

NATURAL HAIR OIL

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ABSTRACT

Biodiesel (fatty acid methyl ester) which is derived from triglycerides by transesterification has attracted considerable attention during the past decade as a renewable, biodegradable and nontoxic fuel. Several processes for biodiesel fuel production have been developed, among which transesterification using alkali as catalyst gives high level of conversion of triglycerides to their corresponding methyl ester in a short duration. This process has therefore been widely utilized for biodiesel fuel production in a number of countries. In India, non-edible oils like karanja oil and jatropha oil are available in abundance, which can be converted to biodiesel. In the present studies, biodiesel has been prepared from karanja oil. As the acid values of this oil were more than 3, hence it can be converted to biodiesel by esterification followed by transesterification process. The methyl ester produced by these methods was analyzed to ascertain their suitability as diesel fuels. Then the comparison of physicochemical properties was done karanja oil, karanja oil methyl ester and biodiesel. The various properties of methyl esters are found to be comparable with that of diesel fuel. However it requires further studies for considering the product as a suitable biodiesel.

Keywords: Karanja oil, Biodiesel, Esterification and Transesterification

I. INTRODUCTION

Hair loss is a very common condition and affects most people at some time in their lives.

Hair loss from breakage of the hair shaft is different than hair loss due to decreased hair growth. Hair loss is seen in both men and women but is more dramatic in men. Thyroid disease, anemia, protein deficiency, chemotherapy, and low vitamin levels, stress, pollution, hard water, dandruff may cause hair loss. Prevention of hair loss includes good hair hygiene, regular shampooing, and good nutrition.

Hair loss happens for many different reasons, and not all of them are related to aging. Fortunately, there are a variety of ways you can prevent excessive hair loss without resorting to expensive products and prescriptions.

And to make this oil we require Karanja oil, Vitamin E Tablet, Curry and neem leaves, Onion juice, Castor oil all this is been added.

Use essential oils combined with a scalp massage:

It promotes good circulation in the scalp and increases blood flow to your follicles.

Restore moisture through hot oil treatments:

When applied to the hair, hot oil can moisturize and also stimulate growth.

Include more high-protein foods and vegetables in your diet:

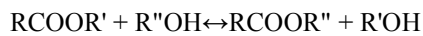
lean meats, fish, soy, or other proteins may help to curb hair loss. Additionally, eating a well-balanced diet that contains a lot of vegetables can help you get the vitamins you need in order to grow and maintain a healthy head of hair.

Take care of the hair that you have:

Never brush wet hair, and avoid rubbing your hair dry with a towel. Instead, let it air dry or else blow dry it to the point of dampness, and let it dry from there.

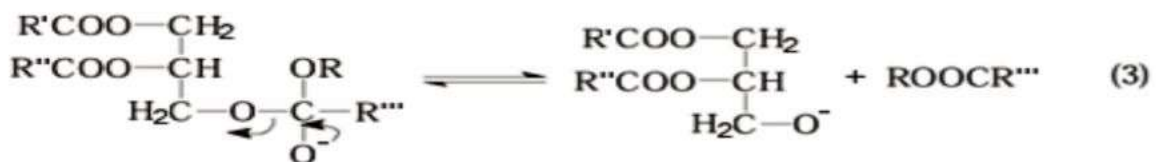
II.IDENTATIONS AND EQUATIONS.

Here alcohol is used instead of water. Transesterification or alcoholysis is the displacement of alcohol from an ester by another in a process similar to hydrolysis. This process has been widely used to reduce high viscosity of triglycerides. The transesterification reaction is represented by the general equation as:



Transesterification is one of the reversible reactions. However, the presence of a catalyst (a strong acid or base) accelerates the conversion.

The mechanism of alkali-catalysed transesterification is described below. The first step involves the attack of the alkoxide ion to the carbonyl carbon of the triglyceride molecule.



Mechanism of base catalysed Transesterification

This results in the formation of a tetrahedral intermediate. The reaction of this intermediate with an alcohol produces the alkoxide ion in the second step. In the last step the rearrangement of the tetrahedral intermediate gives rise to an ester and a diglyceride. The same mechanism is applicable to di-glyceride and monoglyceride.

III.FIGURES AND TABLES

4.1 Seed Characterisation:

Moisture content = 0%

Oil content =34.87%

4.2 Physico-chemical properties of oil:

The physicochemical properties of karanja oil are shown in the table-1 given below:

Table-1: Physico-chemical Properties of Karanja oi

Properties	Value
Water Content	0.05%
Specific Gravity	0.9366
Density	0.9358 gm/cc
Carbon Residue	0.80%
Ash Content	0.05%
Flash Point	212 ⁰ C
Fire Point	224 ⁰ C
Copper Strip Corrosion	No corrosion was observed
Acid Value	16.8
Iodine Value	86.5
Boiling Point	330 ⁰ C
Sediments (insoluble in hexane)	0.006%
Cloud Point	2 ⁰ C
Pour Point	-4 ⁰ C
Calorific Value(Kcal/kg)	8742
Cetane Number	38
Saponification Value	85.7
Unsaponifiable matter	0.90%

IV. CONCLUSIONS

Thus this study suggests that the Karanja Oil is highly recommended for inclusion in moisturizers and hair care products where emolliency is desired. There is a need to explore non-edible oils as alternative feed stock for the production of non-edible oil like karanja is easily available in many parts of the world including India and it is cheaper compared to edible oils. Neem oil is of immense importance and will gain paramount importance in future as well.

Neem oils both have been used widely in India for centuries to cure a variety of ailments. They are still used in Ayurvedic medicine, as well as by cosmetic companies and companies that manufacture pesticides. While there is a long tradition of medical use for

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