

Formulation and Evaluation of Poly Herbal Body Scrub

Parmar Ajaysinh Mahendrasinh¹; Solanki Virenkumar Vasantbhai²; Deeksha Saini³

^{1,2}Student, ³Assistant Professor,

B. Pharmacy College Rampura, Kakanpur, Godhra, Gujrat

Abstract:- The research aimed to produce an Polyherbal body scrub. These days, the demand for skin care products and treatments has increased to a larger extend. Having a proper appearance and a beauty standard has gotten a lot of importance.

A typical skin care routine consists of a cleanser, a serum, a moisturizer and a sunscreen. Among these, it has been seen that the serums are the new go to when it comes to building an excellent skin routine. Serums come in various types of formulation be it for oily, dry or anything in between type of skin.

Facial wrinkles and skin aging are undesirable outcome of photo damage and ultraviolet (UV) rays. Currently no effective strategies are available to delay skin aging process. Aloe Vera, glycerin and honeybee venom face serum is a highly concentrated cosmetic product. When using aloe Vera we get not only a quick cosmetic effects but also psychological satisfactions, serum has a property of rapid absorption and ability to penetrate into deeper layer of the skin. In the present work we have formulated the poly herbal body scrub by using Orange peel powder, SCI powder, SLS powder, Honey, Glycerine, Bees wax, Aloe vera.

These formulations are safe to use for skin and found to be satisfied with all required characterizations. The scrub was evaluated by using the parameters like Appearance, Viscosity, pH, Spreadability, Washability, Grittiness, Foamability, Moisture content, Consistency and Irritation.

Keywords:- Orange Peel; Anti Inflammatory; Antioxidant; Acne; Exfoliant; Anti Septic.

I. INTRODUCTION

Study of human skin represents an important area of research and development in dermatology, toxicology, pharmacology, and cosmetology, in order to assess the effects of exogenous agents, their interaction, their absorption mechanism, and/or their toxicity towards the different cutaneous structures. The importance of beautification to the mankind has been known since the prehistoric time and the desire to look beautiful and healthy has been developing in the society. Cosmetic is a Greek word which means to adorn (addition of something decorative to a person or a thing). Cosmetology is the study and application of beauty treatment. It's an art or science of

beautifying and improving the skin, nails and hair and the study of cosmetics and their application. A skin care formulation must be able to deliver the powerful agent into the skin to fulfil the intended objective. Face serum is the answer to deliver the precious active ingredient into the skin thus eliminating the use of hazardous chemicals in giving instant Serum is a concentrated product which is widely used in Cosmetology. The name comes from itself in professional cosmetology. The cosmetic serum is as concentrated in water or oil as any other cream. Serums are defined as concentrated product that contains ten times more organic matter than cream.

II. HISTORY OF BODY SCRUB

While body scrubs seem like a relatively new and modern beauty practice, they have actually been around since the time of ancient civilizations. Their origins can be traced back to first being used among those in ancient Egypt, where members of the royal family, and eventually the public, took part in these benefits. They would use scrubs with perfumed oils to keep their skin supple and free of wrinkles from the dry desert heat. Other ancient cultures in Greece, Rome and India began to use these practices as well in order to best nourish the body, mind and soul. The process of putting on body scrubs became a whole routine, in which women would come together weekly to relax, bathe and gossip while they scrubbed their bodies with the exfoliator. Today, this weekly ritual continues in many countries around the world.

Body scrubs are widely used today and are practiced to achieve many beauty and health benefits. They are recognized for removing dead skin cells and dirt from the outermost layers of the skin, moisturizing and replacing natural oils, stimulating the body's natural healing mechanism, encouraging cell renewal and eliminating excess fluids and bloating while leaving your skin supple, healthy and glowing.

➤ *Ideal Qualities of Body Scrub:-*

- It should not irritate
- It should be non greasy and easily washable.
- It should have good cleansing and foaming properties.
- It must have properties like remove dead skin cell, hydrated the skin and make skin smooth and soft.
- It contains antioxidant qualities that encourage healthy-looking skin.

A. Method of Preparation:➤ **Water Phase :-**

- In a Beaker
- Glycerine was taken.
- SCI powder was heated on water bath and mixed gently.
- Aloe Vera gel was added.
- Then removing from water bath and SLS powder was added.

➤ **Oil Phase :-**

- In a Beaker
- Honey was taken.
- Then bees wax added.
- Then Aloe Vera oil added and heated.

➤ **Addition Oil Phase into Water Phase :-**

- Oil phase was added into water phase.
- Orange peel was mixed.
- Methyl paraben was added as preservative.

B. Ingredients Used:➤ **Aloe vera:**

Aloe vera, scientifically known as *Aloe barbadensis*, is a perennial succulent plant that belongs to the Liliaceae family. It is a popular plant with numerous medicinal and cosmetic uses and is cultivated in various regions around the world. For your thesis, let's explore the plant profile of Aloe vera, including its taxonomy, morphology, cultivation requirements, and medicinal properties.

