

Formulation and evaluation of herbal face pack for instant glow and radiance skin

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Abstract –

The objective of this formulation is to make a natural face pack for glowing and radiant skin and also to evaluate the formulation by different evaluation parameters for maintaining their quality and safety of the product by using the different varying formulas like F1 to F4 containing ingredients such as green tea, gram flour, vitamin E, sandal wood, lemon juice, turmeric and neem. The evaluation should be done by using different parameters like organoleptic properties, physicochemical properties and stability testing along with irritancy test. Among all the four formulations the F3 should have the better organoleptic properties and flow property and free from irritation and also maintain its consistency even after its stability and storage condition.

Keywords- Formulation, Face pack, Natural, Evaluation, glowing radiant skin.

Introduction-

Cosmetics are the preparations used for improving the appearance of the skin by cleansing, protecting, promoting, beautifying and enhance the attractiveness by making the skin radiant and glowing. At the ancient times the herbs are used to enhance the beauty throughout the later 19th century and early 20th century, changes in the prevailing attitudes towards cosmetics led to the wider expansion of the cosmetics industry, with the market developed in the US during the 1910s by figures such as Elizabeth Arden, Helena Rubinstein, and Max Factor. These firms were joined by Revlon just before World War II and Estée Lauder just after. By the middle of the 20th century, cosmetics were in widespread use by women in nearly all industrial

societies around the World, with the cosmetics industry becoming multibillion - dollar enterprise by the beginning of 21st century.

The first facial mask was invented in Ohio, united states, during the 19th century by Madame Rowley. It was called the “face glove” a mask which was beneficial to anyone who wanted to ‘bleach,purify and preserve the complexion’ of the skin. It was patented in 1875. A sheet mask is a creamy or thick pasted mask applied to clean or smooth the face. It often contains minerals,vitamins and extracts, such as papaya and tomato.

There are different kind of masks for different purposes ; some are deep cleansing for cleaning the pores. The precieved effect of a facial masks treatment can be revitalizing, rejuvenating or refreshing .Although widely believed to provide tighter pores, increased skin clarity, and a reduction in facial skin wrinkles,and provide a natural glow to the skin some masks are washed off with tepid water others are peeled off by hand. Duration for wearing a masks depends on ype of masks, but can be 3 minutes to 30 minutes and sometimes the whole night.

Facial masks should be selected according to skin type. Clay and Mud masks suits oily skins; cream base masks are best work on dry skins types. Mask should be used only on cleansed skin for the best results. Firming masks should not be applied on eye area because they can cause itching.

Materials and methods-

All the herbal and natural substances used in formulation i.e neem, sandal wood, green tea, gram flour, turmeric, viamin E, lemon juice were purchased from local market (Teen candle Malegaon), in a form of dried powder and were identified at L.V.H College Botany department Nashik.

Details of materials used in the formulation of face pack.

Green tea-

Green tea contains a polyphenolic compounds In their molecular structure. Polyphenols have antimicrobial, anti-inflammatory, and antineoplastic properties.It protects the skin from sun light Recent studies suggest that tea polyphenols may be used for treatment of acne vulgaris and reducing sebum production in the skin.

Gram flour-

Gram flour helps the skin by different ways like, by diminishing pore sizes, removing blackheads and whiteheads fading frickles, smoothing sun burns, cleansing skin, improving blood circulations, complexion reducing acne and blemishes and gives a glowing effect to the skin as they contain healthy nutrients.

Vitamin E-

Vitamin E oil acts as a moisturizer to reduce and prevent dry skin.

Vitamin E oil is a heavy emollient. It removes dirt from your pores to give you a refreshed and smooth appearance. A few drops of Vitamin E oil should do the trick.

Sandal wood-(Santalum alba)

Sandal wood has an antitanning and anti-aging property it also helps to toning the skin and also provides the cooling sensation to the skin it also has an a smoothing and healing property.

Turmeric –(curcuma longa)

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 best source of purifier. It is effective in treatment of acne due to its antiseptic and antibacterial properties that fight pimples and breakouts to provide a youthful glow to your skin it also reduces the oil secretions by the sebaceous glands.

Neem-(azadirachta indica)

Neem is anti-inflammatory, antiseptic and highly beneficial for oily and acne prone skin.

Methods of preparation

The different four concentrations of formulation were prepared as F1, F2, F3 and F4 the concentrations of ingredients are mentioned in table 1. The accurate quantity of all ingredients were weighed and after sieving is done by using the sieve no #80 the sieved ingredients were mix into mortar and pestle by using geometrical method and serial dilution method for uniform mixing. Then prepared face pack was packed into an air tight container and properly labelled it and store at suitable storage condition for further evaluation studies.

