



FORMULATION AND EVALUATION OF SULPHURE OINTMENT

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ABSTRACT:

An ointment is a semi-solid preparation, usually containing chemicals. It has many uses, such as healing wounds, rashes, or skin conditions such as scabies, eczema, etc. The cream provides the skin with a protective layer, helps retain moisture and increases the absorption of active ingredients. They can do many things as desired, such as gas or water, depending on desire and the desired effect. Ointments are often preferred for their emollient properties, making them especially useful for dry or irritated skin. Depending on the ingredients used, they can also have a relaxing effect due to their cooling or warming properties. Additionally, lotions generally have a longer shelf life than lotions or creams. Some creams contain ingredients such as antibiotics or steroids used to treat infections or diarrhea. Others may focus on moisturizers like lanolin or petroleum jelly to soften and hydrate the skin. To ensure safe and effective use, always follow the instructions given by your doctor or on the product label. The ointment has been used across cultures for centuries to treat a variety of ailments, from minor cuts and burns to skin diseases and conditions such as eczema and psoriasis. They are valued for their sedative properties and their ability to reduce side effects by delivering medication directly to the affected area. Additionally, some creams contain ingredients such as emollients or humectants that help moisturize and soften the skin. Keywords: Ointment, Sulphur Ointment, Skin Ointment Etc.

INTRODUCTION

Depending on performance and intended use, they can act as water or oil. Some creams are also designed for specific purposes, such as antibiotics to treat fungal infections or antibiotics to prevent infections. In general, ointments play an important role in dermatology and wound healing, reducing symptoms and promoting healing. The ointment is a semi-preparation for topical application to the skin or mucous membranes. It is usually a mixture of an active pharmaceutical ingredient (API) and a base, which can be oil-based, aqueous, or topical. The cream is designed to deliver medication directly to the affected area to relieve symptoms such as a rash, cut, or infection. They are generally thicker and oilier than creams or lotions, which helps them stay on the skin for a long time and provides a protective barrier on the skin. The consistency of the ointment can vary from soft and easy to use to firmer and more occlusive, depending on its intended use and design. Lotions can be classified based on their ingredients as oil-based (oil), water-based (water-based), or a combination of the two (lotion). Each type has its advantages: Oil-based lotions are better suited for dry skin, while water-based lotions are less oily and may be better for certain skin types. It may also contain many additives such as preservatives, fragrances or stabilizers to increase the effectiveness of cosmetics and extend their shelf life. In general, ointments are cosmetics widely used in dermatology, wound healing and other specialized treatments. Sulphate ointments often contain ingredients such as zinc sulphate, magnesium sulphate (Epsom salt), or copper sulphate. These compounds are often used for their antiseptic, astringent or drying properties. Sulphate ointments can be used to treat many skin conditions, such as eczema, dermatitis, or minor cuts. They can help reduce pain, control infection, and promote healing. To avoid allergic reactions or side effects, always use sulphate ointment as directed by your doctor. Sulphate ointments are designed to deliver active sulphate compounds directly to the skin area. For example, zinc sulphate is known for its antibacterial

properties that help soften skin and speed wound healing. Magnesium sulphate ointment, commonly known as Epsom salt ointment, is often used for its anti-inflammatory and muscle relaxant properties, making it useful for conditions such as muscle aches or minor aches. Copper sulphate ointment may have astringent properties and can be used to dry skin lesions or treat fungal infections. However, sulphate creams should be used with caution and as directed, as overuse or improper use may cause skin irritation or other side effects. It is recommended to consult a doctor for clarification and correct instructions. Sulphate ointments have many uses and are not only used to treat skin conditions, but are also used in veterinary medicine to treat wounds and infections in animals. They are available in a variety of formulations, including creams, gels and pastes, and can be tailored to specific needs and preferences. Some sulphate creams also contain other ingredients, such as emollients or humectants, that help moisturize and protect the skin while providing the therapeutic benefits of sulphates. It is important to follow your doctor's or the product's instructions for it to be safe and effective.

• METHOD OF PREPARATION

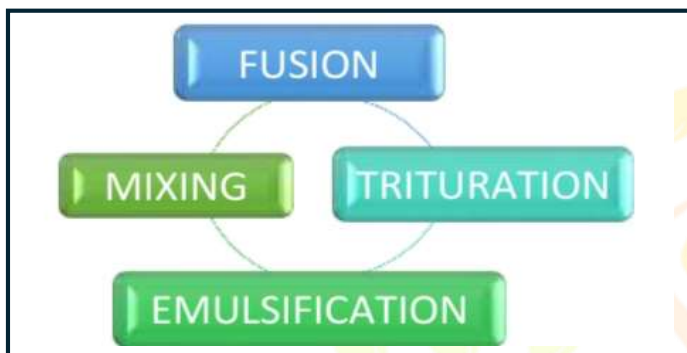


Fig.,: Method of preparation

Method of preparation:

These are the following chemical used for the formulation sulphur ointment.

