

Formulation and Evaluation of Anti -Oxidant Herbal Face and Body Scrub

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ABSTRACT

The main objective of present study was to formulate Anti -Oxidant herbal face and body scrub with the incorporation of Plantain Banana Peel. The banana peel is rich in polyphenols and carotenoids and it promote anti-oxidant property. The Anti-oxidant property in banana peel protect cells from free radicals. The Herbal products consist of natural constituents which possess anti-oxidant and anti-aging properties. Herbal products are safer and considered as the best products nowadays as they have lesser adverse effects when compared to synthetic cosmetics. In this formulation of face and body scrub Banana peel, orange peel, guava seeds incorporated into the gel which is prepared with Carbopol of 940 grade. Other ingredients such as citric acid, triethanolamine, propylene glycol, sodium lauryl sulphate. The prepared face and body scrub was evaluated for various parameters like pH, viscosity, spreadability, washability, grittiness, stability studies, foamability, irritability and contained all the required characterizations. Thus, this formulation can be used as a efficient face and body scrub for maintaining glowing skin.^[1]

KEYWORDS: Anti-oxidant property, Banana peel, Polyphenols.

I. INTRODUCTION

Herbal cosmetics make it possible for anyone to feel beautiful and healthy about themselves. Every person desire to be beautiful in order to give them confidence. Natural beauty is a blessing and cosmetics aid in displaying and enhancing human attractiveness and individuality. Beauty is not only associated with women's but guys are also concerned with their appearance. The concept of beauty and cosmetics dates back to the dawn of humanity and civilisation. Herbal cosmetics are beauty products that are made with various herbal elements to provide certain aesthetic benefits. The herbal cosmetics is gaining popularity because most of the people prefer natural goods

over chemical as they provide nutrients to the body and improve health.^[2]

Exfoliators give skin a flawless shine. They remove dirt and dead skin cells from the epidermis surface. The dullness in the skin get better by using scrubs. Additionally, it has silky, smooth texture and is well prepared to absorb moisturising creams and lotions. Using the exfoliating scrub few minutes each week give beneficial results. These treatment aims to cleanse and invigorate skin when they are gently massaged into dry or damp skin. Rinsing with water gives a refreshing feel.^[3]

II. MATERIALS AND METHODS

All the ingredients were obtained in the crude form from local distributor. All the ingredients were powdered and sieved through sieve no.60. The banana peel was dried and powdered by grinding method. All the powdered ingredients were stored in well closed, moisture resistant container. The ingredients and their uses are mentioned in Table No. 1.^[4]

2.1 Formulation of scrub

Table 1: Formulation of herbal scrub.

Sr. No.	Ingredients	Quantity
1.	Banana Peel	2g
2.	Orange Peel	1g
3.	Guava seeds	5g
4.	Carbopol 940	1g
5.	Citric acid	0.25g
6.	Triethanolamine	2ml
7.	Propylene glycol	3 ml
8.	Sodium lauryl sulphate	1g
9.	Rose water	q.s

2.2 Benefits of ingredients

2.2.1 Banana Peel



Fig.1: Banana peel.

Banana peel contains polyphenols, carotenoids and other anti-oxidants that fight cancer causing free radical in your body. They are rich in Potassium, Vitamin C, A, Calcium, Iron.^[5]

2.2.2 Orange Peel



Fig.2: Orange peels.

Orange is a citrus fruit which contains nutritional source such as Vitamin C. Orange peel reduce inflammations and also prevent wrinkles.^[6]

2.2.3 Guava Seeds



Fig.3: Guava

Guava are high in Vitamin C and contain more than any other citrus fruits. Vitamin C improves immunity and protect from infections. Guava include vitamin A and C as well as carotenes and lycopene, which help to prevent wrinkles.^[7]

2.3 Preparation of Scrub

Soak Carbopol (940) in 3/4th quantity of water, overnight until the Carbopol swells. Citric acid was weighed and dissolved in a beaker containing water and added to the Carbopol (940) and stirred constantly for few minutes and it forms a gel. Sodium lauryl sulphate was weighed, dissolved separately with water and was added in the above gel. Then, the propylene glycol was added. Banana peel powder, guava seed and orange peel powder was dried and powdered. The above ingredients were added into the prepared gel and stirred. At the end triethanolamine was added and record the pH.

