

## Formulation and Evaluation of Herbal Eye shadow

Pratiksha Lohar\*, Aishwarya Pawar, Jyoti S.Pingle, Dr.Vivek kumar Redasani

*YSPM'S, Yashoda Technical Campus , Faculty of Pharmacy, Wadhe, Satara*

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### ABSTRACT

The present work aimed to formulate cosmetic formulations comprising of extract of *Morus alba* L. as a natural coloring agent to overcome the drawbacks associated with synthetic colorants, since the synthetic coloring agents may cause allergic reactions and are reported to be carcinogenic. Dried and powdered fruit of *Morus alba* L. produces pink color. The obtained color was used as a natural colorant in the preparation of cosmetic preparations namely Eye shadow. Different ingredients such as *Morus alba* L fruit powder extract, starch, petroleum, glitter etc were used to formulate the cosmetics using the extracted color.

**Keyword-** *Morus alba* L, Eyeshadow, Carcinogenic

### I. INTRODUCTION

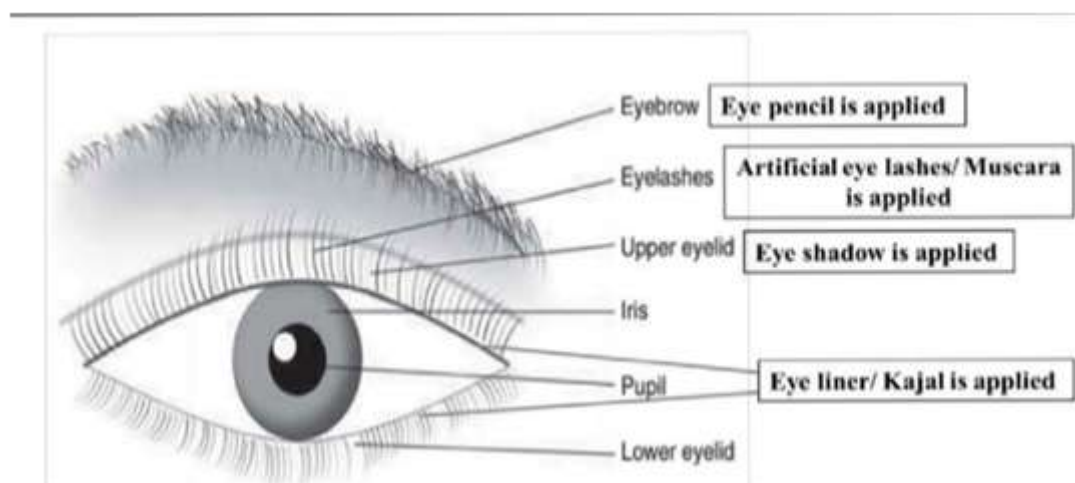
The safety and reliability of natural products have triggered the need to produce herbal-based products. The use Of herbal cosmetics has

become increasingly popular among present-day women. Synthetic coloring agents being Used in cosmetics have been found to produce carcinogenic effects. The objective of the present study involved The preparation and evaluation of herbal eye shadow using color matter from natural sources such as mulberry fruit powder .Prepared herbal eye shadow was evaluated for different evaluation tests such as Color, PH, Flow properties of Powder, Bulk density of powder mixture, Compressibility of powder mixture, PH parameter, Water resistance, Transfer resistance, Dispersion of pigment, Color uniformity,

The mulberry belongs to the genus *Morus* of the family Moraceae.

### Anatomy of eye

The eye is the delicate organ in human body, with a several parts in a near-spherical structure. Each Part of the eye is responsible for a certain action. The external structure of eye is given in FigThe External structures of eye include



### Eyebrow

Thick and delicate hair above eye to prevent water, sweat, or others debris from dropping down in the socket of Eye.

Important to facial expression and human communication

### Eye lids

Thin layer of skin on outer surface to protect surface of eyes from injury.

Protect eye from blinking if foreign matters (dust, dirt or debris) come closed to Eyes and bright light harmful to eyes.

Help to moisten the eyes.

### Eye lashes

Give additional protection to eyes

Filter foreign particles like dirt, dust, debris or dandruff and prevent them from falling the eye surface.

### Eye makeup

During all dynasties and periods, the eye makeup remained a daily pre-requisite for women. Eyes are Not only the windows to the human soul, but also a powerful tool for communication. A brace of Dazzling eyes is a sign of good looks and beauty. Since centuries, eye makeup has played an important Role in highlighting the eyes. In historical eras and time periods, different types of colors, styles and Trends were used to decorate the eyes. Black pigment/color in the form of kohl was used for centuries to accentuating eyelashes, eyebrows and eyelids.