Table 1: ingredients used in the preparation of ointment and there use

SR.NO	INGREDIENTS	ROLE
1	Olive oil	Used as base
2	Camphor	Applying camphor to the skin seems to reduce itching
3	Glycerine	Skincare, moisturising , improve skin barrier function
4	Cetostearyl alcohol	Maintain the consistency of the formulation
5	Yellow paraffine	Helps prevent water evaporating from the skin surface
6	White paraffine	Emollient and protective
7	White vaslline	As a moisturizer to treat or prevent dry, rough, itchy skin and minor skin irritation

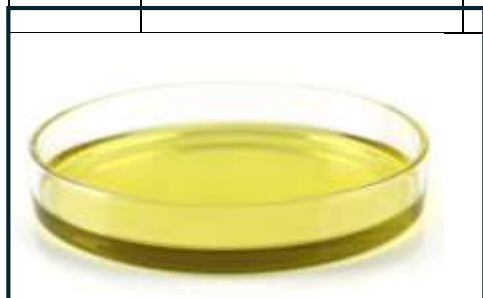


Fig1., olive oil



fig2., camphor



Fig 3., glycerine



fig 4., cetostearyl alcohol



Fig 5., yellow paraffine



Fig 6: white soft paraffine



Fig 7:whiite vaselline

Table 2: formulation of simple ointment

SR.NO	INGREDIENTS	QUANTITY
1)	Olive oil	1ml
2)	Camphor	1ml
3)	Glycerine	2ml
4)	Cetistorial alcohol	1g
5)	Yellow paraffine	1g
6)	White paraffine	3g
7)	White vaseline	3g

- Melt the camphor, vaseline and yellow paraffine and cetistorial alcohol on a water bath
- To this add olive oil and white soft paraffine and stir well till the completion of melting of all the ingredients.
- Examine the content far foreign particle and decant if required.

- Stire the mixture thoroughly until become cool
- Pack the preparation, label the dispense

Category:- scabicial agent

Table 3: formulation of sulphur ointment

SR.NO	Ingredient	Quantity
1)	Sublimed sulphur	8g
2)	Simple ointment	20g

- Triturate the sublimed sulphur, finely sifted with small amount of simple ointment over an ointment slab.
- Gradually add the remaining quantity of simple ointment with thorough trituration until a homogenous mass is obtained
- Pack, label and dispense the preparation.
- Storage:
Store in closed container at room temperature, away from heat, moisture, and direct light. Keep from freezing.

Dose: Use the 5 to 10% ointment one or two times a day. Use as required.

Direction: Do not apply on broken skin and near the eye.

Precautions: Avoid getting this medicine in your eyes, nose, mouth, or on your lips. O Rinse with water if contact does occur. Do not use on open wounds or on sunburned, wind burned, dry or irritated skin. Keep away from children.

Evaluation of ointment

Physical Appearance

Physical parameter of ointment such as colour and appearance were evaluated

Determination of pH

The accurately weighed amount of ointment (2.5g) was dispersed in 25 ml distilled water. The pH was recorded by using digital pH meter at room temperature.

Homogeneity

The homogeneity of ointment was confirmed by visual inspection after the ointment has been set in a container for their appearance and presence of any aggregates.

Washability

The ointment was applied on hand and was observed under running tap water.

Presence of foreign particles

Here we are checking if the developed product containing presence of any particles.

Evaluation of Ointment

Prepared ointment was inspected visually for their characters like colour, consistency and appearance.

Physical Appearance

The formulated ointment showed good physical characteristics like good consistency and absence of air bubbles. Post Application feel was found to be Smooth and comfortable on application.[13] Table 4: Physical appearance of sulphur ointment

Table 4: physical appearance of sulphur ointment

Colour	White, light yellow
Odour	Pungent, distinct, aromatic
consistency	Smooth

Determination of pH The pH of the formulation was measured using digital pH meter, which is given in the table. The value lies in the normal pH range of the skin.

Table 6: pH of ointment

pH			Average pH
Trials			\pm SD (n=3)
1	2	3	2
5.5	6.8	5.7	6.4 \pm 0.12

Homogeneity: The optimized ointment was tested for homogeneity by visual inspection after setting the ointment in a suitable container and checked the presence of any aggregates. The ointment showed good homogeneity devoid of lumps. And also possesses uniform distribution.

Table 7: Showing homogeneity, extrudability, washability

Parameter	Observation
Homogeneity	Homogeneous
Extrudability	Good
Washability	good

Presence of foreign particles: The developed ointment is free from any foreign particles.

Conclusion:

Ointment is getting popularity now a day. They are viscous semisolid preparation mainly for external application. The main advantage of ointment is which allow incorporation of drug and are chemically stable and easy to handle than liquid dosage. Here in this article by using ingredients like wool fat, hard paraffin, cetostearyl alcohol and white soft paraffin simple ointment was prepared and by adding Sulphur to the above preparation Sulphur ointment was prepared, packed labelled and dispensed. The clinical evidence show that ointment are safe and efficient way of treatment for diseases.

Result: preparation and evaluation of sulphur ointment was done.

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