

FORMULATION AND EVALUATION OF ONION SCRUB

Sejal Khodke*, Mayur S. Gangurde, Payal Khairmode, Vijaya Kapadi and Akshay Harpade

Jagdamba Education Society S.N.D. College of Pharmacy, Babhulgaon, Tal-Yeola, Dist. Nashik, Maharashtra, 423401, India.

Article Received on
26 Feb. 2023,

Revised on 18 March 2023,
Accepted on 08 April 2023

DOI: 10.20959/wjpr20236-27844

***Corresponding Author**

Sejal Khodke

Jagdamba Education Society
S.N.D. College of
Pharmacy, Babhulgaon, Tal-
Yeola, Dist. Nashik,
Maharashtra, 423401, India.

ABSTRACT

Nowadays cosmetic have become an important part in the day to day life for both men & women to lead a happy & confident life. To remain healthy and of good appearance, the skin surface requires frequent cleansing to remove grin, sebus and other secretions, dead cells, crusts and applied make-ups. Keeping in the mind that the cosmetic should be free from synthetic chemicals, so we came on conclusion to prepare & evaluate a herbal scrub to prevent Acne, Tanning, Wrinkles. This facial scrub content herb which shows Antioxidants, Antiseptic, Skin brightener & Reducing inflammation properties. In the present work we have formulated the herbal scrub by using a different herbal powders such as turmeric, orange peels, aloe vera, gram flour etc. &

Onion juice. The scrub was evaluated by using the parameters like Appearance, Smoothness and effect on acne, Effect on white and black heads, Spreadibility, Irritation. The scrub shows excellent effects on oily skin, and satisfactory effects of normal and dry skin. All the ingredients use in this herbal scrub is of our food ingredient. So, the chances for its side effects are less.

KEYWORDS: Onion Juice, Turmeric, Anti-inflammatory action, Antioxidant, Acne, Exfoliant.

1. INTRODUCTION

The demand for herbal cosmetics is high nowadays due to its ability to act as cosmetics and drugs. Skin care products are important factor to improve the confidence in individuals. Women are the larger consumer of skin care products but in the present scenario men are equally concern about their look. This concept about the beauty, look and attractiveness leads

to the boom in this field.^[2,4] The cosmeceutical companies produce their product based on the skin texture like men require special type of products due to the roughness of their skin than women. Cosmetics are used universally to enhance beauty and are available in different forms. Various types of skin products are formulated like skin protective, sunscreen, anti-acne, anti-wrinkle for beautifying skin. From ancient era people use herbs for cleansing, beautifying, acne, blackheads, pimples, and dark circles. According to Ayurveda, impurities present in blood are major cause of skin problems.^[6]

Skin becomes dull, non glowing due to various causes and these can effectively be overcome with the application of scrubs.^[8] There are two types of scrub being used on the skin such as facial scrub and body scrub. These two differ only with the ratios of oil and sugar added in each. Use of oil is high in facial scrub due to which it is less abrasive.^[1,3] It removes the dead skin cell and exfoliates the skin. Face scrubs exfoliate and stimulate blood circulation and promote skin glow by removing dead skin cells and adherent cells in the stratum corneum. Scrub cleanses the skin, removes dirt, removes oil from pores, maintains the elasticity and accelerates the renewal of skin cells.^[7]

2. MATERIALS AND METHODS

All ingredients were obtained in their crude form from a local distributor (Dronagiri, Lasalgaon, Nashik.) All the ingredients were powdered and sieved through sieve no.24. The Onion juice is obtained by grinding method. Cut the onion in small slice & grind them in mixer until the juice is formed. All powdered ingredients were packed in moisture resistant, well closed containers. The different ingredients and their key uses are enlisted in table no.1.

2.1 Formulation of scrub

Table 1: Formulation of herbal scrub.

Sr. No.	Ingredients	Quantity
1.	Onion Juice	5 ml
2.	Turmeric	2 gm
3.	Aloe Vera	2 gm
4.	Orange Peels	2 gm
5.	Gram Flour	2 gm
6.	Multani Mitti	q.s.
7.	Khus-Khus	2 gm
8.	Methyl Paraben	2 ml
9.	Guar Gum	2 gm
10.	Rose Oil	4-5 Drops

2.2 Benefits of ingredients

2.2.1 Onion



Fig. 1: Onion.

It protects from sun. Onion is a great source of flavonoids as well as an antioxidant vitamin such as Vit A, C and E. Nourishes the skin. Prevents skin infection.^[12]

2.2.2 Aloe vera



Fig. 2: Aloe vera.

