



ChemTech

International Journal of ChemTech Research

CODEN(USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555

Vol.10 No.12, pp 51-66,2017

Identification of Bioactive compounds of pyrolysis oil obtained from cotton residues (*Gossypiumarboreum*) by flash pyrolysis

P.Madhu^{1*}, G. Periyanyagi²

¹Department of Mechanical Engineering, Jansons Institute of Technology, Coimbatore, Tamilnadu, India-641659.

²Department of Botany, Raja Doraisingam Government Arts College, Sivaganga, Tamilnadu, India-630561.

Abstract:Pyrolysis oils have attracted a lot of interest, as they are liquid energy carriers and general sources of chemicals. In this work the gas chromatography–mass spectroscopy was developed and applied for the analysis of bioactive and hydrocarbons of pyrolysis bio oil. More than 250 bioactive compounds such as normal saturated hydrocarbons, cyclopentane, cyclohexane, esters, alcohols, sulfur- and bromo-containing compounds, simple pyrene, and benzene derivatives, were identified. Most of these compounds have not been reported earlier. The increase in the number of identified products is due to increased separations. This increased understanding of pyrolytic product distribution can be used to enhance our understanding of the formation mechanisms of pyrolytic products. The method described in this article is a suitable research tool for the determination of various chemical compounds from pyrolysis bio oil derived from cotton shell.

Keywords: Cotton shell, Fluidized bed, Pyrolysis, Bio-oil, GC-MS, bioactive compounds.

P.Madhu *et al*/International Journal of ChemTech Research, 2017,10(12): 51-66.