Procedure of face pack application –

Take prepared face pack 3 to 4 tea spoonful into a bowl and add a rose water into it to make a thin slurry or paste then apply it into the facial skin except eye area place a cucumber slice on eyes and kept it for complete drying for 25 to 30 minutes and then wash with cold water.

Methods of evaluation

Organoleptic evaluation-

The organoleptic parameters involve its nature, colour, odour, feel, texture, and consistency which were evaluated manually for its physical parameters.

Physical evaluation-

The bulk and tapped density was measured by using a tapping method. The flow property of the prepared face pack was determined by using a funnel method. The particle size of the drug can be determined by taking an angle of repose by using a microscopic method.

Physicochemical evaluation –

In physicochemical evaluation the pH was determined by using a pH meter and the ash value is also a physical constant is determined by using an incinerator and loss on drying is also calculated.

Sensitivity test-

It is also called as patch test. Apply product on 1 cm² area of skin, epidermis, if there is no rash or inflammation then it is proven to be free from sensitivity. Cell viability can be assessed by use of MTT too. This study can be carried out in accordance with the guidelines of the CPSC (consumer product safety commission). The study has to be approved by the Institutional ethics Committee.

Irritancy test-

Mark an area of 1 sq cm of human skin then apply the face pack on marked 1 sq cm area of skin and after washing observe the rash and any irritation persist within 24 to 72 hours. Calculate the primary irritation index (PII) based on the sum of scored reactions divided by 24 (2 scoring intervals multiplied by 2 test parameters multiplied by 6 rabbits). If there are no signs of edema or erythema on the intact and abraded rabbit skin, the PII of the formulation is supposed to be 0.00. Thus, product is non-irritant to skin.

Stability studies-

The stability testing is carried out for prepared face pack formulation F3 by storing at different storage conditions for 1 month. The formulations are packed into glass vials and stored at different temperature conditions 30 °C, 40 °C, and 50 °C and were evaluated for physical parameters like- color, odor, pH, texture and feel.

Table :1 Formulation of face pack

Sr no	Name of the ingredients	Scientific name	Quantity of sample for 100 g			
			F1	F2	F3	F4
1	Green tea	Camellia sinensis	7	5	4	10
2	Gram flour	Cicer arietinum	25	30	35	15
3	Vitamin E	Tocopherol	10	15	10	5
4	Sandal wood	Santalum album	25	25	20	20
5	Lemon	Citrus limon	10	12	6	5
6	Turmeric	Curcuma longa	20	5	10	20

7	Neem	Azadirachta indica	3	8	15	25
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Table :2 Organoleptic properties

Sr no	parameters	Observation			
		F1	F2	F3	F4
1	Appearance	Powder (free flowing)	Powder (free flowing)	Powder (free flowing)	Powder (free flowing)
2	Color	Dark yellow	slightly yellow	yellow	Greenish yellow
3	Odour	slight	slight	slight	slight
4	Texture	Fine	Fine	Fine	Fine
5	Smoothness	Smooth	Smooth	Smooth	Smooth

Table : 3 Physical parameters and physicochemical evaluation

Sr no	Parameters	Observations			
		F1	F2	F3	F4
1	Particle size (um)	24.6+-4.54	25+-3.8	22.3+-4.5	24.5+-3.2
2	Ash content	90+-0.545	94+-0.327	91+-0.231	90.+-0.541
3	pH	6.6+-0.2	6.5+-0.1	6.5+-0.1	6+-0.3
4	Loss on drying	1	2.2	2.5	3

