

THE EFFECT OF WATER DEVELOPMENT VARIATIONS ON VISCOSITY AND DENSITY ON BIODESEL PROCESS WASHING WITH WET WASHING

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ABSTRACT

Each year, the number of automobiles on the road increases, resulting in increased gasoline consumption. Alternative energy sources can be used in place of fossil fuels. As a substitute for diesel, renewable fuels such as biodiesel are required. The potential of fish oil as a biodiesel source material is well known. Muncar is a fish processing industry location in Banyuwangi Regency's Muncar District, hence there is a lot of fish oil waste potential there. The research was carried out in two parts, the first of which was the production of biodiesel from fish waste oil, and the second of which was viscosity testing at a temperature of 40°C and density testing. The maximum viscosity value was found in biodiesel fuel pure oil fish waste at a variable discharge of 10 ml/s, with a value of 4.210 mm²/s, while the lowest value was found in dicampuran biodiesel B-10 at a variable flow of 20 ml/s, with a value of 2,976 mm²/s. The maximum density value is found in pure biodiesel (B100%) in a variable flow of 10 ml/s, with a density of 943 kg/m³, and the lowest density value is found in the fuel combination biodiesel B-10 in a variable flow of 30 ml/s, with a density of 854 kg/m³.

Keywords: *Fish Waste Oil Biodiesel, Viscosity, Density*