The word aloe Vera means "aloe meaning shining bitter substance while "vera" means true. Aloe Vera contains vitamin A and C and it is also shows anti-inflammatory properties.^[11] Aloe Vera belongs to family "Liliaceae and commonly known as Ghritkumari. Aloe Vera used as moisturizing and softening agent on skin. The aloe gel gives cooling effect on skin It has role in rejuvenation of aging skin, Aloe Vera has been used for variety of medicinal purpose. Aloe Vera also be used as a moisturizer.^[8]

2.2.3 Turmeric



Fig. 3: Turmeric.

Turmeric is mainly used to rejuvenate the skin. It delays the signs of aging like wrinkles and also possesses other properties like antibacterial, antiseptic and anti-inflammatory. It is effective in treatment of acne due to its antiseptic and antibacterial properties that fight pimples and provide a glow to your skin.^[18] It also reduces the oil secretion by the sebaceous glands. Turmeric widely used condiment and colouring agent. The yellow root Turmeric shows anti-inflammatory property.^[15]

2.2.4 Orange peels



Fig. 4: Orange peels.

Orange is a citrus fruit which contains different nutritional source like vitamin C. It also contain calcium, potassium and magnesium.^[19] It prevents the skin from free radical damage, skin hydration and oxidative stress. Also it has instant glow property, prevent acne, wrinkles and aging.^[13]

2.2.5 Gram flour



Fig. 5: Gram flour.

Gram flour is good for acne-prone skin and can help to lighten any acne scars. It can also be applied all over the body to remove dark spots. It has been used as a base in preparation of herbal scrub.^[14]

2.2.6 Multani mitti



Fig. 6: Multani mitti.

Multani mitti helps skin in different ways like minimise pore sizes, removing blackheads and whiteheads, cleansing skin, improving blood circulation, reducing acne and gives a glowing effect to a skin as they contain healthy nutrients. Multani mitti is rich magnesium chloride.^[16]

2.2.7 Methyl paraben

Methyl Paraben is antibacterial since it's a preservative. It is effective at preventing microbial growth and germs such as bacteria and mold in skincare and cosmetic formulations.^[14]

2.2.8 Guar gum

With its usage it makes your skin smoother Adding guar gum as an ingredient increases the life of products. It brings natural moisture to the skin. By the usage of guar gum products your scalp and hair is protected by dryness.^[14]

2.3 Preparation of scrub

- A) Weigh accurately all the herbal ingredients & seive through seive no.24 & mix them together to form a uniform mixture in mortar & pestel.
- B) Measure accurately Onion juice in another mortar. Weigh Aloe vera then add to mortar. Add methyl paraben & guar gum.
- C) Mix all herbal powders & triturate them until the proper consistency occurred.
- D) Add Rose oil for fragrance.

2.4 Ideal properties of scrub

- Non toxic
- Possess small gritty particles
- Mild abrasive
- Non irritating
- Non sticky
- Able to remove dead skin cells.^[17]

3. Advantages of scrubbing on skin

- 1) Rejuvenation of the skin- Regular scrubbing causes the elimination of dead skin cells, dirt and impurities from your skin.
- 2) Removes dead skin- Since scrubbing is an exfoliation process, the beads or the granules of the scrub upon cleansing and massaging removes the dead cells of the skin.
- 3) Removes scar- Every ingredient in your scrub formulation has their own property. Therefore, applying scrub rich in vitamin E & C helps in lightening of the scars and dark patches over time.
- 4) Imparts glow to the skin - Dead skin cells impart dullness to your skin. So, scrubbing your face and body regularly gives it a nice glow and adds brightness to it as well.

4. Disadvantages of scrubbing on skin

- 1) Hard scrubbing motions and hard scrubbing chemicals may cause skin irritation including redness, inflammation.

- 2) Over scrubbing can result in open pores which are exposed to pollution and UV rays at the same time.

5. Evaluation parameter for scrub

5.1 Colour: Yellowish orange colour of scrub was observed by visual examination

5.2 Odour: Odour found to be aromatic.

5.3 State: Solid state of scrub observed by visually.

5.4 pH: pH of the prepared scrub evaluated by using pH paper . Small amount of scrub applied on pH paper. pH was found in the range of 5.5-6.

5.5 Washability: Small quantity of scrub applied on the skin and wash with water. It is easily washable.

5.6 Irritability: Small amount of scrub applied on skin and kept for few minutes and found to be non- irritable.

6. RESULTS AND DISCUSSION

Table 2: Result of evaluation test of herbal scrub.

