

Formulation and evaluation of cold cream from natural ingredients

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Abstract: Cold Cream was first invented by Galen a famous Greek physician pharmacist in the Roman Empire of First century AD. Cold Cream is an emulsion of water and fat used cosmetically for softening and cleansing the skin.

To formulate and evaluate cold cream from natural ingredients such as Borax, Neem oil, Rose water, Honey, Aloe vera, Coconut oil etc. Cream was prepared by using Natural Ingredients which have not side effect on skin.

Borax eradicate skin bacteria and remove dead skin cells and excess oil, Beeswax that helps the oil penetrate the skin, Neem oil is used to treat dry skin and wrinkles, Rose water is used as favouring agent, Honey helps in keeping moisturizing skin, Aloe vera is used to keep skin soft, Coconut oil to reduce itchiness. Cream was formulated and evaluated by different evaluation parameters such as pH, viscosity, spreadability physical appearance and irritancy test. Stability testing for prepared formulation was performed by stirring it at different temperature condition for time period 24th for 1 week. To know parameters like odour, pH, smoothness of lotion.

Keywords: Formulation, cold cream, antibacterial activity, Aloe Vera cold cream.

INTRODUCTION

The cosmetics word derived from Greek 'kosmesticos' which means to adorn. Cosmetics are products used to beautify skins to purify the skin. The cosmetics, according to the drug And cosmetics act is defined as articles intended to be rubbed, poured, sprinkled or sprayed on, introduced into or otherwise applied to the human body or part there for cleaning beautifying, promoting, attractions or altering the appearance. Cosmetics products used extensively throughout world for maintaining general appearance of face and other body parts. Eg. Skin, eyes, hair, hand etc. herbal cosmetics are preparation which represent cosmetics associated with active bio- ingredients, nutraceuticals and pharmaceutical.

Cold cream is mainly used for skin treatment (such as a facial mask or lip balm), due to its moisturizing properties. It can also be used to and remove makeup as cream. When shaving the temperature drops down, cold and windy weather cream which is generally enriched with vitamin E, natural oils such as jojoba and olive oil, rose petals and various fruit extracts particularly grape seed, protect the face skin from getting dry and provide a glow, softness and fairness. It, therefore becomes necessary for the consumers to keep a face cream in winter cosmetic kitty. Winter care creams are suitable for the three types of weather cream which is generally enriched with vitamin E, natural oils such as jojoba and olive oil, rose petals and various fruit extracts particularly grape seed, protect the face skin from getting dry and provide a glow, softness and fairness. It, therefore becomes necessary for the consumers to keep a face cream in winter cosmetic kitty. Winter care creams are suitable for the three types of face skins, i.e. normal, oily and dry. Many winter care face creams are designed to reduce the signs of peeling and repair fragile face skin due to winter dryness. The strong moisturizing formula in face cream also fulfils the therapeutic purpose of consumers during winters.

Fig.no. 1



What Is Cold Cream...?

Cold cream is an emulsion of water and certain fats, usually including beeswax and various scent agents, designed to smooth skin and remove makeup. Cold cream is an emulsion of water in a larger amount of oil, unlike the oil in water emulsion of vanishing cream, so-called because it seems to disappear when applied on skin. The name "cold cream" derives from the cooling feeling that the cream leaves on the skin. Variations of the product have been used for nearly 2000 years.

Cold cream is an emulsion in which the proportion of fatty and oily material predominates, although when it is applied to the skin a cooling effect is produced due to slow evaporation of the water contained in the emulsion. Cold cream is an example of a Water-in-oil (W/O) emulsion.

In cold cream, the major portion is the oil phase. Simply, the cold cream is an oil-based semisolid preparation. Cold cream is also known as Unguentum or CeratumRefrigerans. Generally, it contains mineral oil, beeswax, borax, and water. It is a soothing and cleansing cosmetic typically of oily and heavy consistency, used to soothe and cleanse the skin. It can be classified as a form of cleansing cream.

Cold cream is mainly used for skin treatment (such as a facial mask or lip balm), due to its moisturizing properties. It can also be used to remove makeup and as shaving cream.

History

Cold cream was first invented by Galen, a famous Greek physician- pharmacist in the Roman Empire (who practiced in Rome) of the 1st Century AD. The Galen formula of cold cream has changed but little in proportions or method of preparation throughout many centuries.

ROLE OF INGREDIENTS

➤ BORAX



Fig.no. 2

Borax is used in cosmetic industry to prevent bacterial growth. It is also used to eradicate skin bacteria and remove dead skin cells. emulsifier created by the chemical reaction made the oil and water parts of cold cream less likely to Separate on standing borax were So cold creams made with borax were more stable.

➤ NEEM OIL



Fig.no. 3

Prevents skin from inflammation and acne because of its anti-oxidant properties. Treat for Fungal infections. Antifungal and anti-bacterial properties.

➤ HONEY



Fig.no. 4

Honey is used in a number of winter face Packs contains honey as an ingredient due to the viscous golden liquid's ability to moisturise the skin effectively. Honey will not only remedy dry skin but will also prevent dryness during winters.

➤ **ALOE VERA**



Fig.no. 5

Ayur herbals cream with Aloe Vera is a rich concentration of natural lubricants makes a dense layer of moisture the epidermis's hence reduces the rate of water loss from the skin. This mechanism in return prevents ageing.

➤ **COCONUT OIL**



Fig.no. 6

Nature has a number of ointments which are capable of healing body from within and without and coconut oil best of them.

