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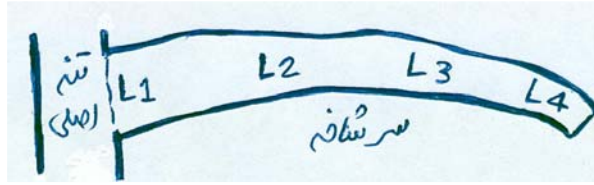
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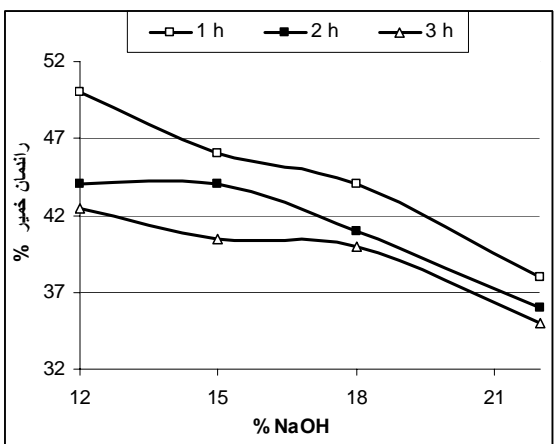
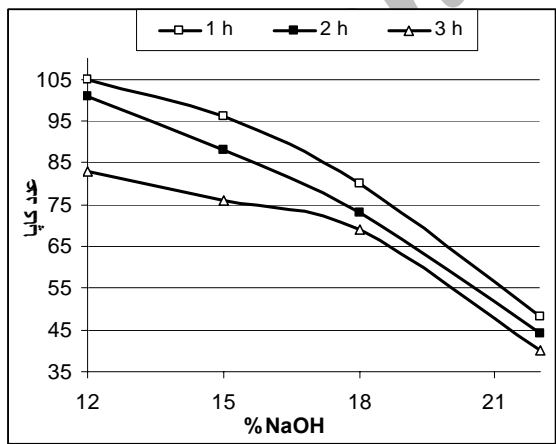
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Determination of the fiber physical and chemical properties and soda pulping from date palm leaves in Iran

H. Resalati^{*1}, H. Sadeghifar² and M. Tabarroki³

¹ Associate professor, Gorgan University of Agricultural Sciences and Natural Resources, Gorgan, I.R.Iran.

² Assistant Professor, Islamic Azad University, Chalus and Noshar Branch, I.R.Iran

³ Former Graduate Student in Wood and Paper Sciences, I.R.Iran

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Abstract

Based on a study performed, about 200 to 400 thousand ton per year waste date palm leaves are available in Iran. In this research, chemical composition, fiber dimensions and soda pulping from five main date palm leaves in Iran were investigated. Specific gravity of different samples has been determined to be in the range of 0.44 - 0.50. Average fiber length and diameter were 1400 and 17.5 micrometers, respectively. Cellulose content varied from 35 to 44% and the klason lignin content was 12 to 15 %. Acetone soluble extractive content was varied from 1.35 - 3.23 %, hot water extractive content was very high from 16% to 19% and ash content was also high varied from 4.5 - 7.75 %. The results of soda pulping of mixed date palm leaves have shown that, good quality high yield and low yield pulps can be produced which are suitable for making different grades of papers.

Keywords: Date palm leaves, Pulp yield, Kappa number, Soda pulp, Chemical composition

*Corresponding author: Tel: +98 911 1112454 , Fax: +98 111 3224915 , E-mail: hnresalati@yahoo.com