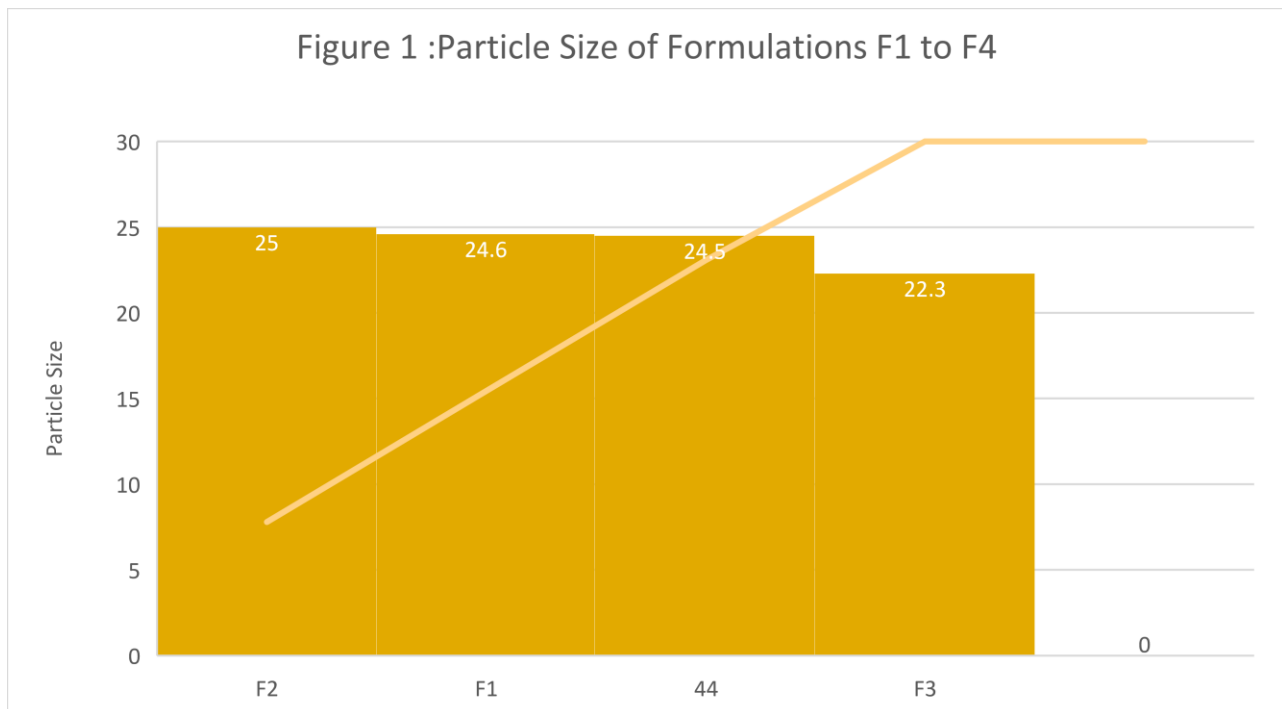
Table : 4 Irritancy test

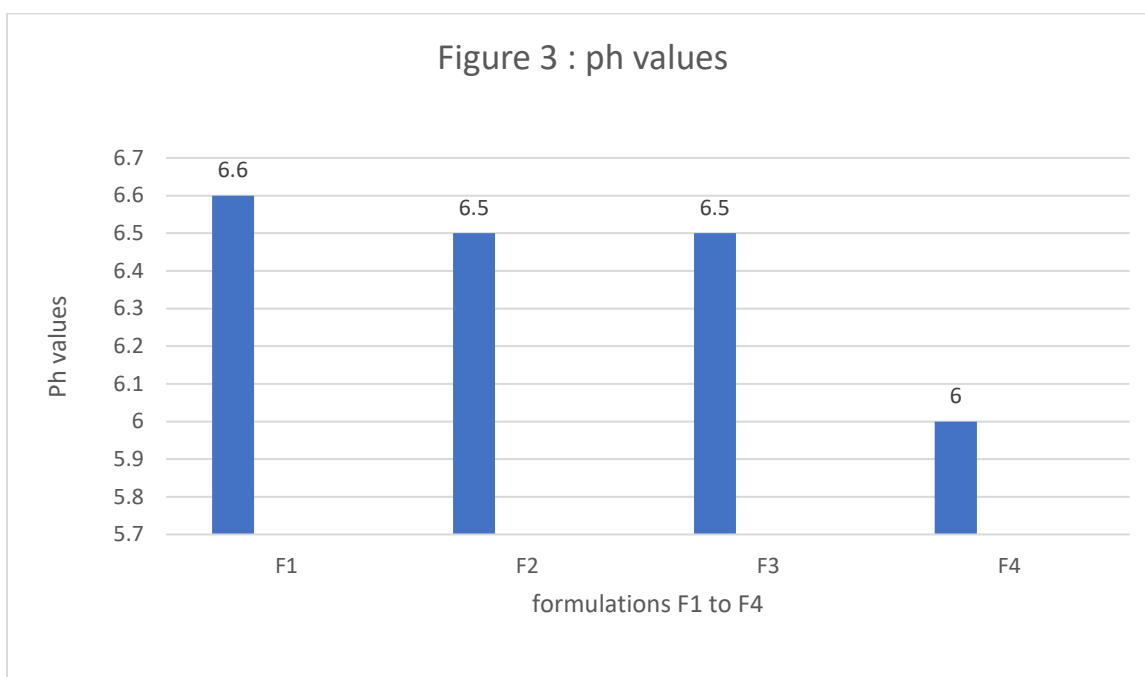
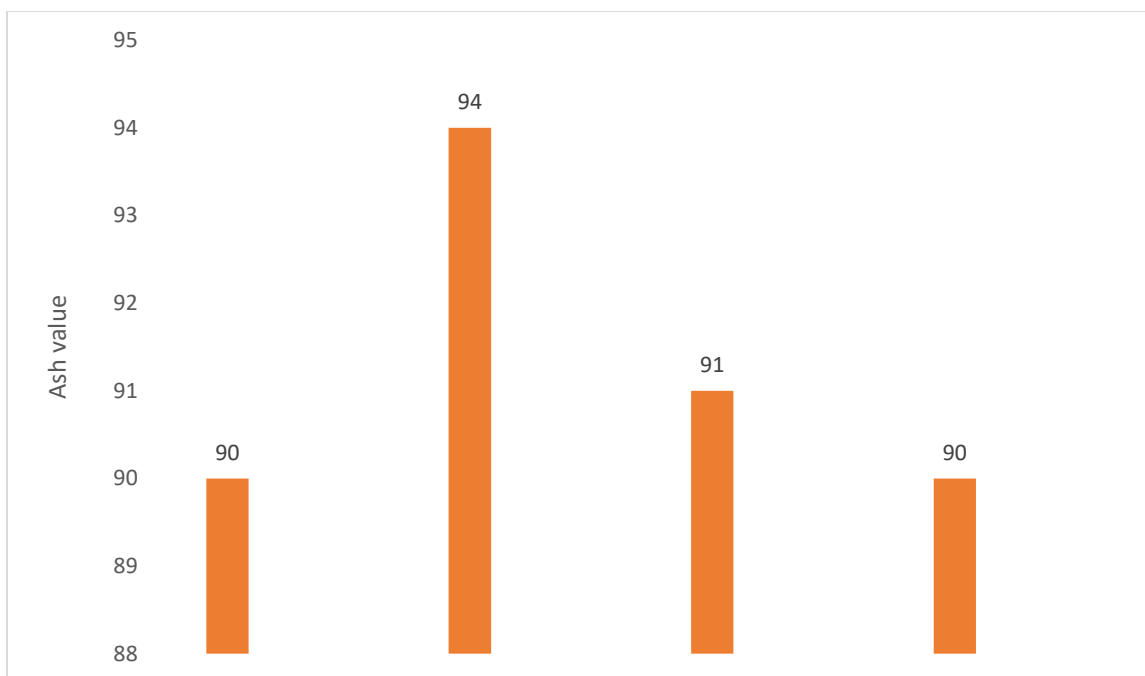
Sr no	Evaluation	Formulations				observations
		F1	F2	F3	F4	
1	Irritant	No	No	No	No	No irritation
2	Erythema	No	No	No	No	No irritation
3	Edema	No	No	No	No	No irritation

