

QUANTIFICATION OF CARBOHYDRATES AND URONIC ACIDS IN  
*EUCALYPTUS SP* WOOD BY PULSED AMPEROMETRIC DETECTION  
USING GOLD ELECTRODE AND ION EXCHANGER COLUMN.

Takematsu, M. M.<sup>1</sup>, Carreira, W.<sup>1</sup>, Batista, F. F.<sup>1</sup>, Zanuni, L.<sup>1</sup>, Sertek, P.  
A.<sup>1</sup>

<sup>1</sup>Departamento de Aplicação e Produto, Metrohm Pensalab  
Instrumentação Analítica Ltda, São Paulo, Brazil.

The determination and quantification of carbohydrates and uronic acids in *Eucalyptus sp* woods are very important to improve the quality of paper industry process and to know the biochemical characteristic of this kind of wood. The purpose of this study is to identify and quantify carbohydrates (arabinose, galactose, glucose, xilose and manose) and uronic acids (glucuronic and galacturonic acids) in *Eucalyptus sp* wood powder treated by acid digestion using ion chromatography system. This system consists of to separate the analytes by high capacity ion exchanger column Metrosep Carb 1 250/4.6, basic mobile phase and the detection was performed by pulsed amperometric detector using gold electrode. The results showed that the method of analysis was rapid and sensitive (detection limit 1 - 2.5 ppm) and there are high concentration of glucose and xilose (about 70% of dry wood powder). The concentration of galacturonic acid is higher than glucuronic, but these fraction of uronic acids represents about 1 - 2% of dry wood powder.

Key words: carbohydrates, uronic acids, pulsed amperometric detection, ion chromatography.