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Formulation and Evaluation of Poly-Herbal Shower Gel

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Abstract

Herbal product has become very important item of global importance both medicinally and economically. Herbal products have generally gained in popularity; yet, their quality, safety, and efficacy are major concerns in both developed and developing countries. The present research has been under take with the aim to formulation and evaluation of poly-herbal shower. Poly-herbal shower gel was formulated by adding the extract of *Camellia sinensis*, oil of *Murraya koenigii*, *Rosa*, *Azadirachta indica*, *Solanum lycopersicum* in a base of Sodium luryl sulphate (SLS). The physicochemical parameters of formulation (Physical evaluation, pH, Foaming ability, Wash ability, Spread ability, Viscosity) were determined. The result showed that formulation having pH level is less than pH level of soap, foaming index is excellent.

Keywords: *Camellia sinensis*, *murraya koenigii*, *rosa*, *azadirachta indica*, *solanum lycopersicum*, poly-herbal shower gel

Introduction

Shower gel is a derivative invention of the liquid soap which first appeared in the 1800s in 1865 William Shepherd patented the formula behind the liquid soap [1-3]. Later, modern chemistry allows the manufacture of shower gel, which cleans the entire body while bathing and showering. [4-9-12-13]. Shower gel is a specialized liquid solution used for cleaning showers. It differs from liquid soap in that it does not contain saponified oil, which can cause skin dryness, and instead employs synthetic detergents derived from petroleum or plant sources. [14-16]. Because they are more emollient in action, both liquid washes and shower gels have a lower PH value than traditional soaps. Demonstrate the most thorough cleaning procedure possible. [10-11]

Shower gels are recognised to have the same fundamental chemicals as soap-water and SLS, but the key variation between the products is in the surfactants they include. [2-6]. A good shower gel remove dirt, pollution and dead skin cell from the skin shower gel during the shower a open the pores and allow moisture to absorb into the skin⁵. Herbal shower gel containing herbal drugs contain like extract of *Camellia sinensis*, *Murraya koenigii*, *Rosa*, *Azadirachta indica*, *Solanum lycopersicum* [7-8].

Synthetic shower gel that gel are made up by many chemical ingredients used for formulation of shower gel². It has a smooth feel to it, however on dry skin it might feel harsh and stiff. All shower gels include harmful substances that are carcinogenic and harmful to one's health. Synthetic shower gel harms the skin's top layer. Most people do not know or do not bother about the seven most harmful ingredients in shower gel [3]. If we are exposed to these components on a

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long-term basis, they harm our brain, disturb hormonal balance, and cause cancer [9-10].

Benefits might a liquid body wash have over a traditional soap herbal shower is totally formed by herbal extract of plants parts herbal ingredients are more benefited then synthetic chemical [9] Herbal drug not give side effects on skin poly herbal shower gel its more benefited because herbal drug its produce skin smooth easy to moisture absorb into the skin cell and rough skin become smooth and moisturized⁷.

Materials and Methods

Collection of Plant Material

Leaves & aerial part of plants and oil were purchased online. GSTIN No-06AXGPD5623NIZA,

Green Tea Extraction

Method of Extraction-Decoction.

Leaves part of plant were extracted by Decoction method. Take 15g green tea leaf powder was mixed with 100 ml distilled water in a stainless steel vessel. The mixture was kept for boiling until the water reduces to one quarter then cools the mixture. After cooing the mixture filtrates and collects green extract [7].

Methods

Simple Mixing Process

Preparation: Prepared extract and surfactant mixed in sufficient amount mixed it properly. Than add oil or other optional ingredient. Add preserve and mixed, after proper mixing adjust thickness and pH of the preparation. Perform some test that regarded. Label the product and pack it [17].

Evaluation of Poly-Herbal Shower Gel

Appearances

a) Color

Physical parameter such as color, odor, and appearance were checked the batch f1 shows dark pink, rose fragrance. F2 batch shows pink color, rose fragrance; batch f3 shows pink, rose fragrance [12].

b) Cleaning action

5 gm of the Some 1g of cotton ball was taken & placed in grease was then in each poly 200 ml of water contain herbal bath I shower gel formulation in flask & was shake for A 4 min the Solution was remove dried & weighted (f3) [12]

The amount of grease removed was calculated using the formula

$$DP=100(1-T)/C$$

Where,

DP = % of detergency.

