

PENGARUH PERBEDAAN KONSENTRASI NaOH TERHADAP KARAKTERISTIK KERTAS SENI DARI AMPAS TEBU

(*Saccharum officinarum L.*)

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ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh konsentrasi NaOH terhadap karakteristik kertas seni dari ampas tebu. Penelitian ini dilaksanakan di Laboratorium Teknologi Industri Pertanian Universitas Dharma Andalas Padang. Penelitian ini telah dilaksanakan pada bulan Desember 2022 hingga bulan Januari 2023. Rancangan yang digunakan dalam penelitian adalah RAL dengan perbandingan persentase konsentrasi NaOH yaitu: A= 4%, B= 6%, C= 8%, D= 10%, E= 12% dengan 3 kali ulangan. Hasil pengamatan dari masing-masing perlakuan dianalisis dengan Analisis Sidik Ragam (*Analysis of Variance*). Jika berbeda nyata maka dilanjutkan menggunakan uji lanjut DNMRT pada taraf 5%. Parameter penelitian ini meliputi rendemen *pulp*, ketahanan tarik kertas seni, gramatur, pH lindi, ketahanan sobek kertas, uji derajat kecerahan, penilaian organoleptik, dan analisis *Break Even Point* (BEP). Hasil penelitian menunjukkan bahwa perlakuan memberikan pengaruh nyata terhadap nilai rendemen *pulp* 51,44% - 53,88%, ketahanan tarik kertas seni 0,46 MPa - 1,80 MPa, pH lindi 9,17% - 11,50%, ketahanan sobek kertas 3,12 Mpa - 4,81 MPa, gramatur 6,33 g/m² - 8,76 g/m², uji derajat kecerahan 85,10% - 89,83%. Hasil untuk uji organoleptik menunjukkan kertas seni yang paling disukai adalah perlakuan E (konsentrasi 12%) dengan nilai kesukaan terhadap warna 4,36 (suka), tekstur permukaan 4,44 (suka), dan kenampakan serat 4,14 (suka). Hasil perhitungan *Break Event Point* (BEP) kertas seni atas dasar unit =37.721,08 unit dan *Break Even Point* (BEP) atas dasar Rupiah = Rp. 377.210.804.

Kata kunci : Kertas seni, karakteristik mutu, konsentrasi NaOH,
break even point

THE EFFECT OF DIFFERENT NAOH CONCENTRATIONS ON THE CHARACTERISTICS OF ART PAPER FROM CANE BAGGAGE

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ABSTRACT

This research aims to determine the effect of NaOH concentration on the characteristics of art paper from sugarcane bagasse. This research was carried out at the Agricultural Industrial Technology Laboratory, Dharma Andalas University, Padang. This research was carried out from December 2022 to January 2023. The design used in the research was RAL with a percentage ratio of NaOH concentrations, namely: A= 4%, B= 6%, C= 8%, D= 10%, E= 12 % with 3 repetitions. The results of observations from each treatment were analyzed using Analysis of Variance. If it is significantly different then continue using the DNMRT further test at the 5% level. The parameters of this research include pulp yield, tensile strength of art paper, grammage, leachate pH, paper tear resistance, brightness test, organoleptic assessment, and Break Even Point (BEP) analysis . The results showed that the treatment had a real influence on the yield value of pulp 51.44% - 53.88%, tensile resistance of art paper 0.46 MPa - 1.80 MPa, leachate pH 9.17% - 11.50%, tear resistance paper 3.12 Mpa - 4.81 MPa, grammage 6.33 g/m² – 8.76 g/m², brightness test 85.10% - 89.83%. The results for the organoleptic test show that the most preferred art paper is treatment E (concentration 12%) with a liking value for color 4.36 (like), surface texture 4.44 (like), and fiber appearance 4.14 (like). The results of the calculation of Break Event Point (BEP) for art paper on a unit basis = 37,721.08 units and Break Even Point (BEP) on a Rupiah basis = Rp. 377210804.

Keywords: Art paper, quality characteristics, NaOH concentration, break even point