



FORMULATION AND DEVELOPMENT OF HERBAL FACE WASH TABLETS BY USING *ROSA GALLICA* & DEAD SEA MUD

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ABSTRACT:

Herbal formulations have a growing demand in the world market because natural remedies are safer than synthetic ones. People are becoming aware of the use of plants for the essential need for healthy and beautiful skin. The *Rosa gallica* plant has been reported in the literature as having good anti-oxidant, anti-microbial and anti-inflammatory properties. Also, dead sea salt and mud have been known for their therapeutic and cosmetic properties. The aim of this study was to formulate and evaluate the herbal face wash tablet containing *Rosa gallica* and *Dead Sea mud*. The formulation was carried out with three different trials and the final formulation (T3) was evaluated for various functional parameters like color, appearance, consistency, cleansing ability, foaming ability, pH, odour and spreadability. The product was subjected to an accelerated stability study to check the stability of the product with respect to color, odour, and pH change. Subjective evaluation of the product was also carried out on a panel of human volunteers. The study showed that the herbal face wash tablet gives satisfactory results to the volunteers with an improved skin condition and a good cleansing effect.

Keywords :- Herbal face wash tablet, *Rosa gallica*, Dead Sea mud, skin condition, Cleansing effect.

INTRODUCTION :

Recently, herbal cosmetics have become more popular among people and gained much recognition. Due to consumers concerns about synthetic ingredients and chemical substances, herbal formulations came into light. They are becoming aware of the use of plants for the essential need for healthy and beautiful skin. Herbal formulations are good in activity and have lesser side effects as compared to synthetic ingredients. Natural face care uses topical face washes made of ingredients available in nature. Various plant-derived ingredients like herbs, flowers, roots, stems, essential oils, etc. are used for formulating herbal formulations as they are reported to have potential beneficial properties for facial skin care. Herbal cosmetic such as herbal face wash is commonly used for daily purposes [1, 2]. The *Rosa gallica* species is a widely distributed plant and is used as a medicinal herb. In particular, the *Rosa gallica*

plant is one of the most commonly used *Rosa* species for cosmetic and medicinal properties. It has been reported in the literature as having good cleansing, soothing, anti-oxidant, anti-microbial, and skin anti-inflammatory properties. Its petals contain phenolic acid, flavonols, and anthocyanin [3]. The *Dead Sea (DS) mud* has been known for its therapeutic and cosmetic properties. The DS mud is derived from older sediments or the red-brown soils that are usually swept back into the sea during the winter time. It is well known for its therapeutic properties for skin diseases, as it contains a unique composition of minerals. The DS mud or salts have been used for long years in many cosmetic products like bath salts, mineral mud soaps, hand and body lotion, eye cream, cleansing mud masks, body butter, body exfoliates, acne lotion, sunscreen, lightening cream with a sun protection factor (SPF), firming night cream, scalp masks, antidandruff and

numerous other shampoos, and products having an anti-wrinkle effect [4,5]. In the present study, herbal face wash tablets containing *Rosa gallica* and *Dead Sea mud* have been developed. A face wash is a mild cleanser that does the vital job of keeping skin clean, germ-free, smooth, fresh and moisturizes the skin without any harshness [6]. The present form of face wash available in the market is mostly gel and cream type, which are packed in a large collapsible tube or plastic container [7]. Carrying face wash while traveling is always a gamble, especially when flying, not only do they take up valuable luggage space, but they're also at risk of exploding or breaking in transit. The herbal face wash tablet is a single-use tablet and its quantity is a sufficient product to avoid overuse.

MATERIALS AND METHODS :

Collection of herbs

Collection of *Rosa gallica*

The fresh petals of *Rosa gallica* were collected from the local market of Nagpur to obtain a *Rosa gallica* powder.

Collection of *Dead Sea Mud*

The *Dead Sea mud* powder was procured from the local market of Nagpur.

Preparation of herbal extract powder

The petals of the *Rosa gallica* flowers were washed and separated from each flower bud. They were carefully shade dried and then grinded in a grinder to obtain a powder. The powder was then passed through the sieve to get a fine powder and stored in an air-tight container [8]. The *Dead Sea mud* powder was also passed through the sieve to get a fine powder and stored in an air-tight container.

Formulation and Development of Face wash tablet by using *Rosa gallica* powder and *Dead Sea mud* powder

Formulation and development of face wash tablet by using *Rosa gallica* powder and *Dead sea mud* powder was designed to give better cleansing, exfoliating and soothing effect to the

skin in more handy way. The formulation was carried out with three different trials (T1, T2, and T3) of Herbal face wash tablet and finalized a formulation T3. The formulations with different trials are summarized in Table No. 1.

Evaluation of Herbal Face wash Tablet formulation (T3)

The prepared herbal face wash tablet (T3) was evaluated for various functional parameters as follows and results were noted. (Table No. 2)

Colour

The colour of the herbal face wash tablet was analyzed visually.

