



Production of chemicals via flash pyrolysis of agricultural biomass

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Abstract: Pyrolysis of biomass is a means to industrially manufacture renewable oil and gas, in addition to biochar for soil amendment and long-term carbon fixation. In this work, bio oil derived from the flash pyrolysis of palmyra palm fruit bunch are analysed using gas chromatography mass spectroscopy technique. The pyrolysis oil fraction exhibits a wide variety of fatty acids, alkanes, alkenes, amides, aldehydes, terpenes, pyrrolidinines, phytol and phenols. In this work the gas chromatography–mass spectroscopy was developed and applied for the analysis of various chemicals present in the pyrolysis bio oil. More than 250 chemical compounds were identified. Most of these compounds have not been reported earlier. The increase in the number of identified chemical products is due to increased separations. The method described in this article is a suitable research tool for the determination of various chemical compounds from pyrolysis bio oil.

Keywords: Biomass, Pyrolysis, Bio oil, GC-MS, Chemicals.

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