

## Formulation and Evaluation of Topical Ayurvedic Face Cream

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Submitted: 15-05-2023

Accepted: 30-05-2023

### ABSTRACT:

Alovera, Turmeric, Neem, Papaya, and Carrot are medicinal plants that are used traditionally for many years in various herbal medicines such as Ayurveda, Siddha, and Homeopathic. Cosmetics as well as medicinal products are made up of the mucilaginous tissue in the center of aloe vera leaf and called Aloe vera gel. Aloe vera gel contains no Anthraquinone. Which are Responsible for the strong laxative effects of aloes. Aloe vera has been traditionally used to treat skin injuries (burns, cuts, insect bites, and eczemas) and digestive problems because of its anti-inflammatory, antimicrobial, and wound-healing properties. Protein, Minerals. Papaya fruit can be used for healthy skin against blemishes, pimples, acne, and blackheads. Thanks to papain and chymopapain enzymes, skin products with papaya reduce inflammations, gently exfoliate the skin, and unclog pores.

**Keywords:** Aloe vera, Turmeric, Neem, Papaya, Carrot extract, face cream, Evaluation.

### I. INTRODUCTION

The Demand for herbal cosmetics has increased due to their non-side effects. Cosmetics are the products applied to the body. Face creams are used as cosmetics for softening and toning actions. The Ayurvedic system of medicine was one of the most important systems that use herbal plants and extracts for the treatment or management of various Diseases state.

Aloe vera Synonyms-Aloe Barbadensis Belong To Family- Liliaceae, which has 300 specie, Aloe vera is a cactus-like plant that grows readily in hot, dry climates, and Aloe vera is cultivated in very large Quantities. Cosmetics and some medicinal products are made up of the mucilaginous tissue in the center of aloe vera leaf and called Aloe vera gel. Aloe vera gel contains no Anthraquinone. Which are Responsible for the

strong laxative effects of aloes. However, total leaf extract may contain Anthraquinone.

Aloe vera contains 75 potentially active constituents like vitamins, Enzymes, Minerals, Sugars, Saponis, and Amino acids. Turmeric contains lots of antioxidants that help combat the damaging effects of pollution, sun exposure, and other unwelcome environmental irritants. Besides the fact that turmeric is naturally gold, it can help bring out your natural glow. By reducing dark spots and hyperpigmentation, your skin looks naturally even and radiant. After a certain age, our bodies stop producing collagen. Curcumin found in turmeric can stimulate collagen production, making your skin appear more youthful. Studies have shown that turmeric can also be used to help treat the appearance of stretch marks. If you've been wanting to make a change from tissue oil, now you can.

Neem Treats acne. The antibacterial properties of neem fight acne-causing bacteria, which helps in the treatment and prevention of acne. Pacify irritated skin. Fight signs of ageing. Tackles blackheads and whiteheads.

### Cosmetological Importance Of Aloe:-

Aloe vera has been used since ancient times for healing infections and burns. However, with the improvement in cosmetology, it has been proved that Aloe vera is a very important component of cosmetics. It contains almost 20 amino acids, minerals like calcium, magnesium, sodium enzymes, and vitamins in sufficient quantities.

### Acne:-

Aloe vera helps to eradicate acne scars by performing as an immune booster and an anti-inflammatory agent. Beauty products composed of Aloe vera may diminish the rigorousness of acne. It

is also composed of chemical ingredients which have the property to save the skin to initiate acne.

#### Moisturizing Agent:-

Aloe vera may also be used for softening and moisturizing the skin. There are so many products available in the market containing Aloe vera which may be used post-showering to obtain the skin in a super soft shape. Aloe vera gel, cream, or lotion applied on the face forms a delicious cover that helps to shield the skin from dust and other natural elements which may be injurious to the skin.

#### Pigmentation:-

Melanin is a pigment that is responsible for the color of human skin. Hyperpigmentation is a situation in which a large amount of melanin is synthesized. This generally happens due to excess exposure of the skin to the sun.

#### Skin Eruption:-

Aloe vera-containing creams are beneficial for skin eruptions. Aloe vera gels have been proven to be the best remedy for burns and wounds. Actually, cellular regeneration and anti-bacterial and anti-fungal activities of Aloe vera make it useful for skin eruption.

