ORGANIC GEOCHEMISTRY CHARACTERISTIC OF NEUTRAL FRACTION OF COAL PIT BINTANG BD-MD SANGATTA, EAST KALIMANTAN

Name : Lucky Novarina P S
Student Identity Number : 1409100095
Department : Chemistry
Supervisor : Dra. Yulfi Zetra, M.S.

ABSTRACT

Characteristic organic geochemistry neutral fraction of PIT Bintang BD-MD Sangatta's coal in East Kalimantan has been done with the GC-MS. The interpreted result of GC-MS’s chromatogram showed that the obtained compounds were n-alkanes (C_{14}-C_{33}), branched alkanes pristane (C_{19}) and phytan (C_{20}), bicyclic sesqui-terpenes (cadinan, driman, homodriman), and triterpenes (Hopane C_{29}-C_{31}) for aliphatic fraction. Whereas in aromatic fraction, it can be concluded that the biomarker compound contained inside the coal were naphthalene series (methyl naphthalene until trimethylnaphtalene), phenanthrenes series (dimethylphenantrene until trimethylphenantrene), cadalene, norcadalene, retene and methyl retene, and pisene. It also obtained methyl saturated ketone (C_{13}H_{26}O, and C_{14}H_{28}O) and methyl unsaturated ketone that consist one double-bond (C_{15}H_{28}O and C_{16}H_{30}O) in ketone fraction. Those compounds provided information that a constituent of coal was dominated by higher plants angiosperm especially family of Depterocarpaceae that starts to formed in Miocene epoch with oxidative deposition environment and produces a coal with low maturity.