK), an average brix degree of 68.750%. Average pH 5.40. The average moisture content is 17.738%. The average ash content is 0.859%. Sugar reduction 44.306%. TPC test results do not grow microbes. The average result was a scent score of 4.40 (likes). The result is a color score of 3.42 (brownish-yellow). Overall reception 4.04 (likes).

Keywords : old palm trunk, liquid sugar, lime, vacuum evaporator.

ABSTRAK

EVALUASI PENGARUH CARA PENGOLAHAN TERHADAP MUTU KIMIA DAN SENSORI GULA CAIR NIRA KELAPA SAWIT DENGAN PENAMBAHAN ATAU TANPA PENAMBAHAN KAPUR $\text{Ca}(\text{OH})_2$

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Batang kelapa sawit yang sudah tua mengandung gula dalam jumlah yang cukup besar, namun belum dianggap potensial. Penelitian ini bertujuan untuk mengetahui pengaruh cara penguapan nira kelapa sawit dengan penambahan kapur $\text{Ca}(\text{OH})_2$ dan tanpa penambahan kapur terhadap mutu kimia dan sensori. Penelitian disusun dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan faktor tunggal, dan dilakukan pengulangan sebanyak 6 kali. Faktor yang diamati adalah penambahan atau tanpa penambahan kapur $\text{Ca}(\text{OH})_2$ dengan perlakuan penguapan secara atmosferik dan *vacuum evaporator* dengan suhu 70°C . Parameter yang diamati adalah mutu kimia (pH, °brix, dan gula reduksi), sensori (warna, dan aroma), dan penerimaan keseluruhan. Data yang diperoleh kemudian diuji kehomogenannya dengan uji *Bartlett* dan kemenambahan data diuji dengan uji Tuckey. Data diproses sidik ragam untuk mengetahui pengaruh perlakuan. Data kemudian diuji lanjut dengan uji Beda Nyata Jujur (BNJ) pada taraf α 0,05 untuk mengetahui perbedaan antar perlakuan. Hasil penelitian terbaik penelitian ini adalah perlakuan penguapan secara atmosferik dengan penambahan kapur (AK), rata-rata derajat brix 68,750%. pH rata-rata 5,40. Kadar air rata-rata 17,738%. Kadar abu rata-rata 0,859%. Gula reduksi 44,306%. Hasil pengujian TPC tidak tumbuh mikroba. Hasil rata-rata skor aroma 4,40 (suka). Hasil skor warna 3,42 (kuning kecoklatan). Penerimaan keseluruhan 4,04 (suka).

Kata kunci : batang sawit tua, gula cair, kapur, vakum evaporator.