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Separation and identification of compounds at pyrolysis oil of wood from populus.spp at 300oC and 350 oC by using GC/MS.

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Populus is a deciduous tree which covers a wide area of forests and gardens plantation. The objective of this study was to separate and identify compounds produced of populous wood pyrolysis at a fixed bed reactor under an inert gas atmosphere (nitrogen) at 300-350 oC. The pyrolysis temperature was ramped at 30 oC/s to end temperature (300 or 350 oC) and kept for 1 hour at this temperature. Separation and identification of compounds at bio-oil treated with N,o-bis (trimetil sailil) trifloeroasetamid (BSTFA) were done, using gas chromatography/ mass spectrometry (GC/MS) technique. Five compounds were identified at 300 oC. The most important compounds identified in wood at this range were 1,2 banzan dicarbocsilic acid bis (2 ethil hexil) ester. And galactoronic acid at 350 oC. The other important compounds observed at 300 oC were pantanoeic acid and levoglocosan and at 350oC were galactoronic acid, tricosan and 1,2 banzan dicarbocsilic acid bis(2ethil hexil) ester.

Keywords: Pyrolysis, Wood, Fixed bed reactor, Populus, GC/MS, BSTFA,

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