ABSTRACT

CHARACTERIZATION OF THE CHEMICAL QUALITY OF OLD PALM TRUNK JUICE (*Elaeis guineensis* Jacq) BASED ON EXTRACTION TIME DELAY

BY

MEISYA TIFANI PUTRI

One of the wastes of oil palm that currently being developed is the management of non-productive oil palm trunks aged 25-30 years. Oil palm trunks contain sap with sucrose, glucose and fructose levels. The purpose of this study was to determine the chemical quality of sap based on the delay in the extraction time of old oil palm trunk sap. This study was arranged non-factorially in a Complete Randomized Block Design (CRBD) with 5 replications. The treatment of delaying oil palm trunks consisted of delaying oil palm trunks for 1 week (P1), delaying oil palm trunks for 2 weeks (P2), delaying oil palm trunks for 3 weeks (P3), delaying oil palm trunks for 4 weeks (P4), delaying oil palm trunks for 5 weeks (P5). The observation parameters were total starch content, total reducing sugar, acidity level (pH), TPT (^{o}brix). The data obtained were analyzed using the Bartlett test and the Tukey test, followed by analysis of variance (ANOVA), and Honest Significant Difference (HSD) test at the 5% level. The results showed that delaying the extraction of oil palm trunks for 5 weeks affected the chemical quality of the sap produced. Total starch content ranged from 17.61-71.99 ppm, total reducing sugar ranged from 12.07-18.98%, acidity (pH) ranged from 4.73-6.77, and total dissolved solids ranged from 5.76-17.70 ^{o}brix.

Keywords : chemical quality, oil palm, oil palm trunk delay, sap extraction.

ABSTRAK

KARAKTERISASI MUTU KIMIA NIRA BATANG SAWIT TUA (*Elaeis guineensis* Jacq) BERDASARKAN PENUNDAAN WAKTU EKSTRAKSI

OLEH

MEISYA TIFANI PUTRI

Salah satu limbah perkebunan kelapa sawit yang dikembangkan pada saat ini adalah pengelolaan batang kelapa sawit non produktif yang berumur 25-30tahun. Batang kelapa sawit mengandung nira dengan kadar sukrosa glukosa dan fruktosa. Tujuan penelitian ini adalah untuk mengetahui mutu kimia nira berdasarkan penundaan waktu ekstraksi nira batang sawit tua. Penelitian ini disusun secara non faktorial dalam Rancangan Acak Kelompok Lengkap (RAKL) dengan 5 ulangan. Perlakuan penundaan batang kelapa sawit terdiri dari penundaan batang kelapa sawit 1 minggu (P1), penundaan batang kelapa sawit 2 minggu (P2), penundaan batang kelapa sawit 3 minggu (P3), penundaan batang kelapa sawit 4 minggu (P4), penundaan batang kelapa sawit 5 minggu (P5). Parameter pengamatan yaitu total kadar pati, total gula reduksi, derajat keasaman (pH), TPT (^{o}brix). Data yang diperoleh di analisis menggunakan uji Bartlett dan uji Tukey, dilanjutkan dengan analisis ragam (ANOVA), dan uji lanjut BNJ (Beda Nyata Jujur) pada taraf 5%. Hasil penelitian menunjukkan penundaan ekstraksi batang kelapa sawit selama 5 minggu berpengaruh terhadap mutu kimia nira yang dihasilkan. Total kadar pati berkisar antara 17,61-71,99 ppm, total gula reduksi berkisar antara 12,07-18,98%, derajat keasaman (pH) berkisar antara 4,73-6,77, dan total padatan terlarut berkisar antara 5,76-17,70 ^{o}brix.

Kata kunci : ekstraksi nira, kelapa sawit, mutu kimia, penundaan batang.