• **Taxonomy:**

- ✓ Kingdom: Plantae
- ✓ Order: Asparagales
- ✓ Family: Liliaceae
- ✓ Genus: Aloe
- ✓ Species: *Aloe barbadensis*

• **Morphology:**

- ✓ Aloe vera is a stem less or short-stemmed succulent plant, typically reaching a height of about 60-100cm (24-39 inches).
- ✓ It features thick, fleshy and lance-shaped leaves that grow in a rosette pattern.
- ✓ The leaves are usually green, but they can vary in colored pending on environmental conditions.
- ✓ The leaf margins have small serrations or teeth.



Fig 1: Aloe vera

➤ **Rose Water:**

Rose water is a flavored water made by steeping rose petals in water. Additionally, it is the hydrosol portion of the distillate of rose petals, a byproduct of the production of rose oil for use in perfume. Rose water for skin and rose water for face are two of rose water's most well-known uses. Rose flowers are Anti-depressant, cleansing, anti-bacterial and antiseptic. They are used as toners in many pharmaceutical products.



Fig 2: Rose Water

➤ **Orange Peel:**• **Taxonomy:-**

- ✓ Binomial name :- *Citrus sinensis*
- ✓ Family :- Rutaceae
- ✓ P' action :- anti-acne, anti-microbial, natural exfoliant.

• **Morphology of Citrus Fruit:-**

Citrus fruit is a modified berry called hesperidium. Elongated or globose in shape, the fruit is 4-3cm long and 4-20 cm in diameter and weight around 50-150g. peel contain lignin and hemicellulose.

• **Orange Peel Extract :**

Orange peel powder is rich in vitamin C and anti-oxidants, which can help brighten the skin, fade dark spots, and promote a more even skin tone. It also contains natural oils that provide hydration and nourishment to the skin. Orange peel powder also helps exfoliate dead skin cell, make skin smoother and more radiant.



Fig 3: Orange Peel

➤ *SCI Powder:*

• *SCI Powder (Sodium Cocoyl Isethionate):*

SCI is a mild surfactant derived from coconut oil. It also known for its gentle cleansing properties, making it suitable for sensitive skin. SCI powder helps to remove dirt, oil and impurities from the skin. It also contributes to creamy texture of the scrub.

➤ *Bees Wax:*

Form a protective barrier on the skin surface, protective your skin from environmental irritants and harsh weather. It also beneficial for acne-prone and sensitive skin.



Fig 4: Bees Wax

➤ *Vegetable Glycerin:-*

In this formulation glycerine used as humectants.



Fig 5: Vegetable Glycerin

➤ *SLS Powder:-*

In this formulation SLS used as surfactant.

➤ *Honey:*

In this formulation honey used as anti septic and effective pore cleanser (Gentle Exfoliant).



Fig 6: Honey

Table 1: Material and Collection

Sr.no.	Ingredients	Place
1	Aloevera Gel	Was collected from B. Pharmacy college Rampura, Kakanpur
2	Bees Wax	Was collected from B. Pharmacy college Rampura, Kakanpur
3	SLS Powder	Was collected from B. Pharmacy college Rampura, Kakanpur
4	SCI Powder	Was collected from online shopping site
5	Glycerine	Was collected from online shopping site
6	Honey	Was collected from medical store of Tharmal
7	Orange peel	Was collected from B. Pharmacy college Rampura, Kakanpur

Table 2: Composition and Role of 25gm of Body Scrub

Sr. no.	Ingredient	Quantity	Role
1	Aloevera Gel	5gm	Reduce rashes and irritations
2	Bees Wax	2gm	Make skin hydrate and moisturize skin and Forms a protective barrier on the skin's surface, protecting your skin from environmental irritants and harsh weather
3	SLS Powder	3gm	Surfactant :- Emulsifying and cleansing agent
4	SCI Powder	2gm	remove dirt, oil and impurities from the skin Produce foam
5	Glycerine	2ml	Humectant
6	Honey	3ml	Anti septic
7	Orange peel	8gm	Exfoliant ,Prevent acne and wrinkles, use as body scrub in daily

III. EVALUATION OF BODY SCRUB

A. Physical Evaluation:

The Sample has been organize and their bodily look became evaluated :-

- Colour : Yellow
- Form : Scrub/paste
- Odour: Citrusy



Fig 7: Body Scrub

B. Cyclical Temperature:

This test is not carried out at any fixed temperature and humidity. In this test, temperature was changed cyclically every day. At room temperature and frizzling temperature to stimulates the changes in temperature.

C. Determination of Viscosity:

Viscosity of body scrub measure using Brookfield viscometer.



Fig 8: Brookfiels Viscometer

➤ Irritability Test:-

Small amount of gel applied on skin and kept for few minutes and found no irritataion on skin.



Fig 9: Irritability Test

➤ Washability Test:

Small quantity of gel applied on the skin and wash with water after few minutes found to be washable with water.



Fig 10: Washability Test

➤ Grittiness Test

The formulation was checked for the presence of any gritty paricles by applying it on the skin.



