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Chemical Engineering , I.T, 2011

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Modification of Vegetable Oil for use as Crankcase Lubricating Oil

Traditional crankcase lubricating oils consist of about 80 to 90% mineral oil as base stocks and 10 to 20 % oil additives. Therefore even if we cannot transform the given vegetable oil into an oil which can completely replace mineral oil, we can still make a small contribution to the environment by mixing up to 15-20% of transesterified vegetable oil which has characteristics similar to those of mineral oil, in mineral oil. The project proposed to undertake Experimental Laboratory work to determine a viable blend of chemically modified Vegetable Oils with Mineral Oil partially, in formulating an Engine Oil which will be bio degradable and not environmentally toxic in contrast to conventional mineral oil based engine oils. We must first modify vegetable oil in such a way that while being soluble in mineral oil it has some characteristics similar to those of the mineral oil currently used in the manufacture of crankcase lubricating oils. In this project, the process, the use of the optimum proportion of oil and the higher alcohol, catalyst and reaction conditions are discussed and reported.



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