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Microbial Evaluation of Ginger oil Against Dandruff

Poonam Agrawal & Apurva Shah
Shri R.L.T. College of Science, Akola
poonamagrawal2575@rediffmail.com

Abstract:

Herbal formulation always has attracted considerable attention because of their good activity and comparatively lesser or nil side effects. The objective of present study involves preparation of herbal hair oil using Ginger and Neem and its evaluation for activity against Dandruff.

Introduction:

Dandruff is a common scalp condition that occurs when dead skin is shade producing irritating white flakesand possibly an itchy scalp. Although the dandruff is associated with scalp the flakes may also appear on the face, shoulder,nose,eyebrows etc. Although the market is providing wide range of chemical solution, herbal cosmetics and hair care products are now-a-days widely usc by the common people because of lesser side effects with better safety. The formulated hair oil was evaluated, and the various parameters were checked.

Material and Methods

Collection of plant part:

For the preparation of hair oil fresh Neem leaves and Ginger were collected which are easily available

Base ingredient:

The pure organic coconut oil was selected and used as a base ingredient.Formulation of hair oil.The two herbs used in the formulation were collected and accurately weigh. These two ingredients were added to the hot coconut oil separately in ratio 1: 2 as neem and ginger respectively. once the two solution get cooled, were mixed and further tests were done.

Evaluation of the product:

The prepared hair oil was subjected to physical and biological test as follows:

- **Sensitivity test:**
  The prepared hair oil was applied to 1 cm of skin of hand and exposed to sunlight for 4-5 min.
- **Color and odor:**
  The product appears pale yellow in color with a pleasant smell.
- **Test for pH value:**
  The pH value of the solution was measured by pH meter.

Saponification test:

Saponification value of oil is defined as the number of milligrams of KOH required to hydrolyse (saponify) 1gm of an oil or fat completely. It is an indication of the average molecular weight of the oil or fat and of the length of carbon chain of fatty acid when fat or oil is heated with excess of KOH (alkali) it gets hydrolyses to glycerol and potassium salt of fatty acid.

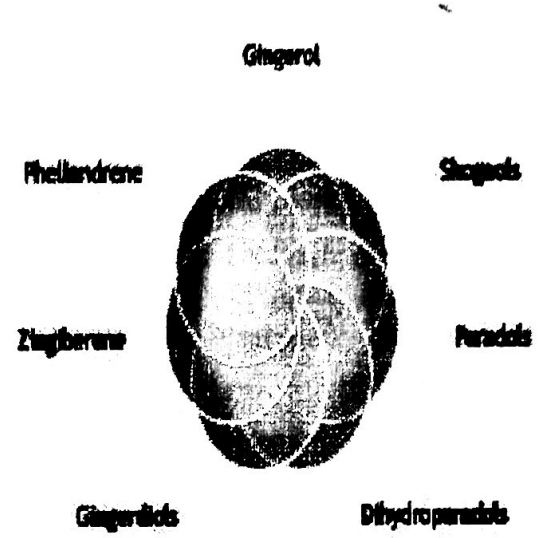
Procedure:

1. Prepare 0.5 N KOH solutions by dissolving the KOH pallets in 95% of ethanol in stoppered volumetric flask. Keep the solution overnight. Filter it and standardize against 0.1 N oxalic acid solution using phenolphthalein indicator.
2. Weight accurately 0.5 to 0.7 gm of oil in a 100 ml R.B. flask. Add 50 ml of std 0.5 N alcoholic KOH. Reflux the mixture on water bath till the solution becomes clear. (2-3 hrs.).

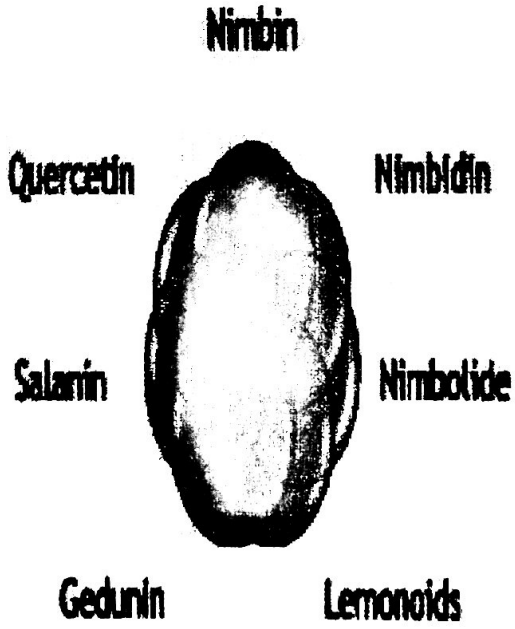
3. Cool the mixture and dilute to 250 ml in a volumetric flask using distilled water. Pippet out 25 ml of this diluted solution / mixture and titrate against 0.1 N oxalic acid solution using phenolphthalein indicator.

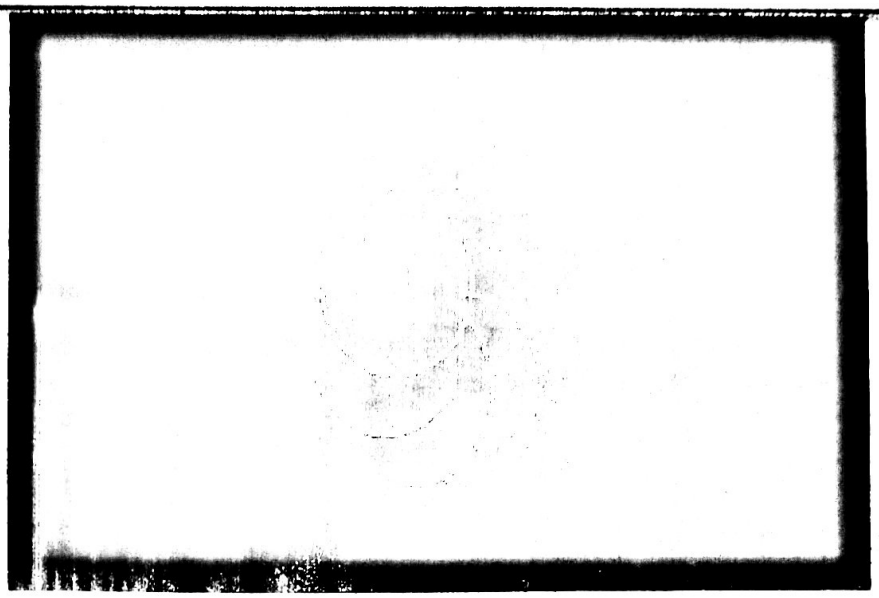
Role of the herbs used

Ginger: Ginger has been proved effective for treatment of many diseases including dandruff. It contains many phytochemicals having medicinal values some them are as follows –



Neem : Neem has been proved best treatment for the skin diseases. Antifungal, anti-inflammatory, antibacterial properties of neem have been proved.Phytochemicals present in neem is -





Results And Conclusion:

Results:

The prepared formulation is pale yellow in color with a pleasant smell of the ingredients. Biological testing of the oil did not show any erythema or edema, allergic reaction which conforms that the oil is nonirritant to human skin. Results of the further physical test are noted in the table below.

Sr.no	Parameters	Inference
1	Color	Pale yellow
2	Odor	pleasant
3	pH	7.65
4	Saponification test	256
5	Sensitivity test	No irritation
6	Irritation test	No irritation

Discussion:

The results obtained for the evaluation tests are under the specified limits. Results obtained for physical parameters like, pH, saponification value are according to standard values. In biological evaluation the test on human skin did not show any allergy.

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