2.4 Ideal Properties of Scrub

- It should be non-irritant.
- Non-toxic
- Mild Abrasive
- Non sticky able to remove dead skin cells.
- Must possess small gritty particles
- Make skin smoother.^[8]

III. ADVANTAGES OF SCRUBBING ON SKIN

- Give glow and smoothness: Remove dead skin cells making the skin smoother and softener.
- Clear blemishes: Accumulation of dead skin cells, block the pores and reduces blemishes. Scrubbing frequently can remove dead skin cells and clears blemishes.

- Reduce stress: Exfoliation of skin good massage and gives relaxing feeling and reduce stress.
- Remove acne scars: When removing dead skin cells, it helps to remove acne scars from skin.^[9]

IV. DISADVANTAGES OF SCRUBBING SKIN

- Hard scrubbing leads to skin irritation which includes redness, inflammation. Sensitive skin can have allergic reactions while using synthetic scrubs.
- Over scrubbing result in open of pores which is exposed to pollution and UV rays, which makes the skin prone to infections and tanning.
- Proper post scrubbing moisturising keeps the pores open, allowing debris to readily accumulate on them. Because of bacterial development which makes the skin more prone to acne. It also dries out the skin.^[10]

V. EVALUATION

The prepared anti-oxidant face and body scrub was evaluated for various parameters as follow:

5.1 Colour

The formulation of the anti-oxidant herbal face and body scrub was checked visually. The colour of the scrub was observed to be Brownish black.

5.2 Odour

The odour of the scrub was found to be aromatic.

5.3 pH

pH of the scrub was evaluated by using pHmeter.

5.4 Consistency

Consistency was found to be semisolid.

5.5 Feel on Application

On applying scrub, a greasy feel was observed.

5.6 Spreadability

It is used to identify spreadability of the scrub on the skin. 1gm of the sample is placed on a glass slide then another slide placed above them. The standard weight 20 g applied on the upper glass plate. The time taken by the scrub to spread was checked by visual inspection.^[11]

$$S = M \times L / t$$

S = Spreadability

M = weight placed on slide

L = Length of glass slide

t = time taken in seconds

5.7 Irritability

Small amount of scrub was applied on the skin and kept for few minutes and found to be non –irritant.

5.8 Washability

Small amount of scrub was applied over the skin and washed with water.

5.9 Homogeneity

- **By visual** -Scrub when visually inspected was found to be smooth.
- **By touch**-The scrub on touch was consistent.

VI. REMOVAL

The scrub was easily removable with water.

6.1 Stability

The stability study was performed for 3 months.^[12]

VII. RESULT AND DISCUSSION

Table 2: Result of evaluation test of herbal scrub

Sr.No.	Parameters	Results
1.	Colour	Brownish black
2.	Odour	Aromatic
3.	pH	5-6
4.	Irritability	Non -irritant
5.	Feel on Application	Greasy
6.	Stability	Stable
7.	Consistency	Semisolid
8.	Spreadability	Uniform
9.	Washability	Easily washable
10.	Homogeneity By visual By touch	Smooth Consistent
11.	Removal	Easily removable

VIII. CONCLUSIONS

From the studies, research and discussions we can reach to the conclusion that natural herbal cosmetics are safer, cheaper, easy to prepare, commonly available and effective. The major quality of natural products is satisfied, used for all types of skin without side effects. In present world, the people need to cure various skin problems without side effects. It is very good attempt that to formulate face and body scrub containing commonly available natural ingredients like Banana peel, orangepeel and Guava seeds. From this study it was concluded that on addition of

orange peel anti-oxidant activity was increased. Orange peel was found to have beneficial effect in the formulation. Therefore, this formulation can be used as an effective face and body scrub.

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