## HISTORY OF EYESHADOW

### Eyeshadows

Eye shadows are available in the market to add dimension and depth to the eyes, make eyes bigger and attractive there by drawing attention to the eye color or eye appearance. They are designed to apply to eyelids and below Eyebrows.

Eye shadows are formulated in the form of crème/gel, stick and powders, either pressed or loose.



### Eyeshadows Type

Eyeshadows are available in the form of creams, sticks and powder either pressed or loose.

### Cream and gel eyeshadows

Cream eyeshadows are anhydrous emulsions prepared by using oils thickened with either waxes or Clay gelling agents. Anhydrous cream eyeshadow is called as cream-to- powder Cream eyeshadow because it glides onto the eyelids in a cream form and then transform into a super soft Powder. They have Higher viscosity and therefore, the pearls and pigments are uniformly distributed into the cream base.

There is an ease in application due to their rheological properties.



Eyeshadow palette. Most powder eyeshadows are matte, shimmery and sparkly and easy to find in most eyeshadow palettes.

Eye shadow (or eyeshadow) is a cosmetic applied primarily to the eyelids to attract attention to the wearer's eyes, making them stand out look.

### Eyeshadow sticks

Eyeshadow sticks are prepared from oils, waxes and texturizing agents and colors are

dispersed in the Same blend. They have a soft cream-like texture and glide smoothly onto the eyelids. The main Excipients are almost same as of lipsticks. But, eyeshadow stick is softer than lipstick. For formulation Of eyeshadow stick, first homogeneous mixture is prepared using pigmented powder with white or off-White components (called as base) like talc blending and grinding. This step is known as extension. After extension of pigments, other white bases are mixed together. Then, Fragrances if present, are Added to a homogenous mix. The blend is sprayed onto the powder with mixing. Pearls are added and Mixed at last. The powder mixture is then ready for compression.



**Powder eyeshadows –**

Powder eyeshadows, either loose or pressed type, are the most popular types. They are applied ontoThe upper eyelid by lightly stroking a fine brush or a soft sponge-tipped applicator, across the skin.



Pressed powder eyeshadows represent the on-the-

go form of loose powders.

Both types of powders are almost similar except that pressed type contains binders to hold the powder components together

**MULBERRY FRUIT**



Scientific name : morus alba

Synonym : Tuti

Family : Moraceae

Chemical constituent : Quercetin, rutin, kaempferol, chlorogenic acid, caffeic acid ,Gallic acid, Anthocyanins, isoquercetin, astragal, ursolic acid, oleanolic acid.

Uses :

1. It help protect cells from damage caused by free radical.
2. It may help reduce the appearance of dark spots, improve skin tone, and protect against induced skin damage.
3. It shows anti- inflammatory activity, anti-microbial activity.

**METHODS OF EYESHADOW PREPARATION**

INGREDIENTS	Quantity taken
Mulberry fruit powder	3.5 gm
Petrolatum	2.5 gm
Starch powder	3 gm
Glitter	1 gm

**Steps-**

1. First the color pigment mulberry fruit powder mix with the binder i.e. starch
2. These mixtures further sieved for achieving a fine uniform powder
3. Add glitter in above mixture and perform flow property and evaluate powder characteristics
4. This mixture adds into petroleum jelly
5. Transfer into suitable container

**FORMULATED PRODUCT**



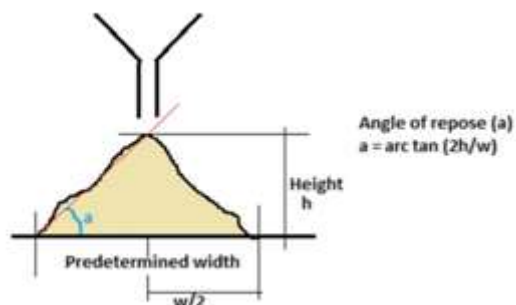
**CHARACTERISTICS-**

1. Produce homogenous color after application
2. Long Lasting effect
3. Good coverage property
4. Dry Quickly on application
5. Water resistance
6. Ease in application and remove without hurting the skin /eye
7. No clumping and flakiness in eyeshadow

**EVALUATION OF EYESHADOW**

**1.Flow properties of powder**

The flow properties of powder type of eye makeup products should be determined especially during Filling process of loose powder to the final container or before the compression of pressed cake in case Of compressed powders. Control of the powder flow and density of final product is important to achieve High quality of the finished eye makeup products. Flow properties are measured in terms of angle of Repose. Smaller the angle of repose, better will be the flow and vice versa. The angle of repose Determined by fixed funnel method.



