

**PEMBUATAN BIODIESEL BAHAN BAKU MINYAK JAGUNG  
DENGAN PROSES TRANSESTERIFIKASI MENGGUNAKAN  
KATALIS NaOH DAN KOH** (*Manufacturing Biodiesel Raw Material Corn Oil  
With Transesterification Process Using NaOH and KOH Catalyst*)  
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***ABSTRACT***

*This research aims to make biodiesel from oil corn which will be used as natural fuel for diesel engines (biodiesel), as well as conducting characteristic tests (viscosity, density, flash point, and calorific value) before testing the vehicle. This research was carried out at the jember state polytechnic automotive machinery laboratory for the process of making biodiesel and the brawijaya university laboratory in malang for the process of tersting the characteristics of biodiesel. This research uses experimental method as data collection analysis. Corn oil that has passed the transesterification process with NaOH and KOH catalysts is then separated between biodiesel and glycerol for 24 hours and then in the washing process. In this research, two samples of different catalysts were compared. The resulting characteristic data is dominated by samples with NaOH catalyst with the following values: viscosity: (8.2 cSt), calorific value: (9.620 cal/gram), flash point: (127 °C), density: (0.867 gr)/cm<sup>3</sup>. In the vehicle flame test carried out on the Isuzu Panther biodiesel car, it can ignite so that it can be categorized as biodiesel according to SNI. In the flash point characteristic test, the calorific value and density are included in the category of biodiesel fuel. However, in the viscosity test, the two samples did not get data according to the thershold value for biodiesel fuel viscosity.*

**Keywords:** *Biodiesel, NaOH, KOH, viscosity, density, flash point, calorific value*