

Formulation of shower gel from Prepare betle leaf extract and turmeric

Dr.Sonal Solanki (Professor of pharmaceutics)

Gayatri Anil Pharate, Arpita Kiran Pathade (Final year students of B pharmacy)

College Name- HSBPVT GOI faculty of pharmacy Kashti, Ahmednagar

Address - Kashti ,District - Ahemdagar

ABSTRACT

Background: Human skin is the natural barrier of body, particularly for the appearance of body. In the normal physiological, the sebaceous glands secrete sebum attached to the skin surface, forming a thin layer to keep the skin soft and smooth. The usage of herbal products and the acceptance of a more natural lifestyle are becoming more popular these days across the entire world. For a healthy lifestyle, many prefer organic products, herbal remedies, and alternative treatments.

Purpose: This review highlights the method of preparation of shower gel. Shower gels are higher viscosity variants of foam baths, often containing higher levels of active materials. Shower a gel a much better alternative for cleaning purposes and also it has advantages like better cleansing and smoothing properties. Using a shower gel is better than using a single bar of soap by multiple users which can reduce the chances of germs spreading from one person to another.

Method:

1. Prepare betal leaf extract and turmeric rhizome extract separately using soxhlet apparatus
2. The second step preparation on gel using carbapol
3. Third step add extract into the gel
4. After preparation shower gel fill in well closed container

KEYWORDS

Shower gel ,Piper betle ,turmeric , almond oil ,carbapol , antifungal effect , antimicrobial effect

INTRODUCTION

Body wash, often referred to as shower gel too, plays a significant role in our daily hygiene routine, as it helps remove dirt, oils, and impurities from the skin while offering an enjoyable bathing experience. The science behind body wash formulation is essential for creating products that effectively cleanse, nourish, and protect the skin without causing irritation or dryness. In this comprehensive guide, we will explore the various ingredients, processes, and considerations involved in formulating body washes that cater to different skin types, preferences, and concerns.

Medicinal plants are of proven value as potential therapeutics with the increase of resistant pathogens to commonly used anti- biotics and the emergence of new infectious diseases.

Human dependence on plants as source of medicine dates back to prehistoric times. Even now, more than three-fourths of the world's population relies mainly on plants and plant extracts for healthcare. Piper betle 1. is one of the important plants in the Asiatic region which ranks second to coffee and tea in terms of daily consumption. Piper betle 1., is an evergreen perennial creeper belonging to family Piperaceae and is known to possess numerous medicinal properties

Advantages of shower gel

1. Good foaming properties (should quickly create high-volume, stable foam).
2. Good wettability of dirt and fat on the skin.
3. Not causing the skin dryness and be safe for the environment.
4. Ability to disperse emulsified dirt particles in the bath.
5. Good performance in the presence of hard water.
6. Improving skin condition after bathing.
7. not irritating effect to the eyes.

Rational of topic:

- 1.the goodness of natural ingredients, this foaming cleanser gently removes impurities and provides moisture to your skin from within.
- 2.Its anti-bacterial and anti-fungal powers, it gives your skin a relaxing and calming effect.
- 3.These natural ingredients provide gentle, non-drying cleansing that maintains the skin's natural oils and pH balance, unlike many commercial soaps that strip the skin of moisture.
- 4.Skin Nourishment and Healing
- 5.Many herbs contain vitamins, antioxidants, and essential fatty acids that nourish and repair skin.
- 6.Reduced Risk of Allergies and Irritations
- 7.Eco-Friendly and Sustainable

LITERATURE REVIEW

- 1.Sudipta Das^{1,2}, Pallab K. Haldar² (2011): Formulation and Evaluation of Herbal Gel Containing Clerodendron infortunatum Leaves Extract.
2. Gouri Dixit, Ganesh Misal (2021): Formulation And Evaluation Of Polyherbal Gel For Anti-Inflammatory Activity.
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5. Rodiah Rahmawaty Lubis, ¹, Marlisa, ¹, and Dian Dwi Wahyuni²: Antibacterial activity of betle leaf (Piper betle 1.) extract on inhibiting Staphylococcus aureus in conjunctivitis patient.

