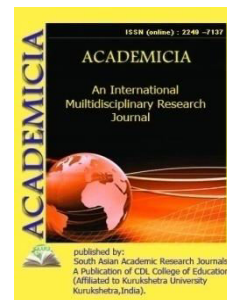




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CALORIC DELINEATION OF BOTH GASOLINE AND DIESEL BLENDS USING DSC

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ABSTRACT

Today, one of the most serious issues associated with the use of internal combustion engines is the emission of harmful gases. In researching alternative sources of energy, there has been an increase in concern about the need for energy resources and the environmental and demand impacts of fuel sources. To meet this criterion, biodiesels will play an important role as an alternative to diesel oil because they are renewable and have similar properties. Petroleum products are currently being consumed at a rate that will lead to depletion in the coming decades. Ethanol usage in transportation is one of the sectors that can meet the requirement while also helping to reduce vehicle greenhouse gas emissions. The application of thermo gravimetric analysis to renewable energy sources is a novel study that has gained popularity among researchers in recent years. In this mainly focus on differential scanning calorimeter(DSC) of various blends to investigate the (TG-DSC) thermal behavior of Petrol, Diesel, Ethanol blends(E5,E10,E20),J atropa oil and waste cooking oil blends all the thermo grams of heat flow is exhibited at 35°C -300°C temperature range at air atmosphere ,The main aim of the study to observe the combustion behavior of both petrol and diesel blends, the origin of biodiesel blends have been analyzed to observe the transesterification reaction effect on biodiesel. Therefore, the petrol and biodiesel blends at different percentages are exposed to isothermal heating rates under nitrogen and air atmosphere with a constant heat rate by using DSC.

KEYWORDS: *Differential Scanning Calorimeter, Combustion, Thermo Gravimetric, Bio-Diesel Blends, Thermo Grams.*

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