

Formulation and Evaluation of Herbal Lotion by Using Arrowroot Powder

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ABSTRACT

Herbal cosmetics refer to the aromatic value of natural herbs and their products in cosmetic preparations that attract consumers to herbal products and cosmetic preparations with natural extracts. They are applied directly to the skin with the help of an absorbent material such as cotton or gauze soaked in it. Aloe vera lotion formulations, menthol lotion formulations and aloe vera lotion formulations containing arrowroot are prepared for different uses. measurements, irritation tests, viscosity, accelerated stability tests, subjective properties, spreadability, emulsion type tests, sensitivity tests, washability tests, statistical analysis, In vitro penetration studies, thermal stability tests, determination of all oily substances, determination of water content, test area. Many researchers have studied herbal medicine, and many researchers can use this knowledge for new herbal medicines.

Keywords: Herbal Cosmetic, Herbal Lotion, Aloe Vera, Arrow Root Powder

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INTRODUCTION

Herbal formulas contain natural ingredients used in cosmetics. The properties of plants are well known. For example, turmeric, aloe vera etc. Its herbal formula is proven by Ayurveda.¹ An herbal lotion that can give effective protection to the skin and free from any toxicity. All herb is natural and are found to be safe to use as compared to chemical-based formulation. To reduce acne and skin irritation.² To reduce skin diseases like eczema, dry skin, wrinkles, rashes etc. and also add glow to the skin. Herbs are rich in nutrients and other beneficial minerals. Cosmetics that protect the skin without toxicity. Because they are natural and safe to use compared to traditional medicines. Lotions are in semi-solid form and are applied directly to the body. Rich in saffron, with the power of coconut milk, honey and aloof Ura, it supports the skin, prevents dryness in summer and winter, and gives the skin some shine.³ Lotions are made by emulsifying oil in water. The high-water content of the lotion makes it moisturizing and lightweight, leaving a slightly oily residue like a lotion or cream. Since lotions contain less oil than lotions and creams, they are suitable for dry skin, oily skin and sensitive skin. / or treat the skin.⁴ The goal of most body lotions is simply to make skin soft, smooth, and healthy, but they also have anti-aging properties and fragrances. It increases blood circulation, is an emollient, astringent, skin refresher, whitener and other remedies. Insoluble materials should be subdivided, as the colloidal mass relieves the swollen area and is better in contact with the disease. Many ingredients can be added to the formula to create greater insulation or enhance the cooling, soothing, drying or protective properties of the cosmetic. Aloe vera used as a moisturizer, to reduce pimples and acne and also used for treatment of Burn Wound.⁵ It is used as an antifungal and anti-inflammatory and it is also used to reduce scar, Pigmentation, redness and itching of the skin In Addition to moisturizing the skin, aloe Vera gel can Ease or soothe conditions like Frostbite. Aloe Vera Gel can help your skin in hot and frigid weather If your skin is damaged from a mild case of frostbite, Aloe Vera gel may help your tissues regrow more Quickly and boost healing. Almond or Coconut oil has a primarily anti-inflammatory and hydrating properties in the skin. ⁶ It has a anti-oxidant property. Coconut oil is excellent as a face moisturizer and soften. Coconut oil acts as a great scrub.⁷ host of natural moisturizers found in many herbal cold creams help to deliver deep hydration to the skin. Ingredients like as vitamin E, beeswax, and aloe vera assist to keep skin supple and soft by sealing in moisture, especially in cold weather.⁸

Ideal properties of Herbal lotion

They should add a pleasant effect to the employment.

They shouldn't have cargo. They should have a softening effect.

They should not create skin toxicity. It should be able for the pH level of the skin.⁹

Lotion Benefits

Supplies moisture to dry skin.

Fills in dry or rough skin patches.

Softens calluses.

Feels and smells great.

Smoothest the roughest parts of the body.

Make your skin glow.¹⁰

Objective

An herbal lotion that can give effective protection to the skin and free from any toxicity.

All herb is natural and are found to be safe to use as compared to chemical-based formulation.

To reduce acne and skin irritation.

To reduce skin diseases like eczema, dry skin, wrinkles, rashes etc. and also add glow to the skin.¹¹

Advantages of Herbal lotion

They do not provoke allergic reactions and do Not have any negative side effects.

They connect easily to skin and hair.¹²

It is very effective compared to other cosmetics.

The extracted plant form reduces the volumetric properties of the cosmetic product and imparts a corresponding pharmacological effect.

Easily available and found in a variety of plants.

Herbal ingredients provide better stability, purity and efficacy.

Easy to manufacture and low cost. Herbal cosmetics are easy to store and handle and last a long time.¹³

| Sr No | Ingredients | Role |
|-------|------------------|---|
| 1 | Arrowroot powder | Reducing grease, thickener, absorbed in first layer helping moisture. |
| 2 | Vitamin E | Reduce hyperpigmentation and dark spot. |
| 3 | Coconut oil | Helps to hydrate skin and reinforce its natural defensive barrier to better retain moisture |
| 4 | Glycerin | Moisturizing Agent |
| 5 | Rose water | Fragrance |
| 6 | Aloe vera gel | Aloe Vera gel has cooling properties and is anti-inflammatory |

Table No.1: Ingredients and their role¹⁴

Experimental Work

Measure the quantity of above formulated gel. Weigh all other ingredient used in formulation.