6.Saba Riaz, Adeel Ahmad and Shahida Hasnain: Antibacterial activity of soaps against daily encountered bacteria.

❖ **INTRODUCTION TO HERBAL DRUG PROFILE**

1. Betal leaf

- Scientific name Piper betle
- Botanical name betal leaf
- family Piperaceae



Fig . betal leaf

- Biological source - Piper betle Linn. (Piperaceae) is a perennial dioecious creeper The betel, Piper betle, is a species of flowering plant in the pepper family Piperaceae, native to Southeast Asia. It is an evergreen, dioecious[1] vine, with glossy heart-shaped leaves and white catkins. Betel plants are cultivated for their leaves which are most commonly used as flavoring in chewing areca nut (betel nut chewing).

❖ **Morphological features**

- A semi-woody branching vine with a sprawling or climbing growth habit
Presence of foreign organic matter, odour, size, color, and shape
- Chemical constituents-
terpinene, P-cymene, carvacrol, chavicol and its derivatives, allyl catechol, eugenol, estragole, oxalic acid, malic acid and amino acids. The leaf is carminative, aphrodisiac, tonic, laxative and improves appetite
- USES OF BETAL LEAF IN SHOWER GEL
This special shower gel is enriched with betel leaf extract to clean and refresh the body. Originating in south and south-east Asia the betel leaf plant is traditionally used in medicine Betel leaf extract contains high level of Vitamin C.

2. TURMERIC

- Synonyms. Saffron Indian; haldi (Hindi); Curcuma; Rhizoma cur-cumae.
- Botanical Name: Curcuma longa and Curcuma aromatica

- Family: Zingiberaceae
Turmeric Rhizome



fig . Turmeric

- Biological sources: Turmeric powder is derived from the root of the turmeric plant (*Curcuma longa*), which is a member of the ginger family. The turmeric plant is native to India and other Southeast Asian countries, and is now cultivated in many tropical regions around the world.
- Chemical Constituents

Turmeric contains yellow colouring matter called as curcuminoids (5%) and essential oil (6%). The chief constituent of the colouring matter is curcumin I (60%) in addition with small quantities of curcumin III, curcumin II and dihydrocurcumin. The volatile oil contains mono- and sesquiterpenes like zingiberene (25%), α -phellandrene, sabinene, turmerone, arturmerone, borneol, and cineole. Choleric action of the essential oil is attributed to β -tolylmethyl carbinol

- Uses of turmeric in shower gel

- * Anti-inflammatory and Antioxidant properties.
- * Helps with skin irritation and redness.
- * Deeply cleansing and hydrating.
- * Brightens complexion.
- * Balances and evens skin tone and texture

3. ALMOND OIL

- Synonyms: virgin Almond oil
- Botanical Name: *prunus Amygdalus Dulcis*
- Family: Rosaceae
- Scientific name -*prunus Amygdalus Dulcis*
- Biological Source

-Almond oil is a hard and fast oil received through seed of prunus Amygdalus belong to family Roseceae



fig .almond oil

- Chemical constituents –

Almond are rich in protein, fibre, vitamin E, iron, potassium, zinc, niacin, thiamine and folate. From the reviewed studies, it appears that almond oil contains a significant proportion of poly and monounsaturated fatty acids, with oleic acid as the main compound, and an important amount of tocopherol and phytosterol content.

- Use

Almond oil has been promoted for its ability to shield your skin from sun damage, strengthen the skin's protective barrier, and reduce the indications of ageing. It contains Omega 3 fatty acids, which can prevent you from the sun's damaging Ultraviolet radiation and prevent you from age spots.

