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## Effect of Ultrasound and Xylanase Treatment on the Physical-Mechanical Properties of Bleached Eucalyptus Kraft Pulp

PDF (Size: 450KB) PP. 125-129 DOI : 10.4236/nr.2011.22017

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### ABSTRACT

The modification on the fiber structure of bleached eucalyptus kraft pulp is a very attractive alternative for improvements in the properties of paper production. The enzymatic treatment by xylanases and ultrasonic treatments modify the characteristics of the fibers, has been reported. Therefore, the purpose of this study was to evaluate the influence of ultrasonic waves as a facilitator of the action of enzymes (hemicellulase) by modifying the physicochemical nature of fiber eucalyptus Kraft pulp, in order to improve the physical and mechanical properties of the paper. But it was observed that the idea of ultrasound acts as a facilitator for action of enzymes can't be affirmed, since in most properties XA-1 and XA-2 were equal statistically. It may be noted that the junction of ultrasound and xylanase provided improves on tensile index, specific elastic modulus and tensile energy absorption and a decrease of tear index on the mechanical properties of handsheet and it increased the opacity when the ultrasound was applied before xylanase.

### KEYWORDS

Ultrasonic, Xylanases, Physical Properties, Mechanical Properties

### Cite this paper

L. Batalha, J. Silva, C. Jardim, R. Oliveira and J. Colodette, "Effect of Ultrasound and Xylanase Treatment on the Physical-Mechanical Properties of Bleached Eucalyptus Kraft Pulp," *Natural Resources*, Vol. 2 No. 2, 2011, pp. 125-129. doi: 10.4236/nr.2011.22017.

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