

International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555 Vol.11 No.02, pp 200-206, 2018

ChemTech

Experimental Investigation of a Diesel Engine fueled by emulsified B20 biodiesel

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Abstract : The depletion of petroleum reserves and ever growing vehicle population have lead to the search for an apt substitute fuel to meet the future requirements satisfying the emission norms as well. Since diesel engines emit gases like nitrogen oxide (NOx) and particulate matter to objectionable level which are harmful to the environment, the search becomes much more relevant. Emulsified fuels have been found to be promising in reducing the emissions. Thevetia Peruviana biodiesel has already been found to be a promising substitute fuel for diesel. In this study B20 biodiesel of Thevetia Peruviana (diesel and 20% biodiesel) with water in the ratios of 5% and 7.5% has been utilized as fuel to investigate the engine performance and emission characteristics and the results reported. **Keywords :** B20 biodiesel, Thevetia Peruviana biodiesel, emulsions, surfactants, emissions.

R. Vinoth Kumar /International Journal of ChemTech Research, 2018,11(02): 200-206.

DOI= <u>http://dx.doi.org/10.20902/IJCTR.2018.110225</u>