Appearance

The appearance of the herbal face wash tablet was checked visually.

Consistency

It was determined manually.

Cleansing ability

It was determined manually by washing hands with running tap water.

Foaming ability

It was determined by washing hands by rubbing tablet on the skin.

pH

pH of 5% aqueous solution of the formulation was measured by using a calibrated digital pH meter at room temperature.

Spreadability

The spreadability of the herbal face wash tablet was checked manually by applying the tablet on the skin with a gentle rub.

Odour

The odour of the herbal face wash tablet was checked organoleptically.

Accelerated Stability Study

The Herbal Face wash tablet was subjected to accelerated stability studies. Changes in parameters like colour, odour, pH at three temperatures [i.e., in oven at (45°C), in refrigerator at (4°C) and at room temperature] was recorded for 30 days, at the interval of 5 days. The results were noted [9]. (Table No.3)

Subjective Evaluation

The subjective evaluation was carried out on the basis of different parameters of sensory evaluation like cleansing ability, foaming ability, skin softness, feeling of grittiness, and after feel effect [10]. Parameters evaluated by 30 human volunteers were noted. (Graph No. 1)

RESULTS AND DISCUSSION :

The aim of the present work was to formulate innovative formulation of herbal face wash tablet by using *Rosa gallica* powder and *Dead Sea mud* powder. Herbal extract powders of *Rosa gallica* petals and *Dead Sea mud* were sieved and prepared for incorporation in the formulation.

Three different formulation trials (i.e., T1, T2, T3) of herbal face wash tablet formulations were prepared by using *Rosa gallica* and *Dead Sea mud* powder, and Trial 3 formulation (T3) was selected, as it gave satisfactory results for further evaluation. From the results of functional parameters of T3, it was observed that formulation T3 has more cleansing and foaming ability. The results are summarized in Table no.2.

From the results of the accelerated stability study, it was observed that the herbal face wash tablet formulation (T3) was stable with respect to colour, odour, and pH change at three different temperatures. The results are summarized in table No. 3.

From the results of the subjective evaluation, the reaction of the users after using herbal face wash tablet on the basis of different parameters of sensory evaluation like cleansing ability, foaming ability, skin softness, feeling of grittiness, and after feel effect was noted, and also a review regarding the product was well appreciated by the participants. It caused no irritation during usage and after removal.

Sensory evaluation was carried out with the consent of all the participants. The proportional representation of the noted parameters is given in graph no. 3.

From the above evaluation, it can be concluded that the herbal face wash tablet gives a good cleansing ability and foaming ability. It also helps to improve good skin condition by giving smoothness and softness to the skin.

CONCLUSION :

From the above study, it can be concluded that the herbal face wash tablet formulation containing *Rosa gallica* powder and *Dead Sea mud* powder can be a user-friendly single-use tablet and produces good foam, and gives cleansing and soothing effect to the skin with a good skin condition.

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Table no. 1. Formulation and Development of Face wash tablet by using *Rosa gallica* powder and Dead Sea mud powder

Sr. No.	Ingredients	Quantity			Uses
		T1	T2	T3	
1	Methylcellulose	15.5%	17.5%	20.5%	Thickening agent
2	Carbopol 940	20%	15%	16%	Thickening agent
3	Citric Acid	0.5%	0.5%	0.5%	Preservative
4	Sodium Lauryl sulphate	15%	15%	10%	Foaming and Cleansing agent
5	Glycerin	10%	15%	13%	Humectant
6	Span 20	09%	10%	7%	Surfactant
7	<i>Rosa gallica</i> powder	10%	09%	11%	Cleansing and soothing agent
8	Dead Sea Mud powder	08%	08%	10%	Exfoliating agent
9	Starch powder	12%	10%	12%	Binder and absorbent

Table no. 2: Results of Functional parameters of Final Herbal Face wash tablet formulation (T3)

Sr. No.	Parameters	Final Herbal face wash tablet formulation (T3)
1.	Colour	Pink
2.	Appearance	Good
3.	Consistency	Solid
4.	Cleansing ability	Good
5.	Foaming ability	Good
6.	pH	6.2
7.	Spreadability	Fine
8.	Odour	Pleasant

Table no. 3. : Results of Accelerated Stability Study

Sr. No.	Formulation	Parameters	Oven (45°C)	Refrigerator (4°C)	Room Temperature
1.	Herbal Face wash tablet Formulation (T3)	Colour	No change	No change	No change
2.		Odour	No change	No change	No change
3.		pH	6.5	6	6.2

Figure no. 1. Face Wash Tablet by using *Rosa gallica* powder and Dead Sea mud powder



Figure no. 2. Foam formed of Final Face Wash Tablet Formulation (T3)



Graph no.1. Graphical representation of Subjective evaluation Testing of Herbal face wash tablet (T3)