C = Weight of grease in the control sample

T= Weight of grease in the test Sample

c) pH

pH determine by using ph meter take pH paper deep into the water take 1g gel dissolve in 10ml water this solution take into the beaker, pH paper deep into the beaker check pH paper color is compare with PH meter and determine pH color and pH of the gel [12].

d) Wash Ability

The shower gel was applied hand and was observed under running water [21].

e) Spread Ability Test

The Spread-ability of the gel checked by using glass slide 1g of sample Placed on slide and checked Spread-ability of gel [21].

f) Foaming Test

Take 1g of gel in a 50ml Shake it and transfer into measuring cylinder gel stable for 5min and check the foam retention [21].






g) Viscosity

Viscosity is determine by using Brookfield viscometer the gel sample placed in a Brookfield viscometer and determine the viscosity of sample [21].

Results and Discussion

The present study was done to prepare & evaluate Poly-herbal Shower gel and 3 batches F3 show better result than F1 and F2. F3 batch shown in fig no. 2 & 3 shows Pink color, Rose fragrance odor, it have 34.3% Cleaning action and appearance gel form it's easy to wash. The spread ability time is 96sec more than F2 and F3 batch. Foam retention and foam formation is 16ml and 22ml respectively. The viscosity of Shower gel is 39.02Ps.

Table 1: Herbal Ingredient.

S. No.	Ingredients	Plant Part	Properties	Image
1.	Green Tea Leaf	Leaves	Antiageing Fights cancer	
2.	Curry leaf	Leaves	Antibacterial Fights against cancer	
3.	Neem	Leaves	Antibacterial Moisturises skin	
4.	Tomato	Fruit	Antioxidant	
5.	Rose	Petals	Soothe skin, Aphrodisiac	




6.	Peppermint oil	Oil	antispasmodic, It improves circulation	
7.	Cinnamon oil	oil	high antioxidant content	
8.	Rose oil	oil	It fights inflammation It is an aphrodisiac It is an astringent, It stimulates circulation	

Table 2: Formulation table for Poly-herbal Shower Gel

S. No.	Ingredients	F1	F2	F3
1.	Curry leaf oil	5ml	5ml	5ml
2.	Green tea extract	12ml	12ml	12ml
3.	Neem oil	1ml	1ml	1ml
4.	Peppermint oil	1ml	1ml	1ml
5.	Cinnamon oil	2ml	2ml	2ml
6.	Sodium lauryl sulphate	6gm	8 gm	10 gm
7.	Rose powder	2 gm	2 gm	2gm
8.	Menthol	2ml	2ml	2ml
9.	Carbapol 940	4 gm	3gm	2 gm
10.	Methyl paraben	0.1gm	0.1 gm	0.1gm
11.	Propyl paraben	0.1gm	0.1gm	0.1gm
12.	Tomato juice	2ml	2ml	2ml
13.	Rose oil	Qs	Qs	Qs

Table 3: Physicochemical evaluation of poly-herbal shower gel

Test	F1	F2	F3
Color	Light pink	Dark pink	pink
Odor	Rose fragrance	Rose fragrance	Rose fragrance
Appearance	Liquid	Gel	Gel
Cleaning test	29.5%	31.20%	34.3%
PH	4.5	5.5	5.5
Wash ability	Easy to wash	Easy to wash	Easy to wash
Spread ability	69sec	94sec	96sec
Foam retention	10ml	12ml	16ml
Foam Formation	15ml	20ml	22ml
Viscosity	41.62 Ps	34.68Ps	39.02Ps



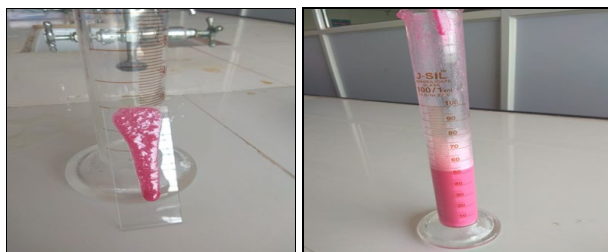
a. Appearances Test

b. pH Test

Fig 1(a&b): Appearances and pH test of poly-herbal shower gel

Conclusion

The plant *Murraya koenigii*, *Rosa*, *Azadirachta indica*, *Solanum lycopersicum* and extract of *camellia sinensis* and subjected to various evaluation test according to previous research the antimicrobial activity of Neem and the antibacterial activity of curry leaf was studied. The prepared formulation when tested for different test gave good result. The F3 shows excellent shower gel properties.



c. Spread ability Test

d. Foam Test

Fig 2(c&d): Spread ability Test and Foam test of poly-herbal shower gel



Fig 3: Green tea extraction

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