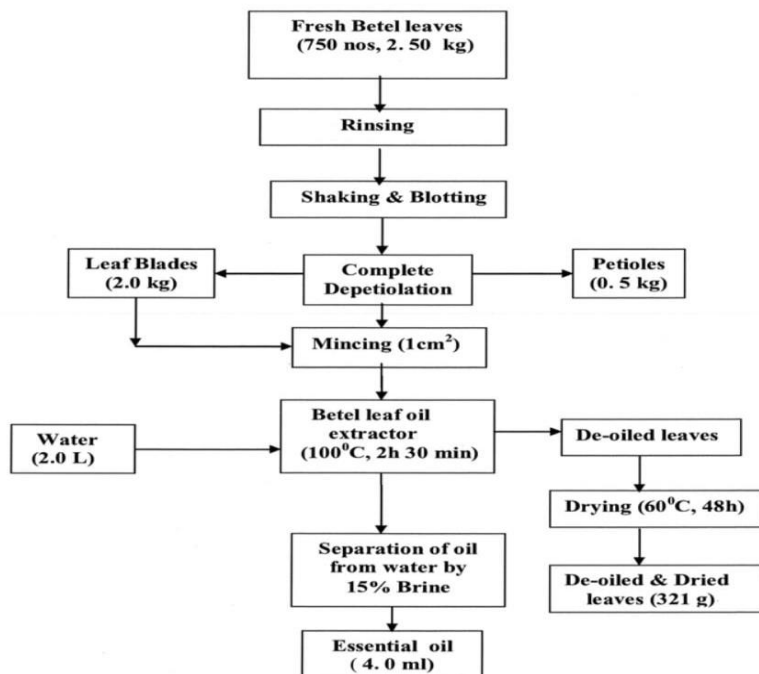
Formulation to prepare shower gel

SR . NO	NAME OF INGRIDENT	QUANTITY TAKEN	USES
1	Betal leaf extract	1.5ml	Antibacterial , effective in soonthing irritant or inflamed skin codition such as acne or redness
2	Turmeric extract	1ml	Antioxidant ,antiseptic , anti-inflamantory
3	Almond oil	0.5ml	protectant
4	Sodium sterated	0.23ml	surfactant
5	carbapol	1gm	Gelling agent
6	Methyl paraben	0.50gm	preservative
7	Triethaloamine	qs	neutrillier
8	water	qs	base
9	levender	qs	fragrance

Method Used:

➤ STEP 1

1. EXTRACTION OF BETAL LEAF



➤ STEP 2

EXTRACTION OF TURMERIC

- Take Rhizomes
- Ethanol used as solvent
- Soxhlet extraction method
- Separate extract

➤ STEP 3

PREPARATION OF GEL

➤ STEP 4

PREPARATION OF SHOWER GEL

➤ STEP 5

ASSESSMENT OF PHYSICOCHEMICAL PROPERTIES

EVALUATION PARAMETER

- 1 . Apperance – colour , clarity , texture , transparency , density
- 2 . Measurement of pH
- 3 . spreadability
- 4 . skin irritation test
- 5 . washability test

EQUIPMENT USED

1. Beaker
2. Measuring cylinder
3. Magnetic stirrer
4. Weighing balance
5. Heating meter
6. Burner
7. Funnel
8. Wire gauze
9. pH meter
10. Glass Slide

Discussion:

Test for alkaloid

- Mayer's test
- Wagner's test
- Hager's test
- Dragendroff's test

Test for phenolic compound and tannin

- Ferric chloride test
- Lead acetate test

Detection of Saponin

- Foam test

Test for phytosterol

- Salkowski test

Test for carbohydrates

- Molish test
- Barfoed's test
- Benedict test

Conclusion :

The formulation and evaluation of an herbal gel for the cleaning your body have demonstrated its potential as an effective and natural remedy. The development of the herbal gel involved selecting specific herbs known for their antibacterial, antioxidant activity.

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