

The Title Formulation and Evaluation of Powder Blush Prepared Using Hibiscus Petal Extract

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Abstract — Due to their numerous benefits, medicinal plants have attracted a lot of interest recently. The plant *Hibiscus rosa sinensis* which belongs to the Malvaceae family, is found all over the world. *Hibiscus Rosa-sinensis* flower extract, which has the potential to be used as a natural dye. This study seeks to demonstrate the stability of the colour of the product while using *Hibiscus* flower extract (*Hibiscus Rosa-sinensis*) as a dye in Compact Powder Blush On. The maceration extraction process is used to obtain *Hibiscus* flower Extract (*Hibiscus Rosa-sinensis*), which is then evaporated in a water bath at a temperature below 80 0 C using a sample of 250 grammes of *Hibiscus* flower Extract (*Hibiscus Rosa-sinensis*) and 96% ethanol. *Hibiscus Rosa-sinensis* flower extract has a 27.87% thickening factor. The maceration process must be conducted with a neutral pH. When the pH is unstable, citric acid or sodium bicarbonate are added. The Compact Powder Blush On is made from Talcum, Kaolin, Parrafin Liquid, Zinc Oxide, and Isopropyl Myristate as its primary ingredients. The concentrations of the *hibiscus* flower extract (*Hibiscus Rosa-sinensis*) are 5%, 10%, and 20%. The pH test, adhesive power test, topical test, and stability test of the colour of the compact powder blush on are tests on the physical compact powder blush on. The results demonstrate that the Compact Powder Blush On product applies smoothly, has an average adherence of 13.83%, generates a pink colour upon application, and has a pH of 7 at concentrations of *Hibiscus* flower extract (*Hibiscus Rosa-sinensis*) of 5%, 10%, and 20%. *Hibiscus* (*Hibiscus Rosa-sinensis*) is used as a Blush On dye, although it lacks colour stability. According to the study's findings, *hibiscus* flower extract (*Hibiscus Rosa-sinensis*) can be utilised as a natural dye for Compact Powder Blush On, although other ingredients are required to ensure that the colour is stable during room-temperature storage.

Index Terms –*Herbal powder blush, Evaluation, Formulation, Natural ingredients.*

INTRODUCTION

Cosmetics are any substances or doses designed for application to the skin, teeth, and mucous membranes around the mouth. This includes the full exterior of the human body. According to prior studies, 73% of consumers used cosmetics to protect their skin, while others did so for fashion (37%) and to draw attention (19%). Utilising cosmetics to treat skin conditions is another reason why people use them. Cosmetic powders can be divided into two categories, loose powder and compact powder, based on their individual traits. Generally speaking, the compact powder has larger particles than the loose powder. Due to its compressed form and more practical use, compact powder is anticipated to be safer than loose powder. Herbal cosmetics are plant-derived cosmetics, which refer to goods made with a variety of cosmetic components that may be utilised as a base for one or more herbal components [8]. Previous studies demonstrated that certain herbal plants were effective in treating a range of skin diseases, including inflammation, ageing, eczema, and irritation. tural components like herbs, fruits, and vegetables are used to make a particular category of cosmetic product known as herbal blush. Herbal blushes are typically regarded as a safer and more environmentally friendly alternative to conventional blush products, which may contain synthetic chemicals and additives. Typically, they are created by pulverising dried herbs and other materials into a fine powder that may be used to blush cheeks for a look that is more natural. Herbal blushes frequently contain ingredients like rose, *hibiscus*, beetroot, and turmeric.

This project included the formulation of a powder blush using natural or herbal raw materials, checking stability tests, and assessing organoleptic properties. colour, smell, and appearance

Advantages of Herbal Blush

- **Natural appearance:** Because herbal blushes are manufactured with natural pigments, they can provide a more subdued, natural-looking flush of colour on the cheeks.
- **Free of dangerous chemicals:** Many herbal blush products are safer options for people with sensitive skin because they don't contain chemicals like parabens, phthalates, and synthetic perfumes.
- **Eco-friendly:** To lessen their influence on the environment, several herbal blush businesses prioritise sustainable and eco-friendly practises by using ingredients and packaging that are ethically obtained.
- **Gentle on the skin:** Compared to synthetic blushes, herbal blush products frequently contain mild, natural components that are less likely to irritate the skin.
- **Long-lasting:** Compared to regular blushes, some herbal blush products are designed to linger longer on the skin

