

## UJI WAKTU PEMBAKARAN SAMPAH DAN NILAI KALOR BAHAN BAKAR *POLYPROPYLENE* CAIR HASIL INCINERATOR PIROLISIS

by

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### ABSTRACT

Pyrolysis is a thermal decomposition process of organic matter in the absence of oxygen with products in the form of liquids, gases and solids. Pyrolysis does not release pollutants in the form of particles and CO<sub>2</sub> into the atmosphere so that it practically does not interfere with the environment. The process of processing plastic waste into products of economic value through several main process stages. In the implementation of the research, two stages were used, the first was the preliminary stage or the stage of making biodiesel from polypropylene plastic waste, while the second research stage was the measurement of the calorific value. The yield of Polypropylene fuel is directly proportional to the mass of Polypropylene plastic raw material. The mass of plastic waste with 5 kg produces 0.8 liters of fuel, for the mass of raw material *Polypropylene* plastic waste weighing 10 kg produces *Polypropylene* fuel as much as 1.7 liters, for the mass of raw material *Polypropylene* plastic waste weighing 15 kg produces *Polypropylene* fuel as much as 2.65 liters and for the mass of *Polypropylene* plastic waste weighing 20 kg it produces 3.7 liters of *Polypropylene* fuel. While the calorific value for each addition of the Polypropylene fuel mixture, in the mixture of 30% *Polypropylene* fuel with 70% pertalite the results obtained a calorific value of 45,912 KJ/kg, in the second mixture, namely 50% *Polypropylene* fuel with 50% pertalite, the results obtained calorific value of 45,472 KJ/kg, in the third mixture, namely 70% *Polypropylene* fuel with 30% pertalite, the calorific value was 45,363 KJ/kg, in the fourth mixture, 85% *Polypropylene* fuel with 15% pertalite, the calorific value was 44,853 KJ/kg. and for the calorific value of pure Polypropylene fuel, the calorific value is 44,672 KJ/kg.

**Keywords:** *pyrolysis, Polypropylene Plastic, Calorific Value.*