Sr. No.	Parameters	Result
1.	Colour	Yellowish Orange
2.	Odour	Aromatic
3.	pH	5.5-6
4.	Washability	Easily washable
5.	Stability	Stable
6.	Grittiness	Small grittey
7.	Irritability	No irritation
8.	Feel on application	Greasy
9.	Removal	Easily removal

7. CONCLUSIONS

All the ingredients use in this herbal scrub is our food ingredient. So, the chances for its Side effects are less. We can use this herbal scrub for its best result for oily skin. It can Also be used dry and normal skin. The efforts are on to reformulate the scrub in a powder base. In order to achieve better stability & spreadability along imparting emollient and smoothing action of the scrub. The prepared scrub was evaluated using various parameters and was found to be satisfied for the application On the skin to make it healthy and glowing without any side effects.

REFERENCES

1. Chanchaal, D, S.Swarnlata, Novel approaches in herbal cosmetics. *J. Cosmet. Dermatol*, 2008; 7: 89-95.
2. Kumar L and Verma R, In-vitro evaluation of topical gel prepared using natural polymer. *Int J Drug delivery*, 2010; 2: 58-63.
3. Garg, A., Agarwal, D. and Garg, S. Spreading of semisolid formulation. *Pharm Tech*, 2002; 9: 89-105.
4. Harish N. M., Prabhakara Prabhu, and Subrahmanyam E. V. S. Formulation and evaluation of in situ gels containing clotrimazole for oral candidiasis. *Indian J Pharm Sci*, 2009; 71(4): 421-427.
5. Rieger M M. Harry's Cosmeticology. In: Chapter, Face, Body & Hair Masks & Scrubs. 8th ed. vol I. New York: Chemical Publishing Co., Inc, 2009; 23: 471-483.
6. Okereke JN, Udebuani AC, Ezeji EU, Obasi KO, Nnoli MC. Possible Health Implications Associated with Cosmetics: A Review, *Sci J Public Health*, 2015; 3(5-1): 58-63.
7. Himaja N, Ashok kumar A, Bhart kumar B. Preparation and Evaluation of Poly Herbal Fruit Face Mask. *J Res Pharm Sci*, 2015; 2(11): 07-13.
8. Hwang JK, Shim JS, Gwon SH, Kwon YY, Oh HI et al. Novel use of Panduratin derivatives or extract of *Kaempferia pandurata* comprising the same. U.S. Patent 0065272A1, 2012. [cited 2016 Aug 05].
9. Ashawat, M. S., Banchhor, M., Saraf S. and Saraf, S. Herbal Cosmetics: Trends in Skin Care Formulation. *Pharmacognosy Review*, 2009; 3(5): 82-89.
10. Pal, R. S., Pal, Y. and Wal, P. In-Houe Preparation and Standarisation of Herbal Face Pack. *The Open Dermatology Journal*, 2017; 11: 72-80.
11. Nguyen, T. Dermatology Procedures: Microdermabrasion and chemical peels. *FP Essentials*, 2014; 426: 16-23.
12. Mendhekar, S. Y., Sonawane, P. S., Kale, R. B., Jadhav, S. L. and Gaikwad D. D. Formulation and Evaluation of Polyherbal Facepack. *World Journal of Pharmacy and Pharmaceutical Science*, 2017; 6(12): 1378-1387.
13. Ghode, S. P., Chatur, V. M., Ghode, P. D., Shaha, N., Prajapati, S. and Thorave, A. Formulation and Evaluation of Facial Scrub Containing Sunflower Seeds and Other Natural Ingredients. *World Journal of Pharmaceutical Research*, 2019; 8(9): 1772-1781.
14. Fatima, Grace X., Anbarasan B., Kanimozhi T. and Shanmuganathan S., 2018 Preparation And Evaluation of Deep Cleansing Exfoliator, *Asian Journal of Pharmaceutical And Clinical Research*, 2018; 11(7): 356-359.

15. Dureja, H., Kaushik, D., Gupta, M., Kumar, V. and Lather, V. Cosmeceuticals: An Emerging Concept. *Indian Journal Pharmacology*, 2005; 37: 155-159.
16. Daud, F. S., Pande, G., Joshi, M., Pathak, R. and Wankhede, S. A Study of Antibacterial Effect of Some Selected Essential Oils and Medicinal Herbs against Acne Causing Bacteria. *International Journal of Pharma*, 2013.
17. Jens J. Thiele et al., Vitamin E in human skin: Organ- specific physiology and considerations for its use in dermatology, *Molecular Aspects of Medicine*, 2007; 28: 646-667.
18. K. Suganya et al., Preparation and Evaluation of Polyherbal Facial Scrub, *Indi American Journal of Pharmaceutical Research*, 2016; 06(11): 6974-78.
19. Sindhu, R. K. and Arora, S. Sandalwood Oil: Phytochemical and Pharmacological Updates. *Recent Progress in Medical Plants*, 2013; 1: 181-191.