Ideal Characteristics of Herbal Blush

- **Natural components:** An perfect herbal blush should be made with non-toxic, gentle-on-the-skin natural substances. Check for chamomile, lavender, calendula, and rosehip oil among other components.
- **Pigment payout:** To appear on the skin and last all day, a good herbal blush should have a respectable pigment payoff. But you should also be able to build it up to the necessary level of intensity.
- **Blendability:** To get a natural and flawless finish, the optimal herbal blush should be simple to blend into the skin. There shouldn't be any sharp lines or patches left behind.
- **Skin type compatibility:** It's crucial to pick a herbal blush that works for your skin type. Look for a blush that includes hydrating components like aloe vera or hyaluronic acid if you have dry skin.

MATERIALS

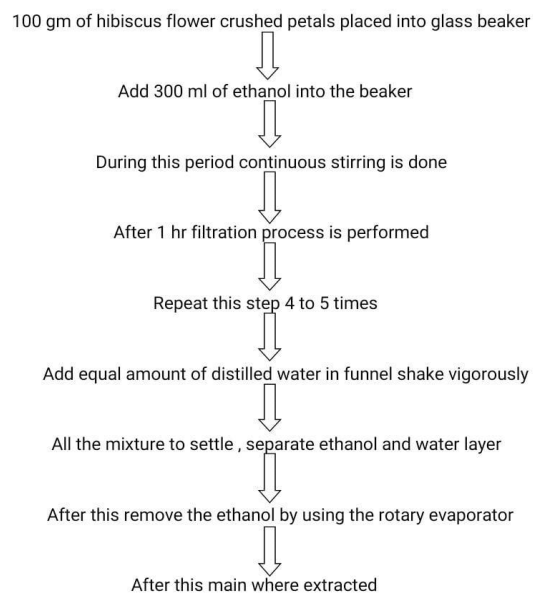
Sr.no	Name of ingredients	Manufacture \Compnny
1	Hibiscus Petal extract	Botanical Garden
2	Talcum	Loba Chemie PVT . LTD
3	Kaolin	Loba Chemie PVT . LTD
4	Paraffin Liquid	Molychem . PVT.LTD
5	Zinc Oxide	Loba Chemie PVT . LTD
6	Isopropyl Myristate	Molychem . PVT.LTD

Table no.1

METHODS OF EXTRACTION

EXTRACTION OF Hibiscus rosa sinensis

EXTRACTION PROCESS OF HIBISCUS PETAL



Flow chart of Extraction

Formulation table –

Ingredients	F1	F2	F3
Hibiscus Petal extract	5ml	10ml	20ml
Talcum	35gm	35gm	35gm
Kaolin	20gm	20gm	20gm
Paraffin Liquid	10ml	10ml	10ml
Zinc Oxide	20gm	20gm	20gm
Isopropyl Myristate	10ml	10ml	10ml

Table no.2



Fig no.1

METHOD

The ingredients must first be prepared. They are thick extract of Hibiscus Petal (5ml), talcum (38mg), kaolin (20mg), paraffin liquid (10mg), zinc oxide (22mg), and isopropyl myristate (10ml).

Before beginning the formulation, every extra component is sieved with a no. 100 sieve. Second, substances other than isopropyl myristate and the viscous hibiscus flower extract are mixed and made into tiny, malleable particles. Isopropyl myristate and the viscous Hibiscus Petal extract are added gradually once the mixture has been softened. The produced compact powder products are subsequently placed in containers. A powder blush compact has been tested.

Evaluation test of Herbal Blush

Organoleptic properties

The organoleptic characteristics of Herbal Blush, such as colour, odour, and appearance, were investigated.

pH test

Using universal pH paper, the pH of Compact Powder Blush On is determined. The preparation is given water until it is homogeneous, and the pH of the preparation is then determined. By dipping pH paper into the homogeneity solution, pH is measured (Ismail et al., 2014). The compact powder Blush On formulas 1, 2, and 3 produce pH results with a pH of 7.

