EFFECT OF PYROLYSIS TEMPERATURE ON BIO-OIL PRODUCTION AND THEIR CHEMICAL PROPERTIES

Subhajit Das[1], Rupam Kataki[1], Bimala Prasad Baruah[2] and Prasenjit Saikia[2,*]

[1]Department of Energy, Tezpur University, Tezpur-784028, Assam, India
[2]Coal Chemistry Division, CSIR-North East Institute of Science & Technology, Jorhat-785006, Assam, India
*Corresponding author, Email: prasentu@gmail.com, Phone: +91 376 2372581, Fax: +91 376 2370011

Abstract:

Bio-energy is now emerging as one of the viable future energy options. Pyrolysis is one of the main thermo-chemical processes that can provide a useful and valuable bio-fuel such as bio-oil and biochar. In the present investigation, an attempt has been made to produce bio-oil from a waste weed named Ipomoea carnea .Thermal pyrolysis of Ipomoea carnea was carried out in a Laboratory scale reactor with a temperature range from 350^{o}C to 500^{o}C at a heating rate of 10^{o}C/min., the liquid product obtained was collected for the terminal temperature of 350, 400, 450 and 500 ^{0}C. The effect of temperature on pyrolysis of the above raw materials is studied to know the optimum temperature for maximum liquid yield. The products obtained are characterised and their yields obtained at different temperatures are discussed.

Keywords: Ipomoea carnea, Bio-oil, Pyrolysis, Bio-energy