- ✚ Help to moisturize the skin.
- ✚ Minimizes look of fine lines.
- ✚ Protects skin against environmental stressors.

➤ **ROSE WATER**



Fig.no. 7

You can use it directly or mix rose water in your cold cream. Add extra dose of miniaturisation to the skin. It gives healthy glow to the skin. Good for boosting hydration.

Beeswax



Fig.no. 8

Beeswax is a product made from the honeycomb of the honeybee and other bees.

Beeswax can create a protective layer on the skin. It's also a humectant, which means that it attracts water. Both of these qualities can help the skin stay hydrated.

Beeswax is also a natural exfoliator, ideal for sloughing away dead skin cells.

- Moisturizes skin
- Clear Acne
- Heal dry skin
- Reduces stretch marks
- Anti-inflammatory
- Protects liver.

Described us an emulsion based on beeswax as emulsifier and thickener.

Borax bees wax are used as an emulsifying agent.

Method of preparation

Extraction processes

i] Aloe Vera gel

Mature, healthy and fresh aloe Vera leaves were collected and washed with distilled water. Then after proper drying of leaves, the outer part of the leaf was dissected using a sterile knife. Then the aloe Vera gel that is the colourless parenchymatous tissue was removed using the sterile knife. Then it is filtered to remove the fibres and impurities. Then the filtrate or the filter product which is a clear aloe Vera gel was used in the preparation.



Fig.no. 9

Formulation table

Sr.no	Ingredients	Quantity
1	Borax	0.10g
2	Coconut oil	2.0ml
3	Neem oil	51g
4	honey	3 spoon
5	Rose water	2 to
6	Aloe Vera	2 spoon
7	Beeswax	20 gm

Table no.1

Preparation

- Preparation can be done by adding natural ingredients.
- First we melt the solid ingredients by indirect heat.
- Then add all oils in it and stir it well.
- Then dissolve borax in water with continuous help of heat.
- Then add borax solution in oil mixture with continuously stirring with help of heat.
- Continuous this process for 5 min.
- Then remove from heat and stir until it get cold.
- We can also use honey and aloe Vera in it in small amount.
- Because natural ingredients are more profitable to skin as a excipients.

Fig.no. 10



Evaluation of cream

Irritancy test

Mark an area on left hand dorsal substance upto (1 Sq cm)

The cream was applied to the specified area

And time was noted. Irritancy way checked if any up to 24 hrs For regular intervals.

Physical evaluation

The cream was observed for the colour, odour and appearance.

Wash ability

The cream was applied on hand and observed under the running.

pH

The pH meter was calibrated with help of Standard buffer solution.

Spreadability

Spread ability is ability of a cream to Spread on Skin. The spread ability was expressed in terms of time in seconds taken by two slides to slip off from the cream, placed in between the slides, under certain load. Lesser the time taken for separation of the two slides better the spread ability. Two sets of glass slides of standard dimension were taken. Then one slide of suitable dimension was taken and the cream formulation was placed on that slide. Then other slide was placed on the top of the formulation. Then a weight or certain load was placed on the upper slide so that the cream between the two slides was pressed uniformly to form a thin layer. Then the weight was removed and excess of formulation adhering to the slides was scrapped off. The upper slide was allowed to slip off freely by the force of weight tied to it. The time taken by the upper slide to slip off was noted.

Spread ability = $m \times l / t$

m= Standard weight which is tied to or placed over the upper slide (30g)

l= length of a glass slide (5 cm)

t= time taken in seconds.

➤ Greasiness

Here the cream was applied on the skin surface in the form of smear and checked if the smear was oily or grease-like

➤ Phase separation

Prepared cream was kept in a closed container at a temperature of 25-100 °C away from light. Then phase separation was checked for 24 h

Sr.no	Formulation	Phaseseparation
1	A	No phase separation
2	B	No phase separation
3	C	No phase separation

Table no. 2

Physical appearance

Sr.No	Parameter	Evaluation
1	Colour	Pale green
2	Odour	Pleasant
3	texture	smooth

Table no. 3

Uses of cold cream

Typically used to cleanse the face off makeup

Heavily moisturises dry skin.

Can also be used as a balm. For dry cracked lips.

It can also be used as a shaving cream alternative for men.

Direction of use

Fig.no. 11



Direction of use

After cleansing apply the cream over hand & body.
Give gentle upward strokes when applying on face & neck.

Precautions

Avoid contact with product gets into eyes, rinse thoroughly with water. If eyes.

Storage

It should not be permitted to freeze.

Labeling information

1. The label information should contain:
2. Manufacture and expiration date
3. Conditions under which the it should be stored,
4. Where applicable,
5. Name of any added antimicrobial preservative.

RESULT

The preparation was pale green in colour and pleasant odour and smooth texture.



Fig.no. 12

CONCLUSION

By using Honey, Aloe Vera, coconut oil cream showed a multipurpose effect and all these herbal ingredients showed significant different activities.

Based on results and discussion it can be safely used on skin.

From the above results it is concluded that the formulated cream showed good consistency and spread ability, homogeneity, pH, non-greasy and there is no phase separation during study period of research. From the above study it can be concluded that the polyherbal cold cream is safe to use as it is developed from herbal extract. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. So, the values of herbs in the cosmeceutical has been extensively improved in personal care system and there is a great demand for the herbal cosmetics nowadays. 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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