Take a large glass or plastic mixing bowl.

Add measured out gel of the aloe vera into the mixing bowl.

Then add other ingredients of the formulation one by one like coconut oil, rosewater, vitamin E, glycerin, essential oil & arrowroot powder with measured quantity.

Mix all the ingredient of the bowl in vigorously manner. Herbal Lotion was prepared.

| Sr No. | Component | A | B | C |
|--------|------------------|------|-----|------|
| 1 | Arrowroot powder | 10gm | 9gm | 10gm |
| 2 | Aloe vera gel | 3ml | 4ml | 4ml |
| 3 | Glycerin | 4ml | 4ml | 3ml |
| 4 | Rose water | 1ml | 1ml | 1ml |
| 5 | Coconut oil | 2ml | 2ml | 2ml |

Table No.2: Ingredients and their quantity

Evaluation of Herbal lotion

Physical Evaluation Formulated herbal creams was further Evaluated by using the following physical parameter physical parameter colour, odour, consistency, and state of the formulation.¹⁵

Colour

The colour of the cream was observed by visual examination.

Odour

The odour of cream was found to be characteristics.

State

The state was cream was examined visually.

Uniformity

The formulation was examined by rubbing cream on hand manually.

The cream having smooth consistency.

| Sr No. | Parameter | A | B | C |
|--------|------------|-----------------|-----------------|-----------------|
| 1 | Colour | Slightly Gray | Slightly Gray | Slightly Gray |
| 2 | Odour | Characteristics | Characteristics | Characteristics |
| 3 | State | Semi-solid | Semi-solid | Semi-solid |
| 4 | Uniformity | Smooth | Smooth | Smooth |

Table No.3: Organoleptic evolution

pH

pH of prepared herbal cream was measured by using digital pH meter. The solution of cream was prepared by using 100 ml of Distilled water and set aside 2h. pH was determined in three times for solution and the average value was calculate.

| Sr No. | Formulation | pH |
|--------|-------------|-----|
| 1 | A | 5.5 |
| 2 | B | 6.6 |
| 3 | C | 6.1 |

Table No.4: pH

Spreadability

Spreadability of formulated cream was measured by placing sample in between two slides then compressed to uniform thickness by placing a definite weight for defined time. The specified time required to separate the two slides was measured as Spreadability. Lesser the time taken for separation of two slides results showed better Spreadability. Spreadability was calculated by the following formula.

$$\text{Spreadability (S)} = \frac{\text{Weight tide to upper slide (W) x Length of glass slide (L)}}{\text{Time taken to separate slide (T)}}$$

| Sr No. | Formulation | Time(sec) | Spreadability |
|--------|-------------|-----------|---------------|
| 1 | A | 6 | 2.14 |
| 2 | B | 5 | 3 |
| 3 | C | 7 | 2.5 |

Table No.5: Spreadability test

Washability

Formulation was applied on the skin and then ease extends of washing with water was checked.

| Sr No. | Formulation | Washability |
|--------|-------------|-----------------|
| 1 | A | Easily Washable |
| 2 | B | Easily Washable |
| 3 | C | Easily Washable |

Table No.6: Washability test

Irritancy test

Mark 1cm² area on left hand dorsal. Cream was applied on that area and note that time. After interval up to 24 hours it is checked for irritant effect reported.

| Sr No. | Formulation | Irritancy effect |
|--------|-------------|------------------|
| 1 | A | Non-Irritant |
| 2 | B | Non-Irritant |
| 3 | C | Non-Irritant |

Table No.7: Irritancy test

RESULT

The above formulations A, B, and C were evaluated. The evaluation test results show that the first three formulations are safe to use, while formulation A is more stable, more spreadable, easily absorbed than the others.

The A formulation's parameters and observations are as follows:

| Sr No. | Parameter | Observation |
|--------|---------------|-----------------|
| 1 | Colour | Slightly gray |
| 2 | Odour | Characteristics |
| 3 | Consistency | Thin |
| 4 | State | Semi-Solid |
| 5 | PH | 5.5 |
| 6 | Spreadability | 2.14 |
| 7 | Washability | Easily Washable |
| 8 | Irritancy | Non-Irritant |

Table No. 8: Result

DISCUSSION

Using Arrowroot powder aloe vera, rosewater, vitamin E, we create three distinct formulations and evaluation of herbal lotion by using Arrowroot powder and then tested. The three formulations were compared and found to be safe for usage based on the evaluation. The formulation A is more stable than the others, according to the evolution test.

CONCLUSION

Utilizing Aloe vera gel, Rose Water, Vitamin E and Arrowroot powder, the cream demonstrated a multifunctional impact, with each of the herbal constituents exhibiting distinct and significant activities. It is safe to apply the formulation on skin, according to the results. It doesn't irritate the skin, is easily washable, and is non-greasy. Its consistency is smooth and its aroma is pleasing. The cold cream developed not only showcases enhanced moisturizing properties but also exhibits potential antioxidant, anti-inflammatory, and skin-soothing effects attributed to Arrowroot powder, aloe vera, and vitamin E. These ingredients are known for their individual therapeutic benefits, and combining them in a formulation offers a synergistic effect that can provide comprehensive skincare benefits.

CONFLICTS OF INTEREST

Nil.

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