

عنوان مقاله:

Biodiesel Production from Tobacco (Nicotiana Tabacum) Seed Oil

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نویسندگان:

Khushbu Sharma - Department of Public Health Dentistry

Madan Kumar Parangimalar Diwakar - Department of Public Health Dentistry, Ragas Dental College and Hospital

Karunanithi Balakrishnan - Department of Chemical Engineering, SRM University, Kanchepuram

Sreeja Vijayalekshmi Gopalakrishnapillai - Department of Chemistry, Hubert Enviro Care systems Private Limited,
Chennai, Tamil Nadu, India

خلاصه مقاله:

The health impacts due to tobacco have lead to loss of lives and economy of the country. Tobacco seed oil can be an alternative source to biodiesel. This study aims to investigate the yield of the oil from tobacco seeds of Indian origin and to compare the properties of the biodiesel produced with American Society for Testing and Materials and conventional diesel. Methods: The tobacco seeds where grounded and the oil was extracted using n-hexane as a solvent in the soxhlets apparatus. The oil extracted was subjected to trans-esterification process to be converted into biodiesel. The biodiesel produced was tested for density, viscosity, iodine value, acid value, cetane index, gross calorific value, flash point and pour point and were compared with ASTM standards and conventional diesel. Results: The yield of oil from tobacco seeds in this study was ۳۴ percent and the biodiesel yield was ۸۵ percent. The properties were found to be comparable with ASTM standards and conventional diesel properties. Conclusion: The properties of tobacco seed oil were comparable with ASTM standards. Tobacco seed oil of Indian origin could be a viable source of biodiesel

کلمات کلیدی:

Biodiesel, properties, economic burden, tobacco seed oil

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