Fig 11: Grittiness Test

➤ *Foamability Test*

Add 2gm of formulation in 5ml water in measuring cylinder. Shake it for 10 times. Allow it to stand for 1-2min. Observe the foam.

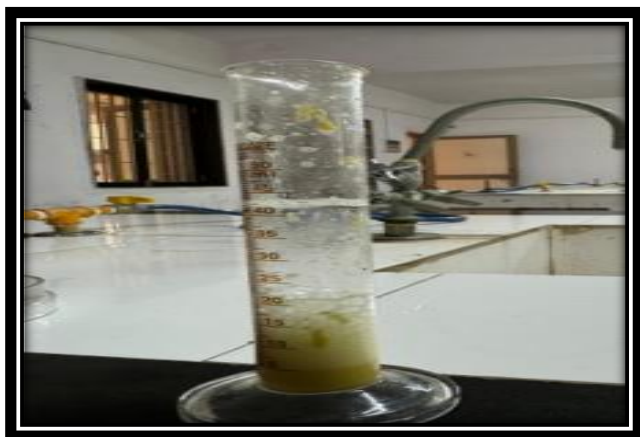


Fig 12: Foamability Test

• *Consistency Test:*

It was found to be semi solid with visual observation.(manually).



Fig 13: Body Scrub

➤ *Ph Test:-*

PH of formulation measure using PH meter.



Fig 14: PH Meter

➤ *Spread Ability Test:-*

Two slides are taken and small amount of the gel was placed on the glass slide. Weight was placed on it. The time required for the gel to spread and the area was measured.



Fig 15: Spread Ability Test

➤ *Moisture Content:*

Initial weight of empty container note down. 20gm of sample place on container and note down the weigh and than that container place in oven at 100C to 105C for 5min. dry weight of sample and container weight are note down. Than calculate the moisture content using Moisture content(%).

IV. RESULT

Table 3: Result

Sr. no.	Parameters	Result
1	Colour/Odour Test	Yellow/Citrusy
2	PH Test	5.57
3	Spreadability Test	Good Spreadability
4	Viscosity Test	1572 mpas
5	Skin Irritation Test	No irritation
6	Foamability Test	Good foaming
7	Washability Test	Easily washable
8	Grittiness Test	Gritty particle present
9	Consistency	Semi solid
10	Moisture content	28%

Table 4: Cyclical Temperature

Sr No	Parameter	Stability
1	Freezer temperature	More Stable
2	Room Temperature	Stable

The formulation was undertaken stability studies for physical and chemical changes. No considerable variations in properties of the formulation were observed.

Table 5: Stability Studies

Visual Appearance	No Change
Phase separation	NO
Homogeneity	Good

V. CONCLUSION

The aim of this report was to study about what exactly are facial serums and their history along with their overall importance. The study includes its proper selection and correct sequence of application. With tremendous amount of serums available in the market for each and every skin type and skin problem these days, it's essential for one to know what they are looking for in a serum precisely

REFERENCES

- [1]. Ms.TalpekarPranjali, Ms.Borikar Monica, "formulation development and comparative study of facial scrub using synthetic and natural exfoliant" ; Research journal of topical and cosmetic science, Vol. 62016,page.PP 46-50.
- [2]. Kambleanujakalyan, dr. hinganeL.D. , miss. kadeP.B. , miss korade A., prof. Bagwan L.R. , "Formulation and evaluation of aloe vera gel" International journal of pharmaceutical research and application,Vol. 8, 2023,PP 1918-1925.
- [3]. Oluwato yin-A-odeku "Formulation and in-vivo anti-inflammatory property of diclofenac multiple prepared using vitellariaparadoxa fat" Aficanjournal of medicine and medical science, Vol. 3 2019, PP 307-317.
- [4]. Stefan bogdanoll "Beeswax production, properties, composition" , control Researcgate publication, Vol. 5, 2016, PP 1-8.
- [5]. Nangarerutujaprashant, thangetruptiashok, "Formulation and evaluation of polyherbal facial scrub" International journal of research publication and review, Vol. 3, 2022, PP 3439-3448.
- [6]. Miss kachare D.S. "Formulation and evaluation of herbal scrub using tamarind peel" International journal of research, Vol.10, 2020, PP 1-6.
- [7]. Juliantoni, y., Hajrin, W., Subaidah, W. A, Wirasya D. G. , "Formulation of Ashitaba (Angelica keiskei) Herb Ethanolic Extract Toothpaste" Mataram. J Pharma Sci& Practice, Vol. 8, 202, PP 70-73.
- [8]. Octavianti, "P. Study of Mango Fruit Flour Production Process (Mangiveraindica L) Arumanis Varieties 5.
- [9]. Saini deeksha, sonartiyasunita, P.kdubey, "Formulation and evaluation of amoxicillin containing cream to treat bacterial infection (gonorrhoea) "Vol. 24 202, issue 3 , june 2020 in international journal of pharmacy and research science.