



Analysis of Retention Time and Substances Released Enzymatically from Lignocellulose, Coconut Coir Treated by Alkaline, Ionic Liquid[MMIM][DMP] and Combined Method by Observing the HPLC-RI Spectra

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Abstract : The retention times and substances released from lignocellulose, coconut coir dust treated by alkaline, ionic liquid and combined technique, were analyzed successfully by observing HPLC-RI (high performance liquid chromatography equipped by refractive index detector) measurement using Aminex HPX87P (Bio-Rad, CA) column and pure water as mobile phase. The results obtained in this work were compared to those of references reported by some authors. Average retention times of glucose, xylose and galactose dissolved enzymatically from coconut coir were around 13.42, 14.81 and 17.15 using cellulase and xylanase, in which they were relative similar to pure sugars recorded at 13.30, 14.72 and 17.70 min, respectively. After conducting a comparative study with some reports published before, the peak appearing clear that was located at 7.5 min, was identified as cellobiose substance that was unknown previously in this investigation.

Key words : Cellobiose; Glucose; Galactose; HPLC-RI; Retention time; Xylose.

Hanny F. Sangian /International Journal of ChemTech Research, 2016,9(12): 715-724.
