



Cream: A Review on Method of Preparation, Extraction and Evaluation

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Abstract Cosmetics are the preparations which used to beautify and enhance the human appearances. The aim of the present research was to formulate and evaluate the aloe cold containing plant extracts prepared by using water in oil (Emulsification method) method for the purpose of nourishing and moisturizing the skin. The cold cream is prepared by using the rose oil and extract of aloe vera. Quality evaluation of the formulated product was assessed by using different evaluation methods. No change of the physical properties was observed in formulated cream. The formulated cream showed good consistency and spread ability, pH, no evidence of phase separation during study period of research. Stability parameters like visual appearance, nature, viscosity and fragrance of the formulated cream showed that there was no significant variation during the study period of research.

Keywords: Cosmetics, Plant extracts, Cold cream, Stability parameter

Introduction

Cosmetics are any articles intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise application to human body or any part of there for cleansing, beautifying, promoting attractiveness, or altering the appearance, and includes any article intended for use as a component of cosmetic. The cosmetics are the word derived from Greek word – ‘kosmesticos’ which means to adorn. From that time the materials which are used to promoting appearances or to beautify the skin are called as cosmetics. From ancient time till now people are still using herbal cosmetics for the beautification of skin. Cold cream is the water in oil emulsion. Cold cream gives the prolonged contact time in the site of application as compared to the other semisolid dosage form or formulation. They give elegancy to the skin and it is not that much greasy. Due to the oil phase, it gives an emollience to the skin. The function of the cold cream is for restoring moisture to dry skin, it allows to eliminate the waste materials from the pores and also cools the body. It is easily watered washable and easy to wash away. They are non-irritating when applied on the skin. The water phase gives extra conservation to the skin. It gets liquefy at body temperature. It gets penetrated via the epidermis of the skin via the natural pores.

Material and Methods

Extraction of Aloe vera

- **Choose Your Aloe Leaf.**

When picking the leaves opt for the outermost ones – choose the oldest and largest of the leaves to use.

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- **Clean Away the Yellow Liquid.**

You may notice after cutting the leaf from the plant that there is a yellow liquid oozing from the cut. This is a sap called *aloe latex* and it's not actually part of the aloe vera gel, which you'll see is clear. Aloe latex contains laxative properties. To stop the liquid from oozing everywhere, point the leaf vertically with the cut facing down, and leave it sitting in a bowl to allow the liquid to drain.

- **Cut Away the Top Section of the Leaf.**

Towards the top end of the leaf, it starts to become much thinner. Rather than spending time fiddling with this tiny amount of gel, trying to extract every last bit, cut this portion off and compost it.

- **Cut Away the Spikes.**

Remove the spikey edges on either side of the leaf by carefully sliding the knife along the edge of the leaf, keeping your hands a safe distance away. Cut as close to the spikes as possible to avoid losing some of the gel in the process.

- **Remove the Top and Bottom Leaf 'Skin' Layers.**

The leaves have a flat side, and a curved side. Begin with the flat side. Lay your leaf flat on a cutting board and carefully slice away the skin of the aloe vera leaf, pushing your knife down into the chopping board as you slide it along the bottom, while also pushing the top of the leaf down onto the knife to make it as flat as possible. Your knife should be in between the gel and the green skin. Repeat on other side.

- **Making the Gel.**

At this point, you should have slabs of clear gel. If you notice any bits of leaf left on them, cut it away. The aloe vera gel can be used as is, or it can be blended up to break down its fibrous structure. Simply pop the gel pieces into a blender and blitz until frothy and liquified; this should only take a few seconds. The gel will keep in an airtight container in the fridge for up to one week, or freeze into ice cubes and keep for up to 6 months.



Preparation of Aloe vera Cold Cream

Formulation can be prepared by adding two different phases which are as follows:

- Bees Wax
- Borax
- Liquid Paraffin
- Aloe Vera
- Rose Water
- Methyl p- hydroxy benzoate

Heat liquid paraffin and beeswax in a borosilicate glass beaker at 75 °C and maintain that heating temperature. (Oil phase). In another beaker, dissolve borax, methyl paraben in distilled water and heat this beaker to 75 °C to dissolve borax and methyl paraben and to get a clear solution. (Aqueous phase). Then slowly add this aqueous phase to heated oily phase. Then add a measured amount of aloe Vera gel and stir vigorously until it forms a smooth cream.



Then add few drops of rose oil as a fragrance. Put this cream on the slab and add few drops of distilled water if necessary and mix the cream in a geometric manner on the slab to give a smooth texture to the cream and to mix all the ingredients properly. This method is called as slab technique or extemporaneous method of preparation of cream.

Evaluation of Cream:

- **Physical properties:** The cream was observed for the color, odor and appearance.
- **Washability:** The cream was applied on the hand and observed under the running.
- **pH:** The pH meter was calibrated with the help of standard buffer solution. Weigh 0.5 gm of cream dissolved in 50.0ml of distilled water and its pH was measured with the help of digital pH meter.
- **Viscosity:** Viscosity of cream was done by using Ostwald viscometer at a temperature of 25 °C using spindle No. 63 at 2.5 RPM. According to the results all the three formulations showed adequate viscosity.

$$cp = TK * SMC * \frac{10000}{RPM}$$

Where,

cP = Viscosity

TK = Torque %

SMC = Spindle multiplier constant

- **Spread ability test:** The cream sample was applied between the two glass slides and was compressed between the two-glass slide to uniform thickness by placing 100 gm of weight for 5 minutes then weight was added to the weighing pan. The time in which the upper glass slide moved over the lower slide was taken as a measure of spread ability. [8][9]

$$\text{Spread ability} = m * l/t$$

$$\text{Spread ability} = M * \frac{L}{T}$$

M = Weight tight to upper slide

L = Length moved on glass slide

T = Time taken

- **Irritancy test:** Mark an area (1sq.cm) on the left-hand dorsal surface. The cream was applied to the specified area and time was noted. Irritancy, erythema, edema, was checked if any for regular intervals up to 24 hrs. and reported.
- **Homogeneity:** Homogeneity was tested via the visual appearance and test.

Conclusion

An herbal cream which is non-toxic, safe, effective and improves patient compliance by the utilization of herbal extracts would be highly acceptable than synthetic ones.

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