BIOMARKER CHARACTERIZATION OF ACID AND POLAR FRACTION OF CRUDE OIL FROM KARTAGENAH VILLAGE, PAMEKASAN MADURA

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ABSTRACT

Biomarker characterization of acid and polar fraction from Lawe-lawe oil wells were studied. Before characterization, crude oil were fractioned by McCarty and Duthie methods and analyzed by GC-MS. The result show that alifatik carboxylic acids (C_{14}-C_{28}) which is dominated by even chain, 17\beta(H),21\beta(H)-28-norhopanoic acid, 17\alpha(H),21\beta(H)-homohopanoic acid, 17\alpha(H),21\beta(H)-bishomohopanoic acid, 17\beta(H),21\beta(H)-homohopanoic acid and 17\beta(H),21\beta(H)-bishomohopanoic acid are produced by acid fraction. In the polar fraction, n-alkene distribute on C_{17}-C_{25} which is dominated by even chain and 17\alpha(H),21\beta(H)-bisnorhopane, 17\beta(H),21\beta(H)-30-norhopane, 17\alpha(H),21\beta(H)-hopane, 17\beta(H),21\beta(H)-bishomohopane dan 17\beta(H),21\beta(H)-tetrahomohopane were found. The result from acid and polar biomarker analyze show that crude oil is from terrestrial sedimentation, bacteria and marine organism. Kartagenah crude oils is unbiodegradation and immature crude oil.

Keywords: Crude oil, biomarker, acidic biomarker, polar biomarker,
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