Table 5 :parameters of stability studies of formulation F3

Sr no	Parameters	Observations (Formulations F3)		
		Room temperature	35+-5 ⁰ c	40+-5 ⁰ c
1	Color	No change	No change	No change
2	Odor	No change	No change	Slightly changed
3	Texture	Fine	Fine	Fine
4	pH	6.6+-0.2	6.5+-0.1	6.5+-0.1
5	Smoothness	Smooth	Smooth	Smooth

Batches





Result and discussion:

Physical parameters

The different batches of face pack was prepared and evaluated for physical parameters (table no 2). There is an variation of colors between each batch of r(F1 to F4)because of variation in their composition of ingredients. Formulation F1, F2, F3 shows the slight and dark yellow color

but the F4 formulation shows the yellowish green color. The odour of prepared formulation was good acceptable desirable for cosmetic preparations. The particle size in the range of (table no.3). The pH of formulation lies in the range of . The ash content should also be in within limit (table no.4)

Stability studies :

The stability studies showed a no change in pH of formulation which was stored at 40°C and changes were observed at temperature 50°C (Figure 3). The odour of formulation was slightly changed after one month of stability studies at 50°C and there was no change in color and odour at other mentioned conditions of stability which were showed in Table 5.

Irritancy test:

The results of irritancy test were shown in Table 4. The formulations F1, F3 and F4 showed mild irritation because of presence of turmeric powder. The formulations which was prepared by lowering the concentration of turmeric i.e. formulations F2 showed no redness, edema, Inflammation and irritation during irritancy studies. This formulation is safe to use for skin.

CONCLUSION :

In the present scenario, people need cure for various skin problems without side effects. Herbal ingredients opened the way to formulate cosmetics without any harmful effect. Herbal face packs are considered as sustaining and productive way to advance the appearance of skin. Thus in the present work, It is a very good attempt to formulate the herbal face pack containing naturally available ingredients like sandalwood, turmeric, green tea, lemon juice, neem, vitamin E and gram flour. It is suggested that the prepared formulation was physico-chemically stable, and possessed characteristics of a standard cosmeceuticals formulation for skincare.

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