

APLIKASI $^1\text{H-NMR}$ DALAM PENENTUAN KONVERSI METIL ESTER PADA PEMBUATAN BIODIESEL

Dwi Kartika¹ dan Yoeswono²

¹ Program Studi Kimia, Fakultas Sains dan Teknik, UNSOED, Purwokerto

² Pusdiklat Migas, Jl. Sorogo No. 1, Cepu

ABSTRACT

Determination of methyl ester conversion on biodiesel processing using $^1\text{H-NMR}$ spectrometer has been done. Methoxy spectra from methyl ester would appear at 3,7 ppm (singlet), spectra at 4,2 ppm (doublet of doublet) was glyceridic proton. The spectrum could be used as reference to determine the degree of biodiesel conversion, because spectra at chemical shift 4.2 ppm was characteristic for triglyceride that methyl ester did not have it. Whereas, spectra at chemical shift 3.7 ppm was characteristic for methyl ester that triglyceride did not have it. The extent of both spectrum indicated for incompleteness in biodiesel synthesis.

Keywords: $^1\text{H-NMR}$, methyl ester, biodiesel