Stability Color of Compact Powder Blush on Products

The capacity of a medical or cosmetic product to remain within the established parameters during the duration of storage and usage to ensure the identity, strength, quality, and purity of the product is referred to as stability. A stable cosmetic preparation is one whose features and attributes remain the same as they did when it was first produced and that is still within acceptable limits after being stored and used. This stability test is conducted by keeping an eye on any physical modifications made to the cosmetics.

After 5 days of storage at room temperature, the colour of formulas 1, 2, and 3 changes from pink to brownish red. This is as a result of Brazilin's hydroxyl groups being oxidised. Brazilin's colour can change to a brownish red depending on the findings of the sticking power test of the compact into carbonyl groups after exposure to air and light (Farhana et al., 2015)

Particle size

A microscope and sieve analysis were used to evaluate the blush powder's particle size.

Carr's index

To quantify the flow characteristics and compressibility of powders, Carr's compressibility index was calculated using the bulk and tapped densities.

$$\text{Carr's index} = \frac{\text{Tap density} - \text{bulk density}}{\text{tap density}} * 100$$

Hausner ratio

It reveals flow characteristics. It is a property that is derivable from bulk and tapped density. Better flow is indicated by a lower Hausner ratio, while poorer flow is indicated by a larger ratio. The following formula is used to determine

$$\text{Hausner ratio: } \frac{\text{Tap density}}{\text{Bulk density}}$$

Sterility test

The soybean-casein digesting medium, which is acceptable for the cultivation of both fungi and bacteria, was used for the sterility test. The powder needs to be cultured on the chosen media, and any microbial contamination needs to be looked for. The test is good for three to five days.

Polishing test

The polishing test was run on each formula's whole dosage form set. on determine the colour, three applications of each formula were made on the inner arm.

RESULT

Sr.no	Evaluation Parameter	Observewd Value
1	Organoleptic Property	-
2	Color	Pink
3	Odour	Pleasant
4	Apearance	Smooth
5	pH mesurement	5
6	Skin irritaion	No
7	Carr's index	15..38
8	Hausner ratio	1.15

Table no.3 Evaluation Parameter & Results

DISCUSSION

Cosmetic-grade goods are widely available in neighbourhood drugstores and department stores and do not adhere to the same criteria as pharmaceutical

goods or even very few standards. According to the FDA, skin care products are classified as cosmetics and are subject to the same regulations as other types of cosmetics. According to a study on customer purchasing habits for cosmetics conducted in 2015 in Pune, out of 200 consumers, 60% opted to purchase organic cosmetics, and the remaining 42.5% utilised the items to enhance their appearance. The blushing powders are divided into three categories: cream blush, compact powder, and loose powder. Loose powders are often used on oily skin types to regulate the oil that builds on your face throughout the day because they are more finely milled and therefore contain fewer oils. The process for making blushing powder generally involves mixing raw ingredients like arrow root powder, colouring agents, and flavouring agents. The mixture is then dried and allowed to pass through fine sewing mesh to produce fine particles, which are then packed in cosmetic containers and sealed the package. Blush preparation is subjected to a variety of evaluation procedures following formulation, including polishing tests, sterility tests, physical character tests, Carr's index tests, etc. After passing the evaluation test, formatted flash was found to be safer and should be marketed.

CONCLUSION

Hibiscus extract (*Hibiscus Rosa-sinensis*) can be utilised as a dye in the production of Compact Powder Blush, according to the findings of the research and debate. In order to maintain the colour constant during storage, more components must be added to the recipes. The results of the physical test of the compact powder blush preparation were as follows: Hibiscus rosa sinensis flower extracts at concentrations of 5%, 10%, and 20% were added to formulations 1, 2, and 3 to provide pink colour. The pH test in formulations 1, 2, and 3 has a pH of 7, which is consistent with the pH of the skin in general and is stable enough to generate a pink colour in Brazil. All formulas had about the same falling % in the sticky power test. In the stability test, after five days of storage at room temperature (blush), the colour changes from pink to brownish red as a result of the oxidation of Brazilin's hydroxyl group into carbonyl groups, which can cause Brazilin to turn brownish red when exposed to air and light.

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