International Journal of Pharmaceutical Research and Applications
Volume 8, Issue 1 Jan-Feb 2023, pp: 223-226 www.ijprajournal.com ISSN: 2249-7781

# Formulation And Evaluation Of Herbal Kajal

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Submitted: 01-01-2023 Accepted: 08-01-2023

**ABSTRACT**

Kajal is inseparable part of women beauty cosmetics because of its medication effect on human eyes. In india, kajal is mainly used for eye makeup. Herbal kajal is to treat eye inflammation and eliminates redness of the eyes. In this attempt was made to prepare kajalby usingeclipta alba, cow ghee,castor oilwhich is the best alternative and herbal source and then after the formation of the kajal to give the spreadability and smoothness to the eye preparation .the herbal kajal has been evaluated in relation to reference products based on selected criteria with its anti-microbial ability.

**Keywords:** kajal, ghee,castor oil, pH, spreadability.

**Objectives:**

- Herbal Kajal containing poly phenolic ,glycosides, flavinoids and tannins are prepared and transformed in TLC method
- In vitro and vivo skin penetration excellent deposition
- Optimized eye Kajal showed excellent optimal safe by protection of eye

## I. INTRODUCTION

Eyes are one of the sense organ which is helpful in the vision and sight. Eyes are the essential connections between the inner and outer worlds. Eyes are known as 'THE WINDOW OF OUR SOUL'. Eyes cosmetics have been used since prehistoric times to emphasize and highlight the eyes to enhance perceived attractiveness and beauty. Eye makeup has been used since long time to improve personal appearance to get better self-confidence or to attract the interest of others.

Amongst the commonest causes leading to eyelid dermatitis, cosmetics used for eyes include eyeliners, mascara, eyeshadow, eyelash, makeup Kajal (kohl) has been defined as ultra fine powder comprising one or more substances like herbs, gemstones, pearls etc.

Womens are more likely to be use of synthetic kajals, traditional women use of synthetic Kajal and mascara on the eye lids of margin .There are mainly carbon compounds and surma contains mercury will results in certain disorders like eye irritation, eye rashes, itching on the surface of eyes, pain in the edges of the eyelid. Prolong usage can cause various health hazards like ocular migration, conjunctivitis ,keratitis, eyelid contact dermatitis, Blepharitis and may even lead to blindness. To over come this effects we have been introduced herbal kajals extracted from the herbs of plants.

In AYURVEDHA, pitta, dosha stands for the element of fire and light that governs our eyes. Vedic science offers several natural, safe and effective techniques to care for the eyes especially for beautification. Science of ayurveda, several herbs and floras were used to make Ayurvedic cosmetics.

Not only that, plant products are used in cosmetics for useful purpose such as moisturizing, whitening, coloring, sunscreen, antioxidant ,immunostimulant, cleansing, preservatives, thickness etc. one of that, Kajal is such cosmetic whose role in eye products can`t be ignored.

Kajal is worn for many reasons including tradition, beautification, towards of the "EYIL EYE". It is the widespread belief that kohl is medically beneficial for the

eyes, and finally because wearing Kajal is encouraged within the sunna, the traditional behavioral guidelines of the Islamic religion.

The number of herbal plants which are used ophthalmic disorders, either single or in compound formulations are present in the Ayurvedic system of medicine, as mentioned in ancient Indian books like **CHARAK SAMGITA, SUSHRUT SANHITA, BHAV PRAKASHA, RAS TARANG,NAYAN DRASTAM AND ASTANGHRIDAY.**

Use of various herbal drugs in different dosage forms like extract, arkasKajal( aqueous

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distillate) fermentation and washing with different extracts have also been prescribed frequently.

## II. MATERIALS AND METHODS

**1.COLLECTION OF RAW MATERIALS:**

The fresh whole plant of eclipta alba and rose pettals were collected from the Anamali hills of Coimbatore district of Tamilnadu, India and were identified and jby DR. Jawahar, senior taxonomist, herbarium and taxonomydivision, foundation for revitalization of local health traditions

**2. EXTRACTION OF JUICE:**

The juice of the leaves of herbs were prepared hyginecally and cleaned with the help of cotton cloth.

**3.SOAKING :**

Juice of the herbs are been soaked in a well closed container with cotton for 8hrs.

**4. DRYING:**

The soaked cotton has been removed frome the liquid and then placed in natural drying until the product was completely loose the water content in it.

**5. COLLECTION OF FOMES:**

The dried cotton cloth piece was used ass a wick and was lightened in a mud containing castor oil. The black soot was collected with the clean dry plate by tapped.