#### Cosmetological Importance Of Papaya:-

Well, you must be wondering how gooseberry can be used on your skin. You can consume it with honey or you can also apply it on your skin directly and reap its benefits. If you are finding it hard to consume this sour fruit, then try making juice out of it and consume it. This will do good for your skin. Here are some health benefits of gooseberry for your skin

#### Treats Acne:-

You can also make papaya paste and apply it over the affected area of your face and leave it to dry for not more than 15 minutes. This will help in managing the pimples, and fine lines and reduce scarring done by acne. It is a natural blood purifier that keeps pimples and the after-effects of acne away. Thus, amla juice gives you flawless skin.

#### Cosmetological Importance Of neem:-

Neem has antiseptic properties, which are known for keeping infections at bay. It is loaded with compounds like Nimbidin and Nimbin, which prevents redness and swelling thereby retaining the skin moisture. Neem oil is a tested remedy for all types of dermatitis. It is also ideal for acne-prone skin and helps combat bacteria that cause pimples and breakouts.

#### Benefits of carrot extract for the skin:-

Carrots are rich in compounds called carotenoids. Research indicates that a diet rich in carotenoids protects our skin against UV damage and sunlight. Beta-carotene is the main carotenoid found in carrots. It provides the carrot with its red and orange hue, and our body converts it into Vitamin A which improves skin and eye health. Research indicates that phenolic compounds called umbelliferous found in carrot juice benefit skin by reducing the appearance of hyperpigmentation in the skin and promoting antioxidant activity while providing added UV protection

#### PLANT MATERIAL AND METHODS:-

The proposed study of Alovera, Turmeric, Neem, Papaya, and Carrot was collected from the local area.

#### Preparation of Extract:-

Air-dried and coarsely powdered Aloe vera, Turmeric, Neem, Papaya, and Carrot. Were placed in Soxhlet separately, using petroleum ether and then successively with Ethanol. The extract was then concentrated to dryness under reduced pressure and controlled Temperature, and they were preserved in a Refrigerator.

#### Cream Formulation:

- Beeswax and propylene glycol were taken in the first beaker.
- Then heat on a water bath for uniform mixing.
- After a few minutes, the oil phase was formed. Aloe vera extract, Papaya extract, carrot extract, neem extract, turmeric extract, vitamin E, stearic acid, Distilled water, white soft paraffin, Bee wax, menthol, methylparaben, glycerine, zinc oxide, propylene glycol and Sodium benzoate were taken in the second beaker.
- Mixing all the ingredients by heating a water bath, the aqueous phase was formed.
- The oil phase was added to the aqueous phase

**INGREDIENTS QUANTITY:-**

Sr. No	INGREDIENTS	QUANTITY
1	Aloe vera	3gm
2	Papaya extract	2gm
3	Neem extract	1ml
4	Turmeric extracts	0.5ml
5	Carrot extract	1.1
6	Vitamin E	0.5
7	Stearic acid	1.1
8	Beeswax	2.7gm
9	White soft paraffin	10ml
11	Methylparaben	0.6ml
12	Propylene glycol	2ml
13	Menthol	0.5ml
14	Glycerine	2ml
15	Sodium benzoate	1gm
16	Zinc oxide	2gm

Table no.1 Formula of cream formulation

**EVALUATION OF CREAM:-**

Evaluation of herbal cream as follows.

Physical Evaluation Formulated herbal creams was further Evaluated by using the following physical parameter color, odour, consistency, and state of the formulation.

a) Colour: The color of the cream was observed by visual examination. The result was shown in Table 2.

b) Odour: The odour of cream was found to be characteristic.

c) State: The state of was cream was examined visually. The cream was solid in state result as shown in Table 2.

d) Consistency: The formulation was examined by rubbing cream on hand manually. The cream has a smooth consistency.

e) Ph: ph of the prepared herbal cream was measured by using a digital ph meter. The solution of cream was prepared by using 100 ml of Distilled water and set aside for 2h. Ph was determined three times for the solution and the average value was calculated. Results were shown in Table 2.

f) Spreadability: spreadability of formulated cream was measured by placing the sample in between two slides and then compressed to uniform thickness by placing a definite weight for a defined time. The specified time required to separate the

two slides was measured as Spreadability. Lesser time is taken for the separation of two slides results showed better Spreadability. Spreadability was calculated by the following formula. Results were shown in Table 2.  $\text{Weight tide to upper slide (W) x Length of a glass slide (L) Spreadability (S) = Time taken to separate slide (T)}$

g) Washability: formulation was applied on the skin and then ease extends of washing with water was checked. Results were shown in Table 2.

h) Non-irritancy test:

Herbal cream formulation was evaluated for the non-irritancy test. Preparation showed no redness or irritancy. Observation of the state was done for 24 h.

