



Formulation, development and standardization of advance herbal eye preparation (kohl) containing active constituent obtain from various region of India.

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Abstract

In India, kohl has been used for cosmetic purposes for centuries it is use as cosmetic and treats the eye problems. Kajal is mainly used for eye makeup. Kajal is historically called kohl or Surma and is used as an eye - catcher. The aim of the preparing formulation that is medicated herbal Kajal is to treat eye inflammation and eliminate redness of the eye. In this attempt was made to prepare Kajal by using Eclipta Alba, Triphala and Rubica card folia cow ghee, which is the best alternative and herbal source the key benefits of these cosmetics items are greater patient conformity, water-resistant properties, dura bility and cost-efficient shaping curve. Standardized herbs were performed using specific physico -Chemical parameters to determine the values within the specified limits. Evaluation of the medicated herbal Kajal is carried out by using the different parameter like pH, Spreadability, Physical evaluation etc., Evaluation of the Triphala for In-vitro biochemical characterization for anti-inflammatory activity. The herbal

Kajal has been evaluated in relation to reference products based on selected criteria with its anti-microbial ability.

Keywords: Kajal, Triphala, Rubica cardi folia Eclipta Alba pH, Spreadability. Anti-inflammatory

Introduction

Kajal is worn for a variety of reasons, including culture and beauty, to prevent "evil eyes." People use Kajal in the eyes of children to drive away evil as a symbol of protection. In the Ayurvedic language, Kajal is known as Anjanum or eye ointment. There are many types of medicinal plants used for eye diseases. The fight against eye diseases and side-effect-free chemicals remains a challenge for the healthcare system. 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“. Eye makeup has been used since long time to improve personal appearance to get better self- confidence or to attract the interest of others The Indian System of Ayurvedic medicine is as old as our history

and has formed an integral part of the Indian tradition.

Medicinal plants play an important role in supporting health care in India. According to the World Health Organization (WHO), 80% of rural population in developing countries utilizes locally available medicinal plants for their primary health care needs. Ayurvedic cosmetic those not only embellish the face, but also shield it from any adverse effects on the body. Amongst the commonest causes leading to eyelid dermatitis, cosmetics used for eyes include eyeliners, mascara, eye shadow, 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 Kajal, 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 A popular eye product, kohl is described in almost all human cultures as being cool and clean for the eyes and used for the prevention and treatment of eye diseases plant products are used in cosmetics for useful purpose such as moisturizing, whitening, coloring, sunscreen, antioxidant ,immune stimulant, cleansing, preservatives, thickness etc. one of that, Kajal is such cosmetic whose role in eye products can't be ignored. There is a broad belief that kohl is medically beneficial for the eye and that the traditional behavioural guidelines of Islamic religion are ultimately encouraged to use kohl in the Sunnah.

Benefits of applying medicated Kajal

- ❖ Nourish stressful, raw, injured eyes.
- ❖ Give cooling effect to the eyes.
- ❖ Formulation is used as anti-inflammatory agent

- ❖ It is use in treatment for eye redness or Itchy eye.

Effect of herbal ingredient in Kajal

Increase circulation in eyes and provide better nutrition to cell. In this formulation Medicated Kajal was thought to be a revolutionary solution as the cosmeceuticals drug in the fight against eye infections and enzymes, as Kajal is most effective in the maquillage of the skin. Looking at the present study, the aim of the preliminary Ayurvedic Kajal, called soot / lamp black, was to prepare a contemporary formulation, prepared by various herbs namely Eclipta Alba, Rubica cardifolia and Triphala, with a common identity, physical evaluation and safety toxicity study.

Material and method

Collection of raw materials

The fresh whole plant of Eclipta Alba, Rubica cardifolia and Triphala were collected from the Himalaya regien district of Deoria, India and were identified by head of department of Pharma cognoscy of L. N. Pharmacy College Baitalpur Deoria.

Extraction of juice

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

Soaking of juice

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

Drying

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

Collection of foam

The dried cotton cloth piece was used as 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 bad ham has been buried with the same lamp until it become black in colour the piece of the bad ham

has been replaced with the mortar and pastel to make even size powder by titration method. The powder then

used with ghee and honey by making a paste with coconut oil and apply as a Kajal.