Along with this badham has been buried with the same lamp until it become black in colour the pices of the badhamhas been replaced with the mortor and pistle to make even size poweder by tituration method.

The powder then used with ghee to form a paste form then used to apply as a surma or kajal.

**EVALUATION OF HERBL KAJAL**
**PHYSICALEVALUATION:**

The formulated product afforded a shiny, with a black characteristic odour with a semisolid consistency.

**pH DETERMINATION:**

The pH of various formulation was determined by using pH strip was found to be 6.4 pH.

**SPREADABILITY:**

Spreadability can be defined as the extent of area to which the formulation readily spreads on application to skin or hair.

The bioavailability efficiency of a formulation also depends on its spreading value. The spreadability was expressed in terms of time in secondstaken by two slides to slip off from the formulation, placed in between the slides, under certain load.lesser the time taken for separation of the two slides greater the spreadability.

**STABILITY STUDIES:**

Physical parameters such as colour, odour, texture, and consistency were detrmined at room temperature37$^{o}$c.

**EVALUATION OF BASE:**

The evaluation of base that is ghee was evaluated by acid value and saponification value

- **ACID VALUE:**

The acid value is to neutralize the free acid in 1g of substance the number of substance the number of mg of KOH is required. Weight accurately 5g of the substance in the 250ml of conical flask and add 25ml of alcoholand 1 drop of phenolphthalein. Warm up on the water bath if necessary until substance was dissolved. Titrate with 0.1N KOH shake continuously until pink colour is obtained.calculate the acid value by using the formula:

$$\text{ACID VALUE} = a \times 0.00561 \times 1000/W$$

Where,

a = number of ml of 0.1 KOH required
W = weight of g of substance taken.

- **SAPONIFICATION VALUE:**

The saponification value is the number of mg of KOH required to neutralized fatty acid determined by the following method. Add 20gm of KOH 10ml of water and add sufficient alcohol to make volume 500ml. allow it over night. Weight 2g of ghee in 250ml of conical flask add alcoholic solution of KOH, attach to the reflux condenser set another reflux condenser as blank with other reagents. Boil it until the solution will become miscible .add 1ml of phenolphthalein. Titrate with 0.5N HCL. Note the saponification value.

$$\text{Saponification value} = (b - a) \times 28.05/ w$$

Where,

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W= weight in g of substance taken
a = sample solution reading

**IRRITABILITY TEST:**
The prepared formulation was applied on the eye.it causes no irritation.

## III. RESULT AND DISCUSSION:

The herbal kajal was formulated and evaluated for:

- **Physical evaluation** – black colour, characteristic odor,smooth and semisolid in consistency
- **pH 6**.4,**spreadability test – 293.16cm.gm/ sec.**
- **Irritability:** it does not cause any irritation
- **Stability studies:** The stability study was performed at room temperature and at 40ºc, there are no change occurs in colour ,odor,texture and consistency.

**TABLE NO 01 STABILITY**

| SL NO | PARAMETER | AT ROOM TEMPERATURE | AT 39ºC |
|---|---|---|---|
| 1 | COLOUR | NO CHANGE | NO CHANGE |
| 2 | ODOUR | NO CHANGE | NO CHANGE |
| 3 | TEXTURE | NO CHANGE | NO CHANGE |
| 4 | CONSISTENCY | NO CHANGE | NO CHANGE |

**ACID VALUE:**
Acid value is calculated by using formula;
Acid value = a × 0.00561 × 1000/w where
W is 10,
Acid value = 2.1× 0.00561× 1000/10
Acid value = 1.187

**SAPONIFICATION VALUE :**
Saponification value is caslculated by using a formula :
Saponification value = ( b-a) × 28.05/w
Saponification value = ( 59.6-25.3) × 28.05/4
Saponification value = 240.528

## IV. DISCUSSION

Medicated herbal kajal is formulated and evaluated by different parameter. The physical evaluation test, spreadability, stability table no 1,also the base (ghee) which is use in formulation was evaluated by the parameter like acid value and saponification value which shows the significant effect. All evaluation test results was meeting with cosmeceutical parameters. All

## V. CONCLUSION

Medicated herbal kajal using herbal ingredient was prepared and evaluated. Different parameter like physical evaluation pH, consistency, texture,odour, stability study, spreadability is use for evaluation of medicated herbal kajal and which shows the significant results.this study shows that the prepared herbal medicinal kajal is safe and use as the cosmeceuticals.

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