Sr. NO	Parameter	Results
1	Colour	White Green
2	Odour	Characteristics
3	State	Semisolid
4	Consistency	Smooth
5	Ph	6.7
6	Spreadability	7.4g.cm/cm
7	Washability	Easy washable
8	Non-irritancy test	Non-irritant
9	Viscosity	39015
10	Phase separation	No phase separation
11	After feel	Emollient

## II. RESULT

The present research was the formulation and evaluation of polyherbal cream. The evaluation parameters were coming under results like the physical evaluation of polyherbal cream, PH of the cream, Spreadability, Washability, non-irritancy test, viscosity, and phase separation of the polyherbal pain relieving cream was shown in Table 2

## III. DISCUSSION

The present work was the formulation and evaluation of polyherbal cream. This cream formulation was an o/w type of emulsion; hence this formulation was easily washed with plain

water after application. The prepared formulation was good with Spreadability. The viscosity and PH of the cream were good. The cream does not show any type of phase separation during storage. The cream was nongrassy and easily removable after application. The formulation was non-irritant and did not harm the skin.

## IV. CONCLUSION

Formulation of cream was done by slab method and further evaluated by various evaluation parameters such as physical properties, PH, Spreadability, Washability, non-irritancy test, viscosity, and phase separation of cream and gives good results.

### REFERENCES

- [1]. MV Vishvanathan, PM Unnikrishnan, Kalsuko Komatsu, Hirotoshi Fushimi. A brief introduction to the Ayurvedic system of medicine and some of its problems. *Indian J Traditional Knowledge* 2003;2:159-69.
- [2]. Newall CA, Anderson LA, Phillipson JD. *Herbal medicines. A guide for health-care professionals.* London: The Pharmaceutical Press, 1996.
- [3]. Atherton P. Aloe Vera revisited. *Br J Phytotherapy* 1998; 4: 176-183.
- [4]. Krishnaveni M, Mirunalini S. Therapeutic potential of *Phyllanthus emblica* (amla): The Ayurvedic wonders. *J Basic Clin PhysiolPharmacol* 2010; 21:93-105.
- [5]. Patel SS, Goyal RK. *Emblica Officinalis* Geart: A Comprehensive Review on Photochemistry, Pharmacology, and Ethno medicinal Uses. *Res J Med Plant* 2012;6:6-16
- [6]. Chandrashekhar B. Badwaik, Mr. Sharad Manapure, Dr. Suhas Padmane, and Dr. Sheelpriya Walde. EVALUATION OF INVITRO ANTIOXIDANT ACTIVITY OF ERAGROSTIS PILOSA. *WORLD JOURNAL OF PHARMACY AND PHARMACEUTICAL SCIENCES*.2021; 10(7):1025-1032.
- [7]. Chandrashekhar Bhojraj Badwaik, Dr.Suhas Padmini, Dr.Sheelpriya Walde, Mr.SharadManapure. NATURAL PRODUCTS IN ANTICANCER THERAPY. *International Journal of Advances in Engineering and Management (IJAEM)*.2021;3(4):605-607.
- [8]. Chandrashekhar B. Badwaik\*, Updesh B. Lade, Prachi Barsagade, Santosh N. Ghotefode. Madhuri S. Nandgaye, GOUT-A REVIEW ON PATHOPHYSIOLOGY, ETIOLOGY, AND TREATMENT. *Journal of Emerging Technologies and Innovative Research (JETIR)*.2022;9(1):d688-d694.
- [9]. Madhuri S. Nandgaye, Ajay Dongarwar, Upadesh B. Lade, Santosh N. Ghotefode, Tikesh Agrawal, Chandrashekhar B. Badwaik. "Phytochemical Screening and International Journal of Pharmaceutical Research and Applications Volume 7, Issue 1 Jan-Feb 2022, pp: 955-960 [10].
- [12]. Talal A., Feda M. (2003). *Plants used in cosmetics. Phytotherapy research.* 17(9):987 – 1000.