Flow chart of making Kajal (Kohl)

Take dried powder of Triphala for preparing the soot



Take cotton cloth piece, in this piece Triphala powder and Rubica cardifolia powder was taken and used as a wickand was lighted in a mud lamp containing ghee.



Now lit the lamp and put the inverted copper plate onit.



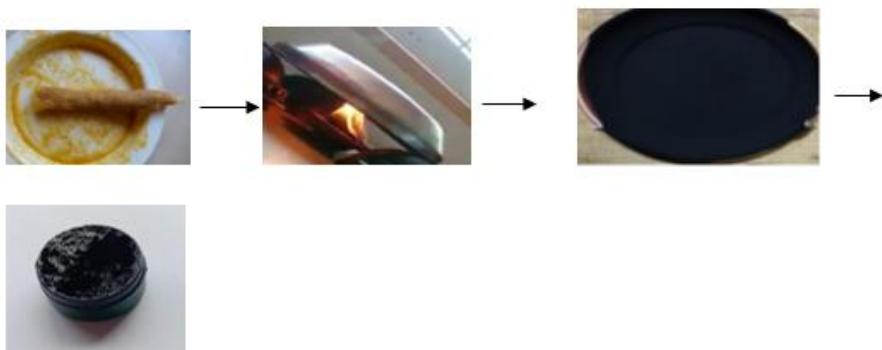
Then scrape the black soot and collected in a clean,dry porcelain dish



Adding the gee andCoconut oil in black Soot



Make a paste form, Kajal is ready



(Diagram of Kajal Preparation)

Table 1: Composition of formulation of medicated Kajal

Sr.No	Herbal Ingredients	Amount Batch (F1)	Amount Batch (F2)	Amount Batch (F3)
1	Triphala powder	5gm	6gm	7gm
2	Coconut Oil	2.5ml	2ml	3 ml
3	Rubica cardifolia	6gm	4gm	4gm
4	Eclipta alba	1.5ml	2ml	1.ml
5	Cow Ghee	14gm	15gm	15gm

Evaluation parameter of herbal Kajal

1- Physical evaluation

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

2-pH determination

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

3-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 alcohol and 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.

4-Spreadability

Spreadability can be defined as the extent of area to which the formulation readily spreads on application to skin or hair. The bio availability efficiency of a formulation also depends on its spreading value. The spreadability was expressed in terms of time in seconds taken by two slides to slip off from the formulation, placed in between the slides, under certain load. If separation of the two slides taken less the time the spreadability will be greater.

5-Saponification value

Table 1: Physical evaluation

Sn.	P. Evaluation	Observation on Batch (F1)	Observation on Batch (F2)	Observation on Batch (F3)
1	Colour	Black colour	Glossy black colour	Black colour
2	Odour	characteristic odour	characteristic odour	characteristic odour
3	Texture	Gritty	Smooth	Slightly Smooth
4	Consistency	Semisolid	Semisolid	Semisolid

Table 2: Stability study

Sn.	Parameter	At room temperature	At 40°C
1	Colour	No change	No change
2	Odour	No change	No change
3	Texture	No change	No change
4	Consistency	No change	No change

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

6-Stability

Physical parameters such as colour, odour, texture, and consistency were determined at room temperature 37°C.

7-Base evaluation

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

8-Irritability

The prepared formulation was applied on the eye. it causes no irritation

Result

Acid value

Acid value is calculated by using formula; Acid value = $a \times 0.00561 \times 1000/w$ where W is 10,

Acid value = $2.1 \times 0.00561 \times 1000/10$ Acid value = 1.187

Saponification value

Saponification value is calculated by using formula-

Saponification value = $(b-a) \times 28.05 /W$ Saponification

value = $(57.6-23.3) \times 28.05 /4$ Saponification value = 2437.5412

PH 6.4,

Spread ability test 293.16cm.gm/ sec.

Irritability it does not cause any irritation

Conclusion

Medicated herbal Kajal using herbal ingredient was prepared and evaluated. Different parameter like physical evaluation pH, consistency, texture, odour, stability study, and spread ability 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. As the contain of the Triphala increases the greater the anti-inflammatory activity of Kajal. Rubia cordifolia L. having numerous medicinal values, when it is used in the preparation of kohl will add to the health of the eyes In the batch F2 more significant result are obtained than other batches.

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