**2.Bulk density and tapped density**

The bulk density ( $V_b$ ) and tapped density ( $V_t$ ) are measured for determining the trapped air in the Powder and to ensure free followability. The bulk density of a powder is the ratio of Mass of powder Sample (untapped) and its total volume including void spaces/volume. It is expressed as grams per Milliliter Tapped density is obtained after tapping and is measured as the ratio of the known mass of the powder and its total volume occupied without void volume. Tapping of powder is done in a Apparatus that lifts and drops the volumetric cylinder containing powder at a fixed distance. Tapped Density is always higher than bulk density.

**3.Compressibility of powder mixture**

Percent compressibility (Carr's index) and Hausner's ratio is calculated using bulk and tapped densities. Inter-particle interactions significantly influence the powder flow, which are based on these Parameters (formula given below). Lower the values of compressibility index and hausner's ratio, Better will be the flow. These interactions are less significant in free-flowing powder samples, and both The densities will be closer in values. Greater inter-particle interactions are there in poor flowing Powder samples, and a more difference will be observed between bulk se is determined by powder pile method.

$$\text{Compressibility Index} = 100 \times \left[ \frac{(\rho_{\text{tapped}} - \rho_{\text{bulk}})}{\rho_{\text{tapped}}} \right]$$

$$\text{Hausner Ratio} = \left( \frac{\rho_{\text{tapped}}}{\rho_{\text{bulk}}} \right)$$

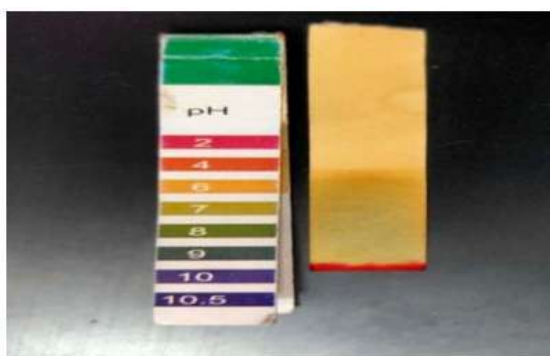
**4.Skin irritation test:**

Apply the eyeshadow on the skin for 10 min & observe



**5. PH parameter:**

Determine the PH of the eyeshadow using PH Paper (5-7)



**6. Water resistance**

The water-resistant or waterproof properties of mascaras, eyeliners or eyeshadows can be evaluated By applying a known concentration of the eye makeup product on the backside of the hand and is Allowed to set for a minute. The hand is then immersed into water or hold it under running water again for a minute. Remaining amount left on the hand after removing the eye makeup product by under water, is analyzed visually or using a soft ware made for such analysis



**EVALUATION OBSERVATIONS**

Evaluation parameters	Inference
Color	Pink
PH	6 to 7
Flow properties of powder	Good
Bulk and tapped density of powder	Good
Compressibility of powder mixture	Good
PH parameter	6 to 7
Water resistance	Water resistance

**II. RESULT**

Last few decades there has been tremendous boost in use of cosmetics by women. However, the hazards caused by these chemicals have come into limelight very recently. The present work formulation and evaluation of herbal Eyeshadow was aimed to formulate a Eyeshadow using herbal ingredients with a hope to minimize the side effect As produced by the available synthetic ones

Hence, from present investigation it was concluded that this formulated herbal Eyeshadow

has better option to Women with Eyeshadow has better option to women with minimal side effect through a detailed, clinical trials. May be done to access the formulation for better efficacy

**III. CONCLUSION**

The use of natural colorants in Eyeshadow formulation having no or minimum side effect. Thus we can move towards the use of natural colorants to prepare Eyeshadow. Hence the use of natural color is step towards healthy cosmetics and which can be widely utilized by the women with

great pleasure.

### REFERENCES

- [1]. A handbook of cosmetics by B.M.Mithal  
M. Pharm , PH D (Professor of pharmacy  
and deputy director) and Colour pigments  
of Beta Vulgaris Taproot (Swethakrutika)  
, S Sairam, Sheik Azhar.
- [2]. R.N.Sahan Pharm, PH D (Professor of  
pharmacy and group leader head) Birla  
Institute of technology and Science.
- [3]. Formulation And Evaluation of Natural,  
Shaikh Sadiqi , Shraddha deb Malik & T  
Ramyasree (Hyderabad) 500097
- [4]. Formulation and evaluation of a herbal  
Eyeshadow : A new approach Rautela  
Sunil , Tailor Chandra  
Shekhar,BadolaAshutosh (Division of  
pharmaceutical sciences, Shri guru ram rai  
institute of technology and Science.
- [5]. Formulation and evaluation of herbal  
Eyeshadow from natural edible colouring  
matter richa Kothari Bhavya Shukla  
,divyagautam ,minishabagaria and  
akansha Sharma (department of chemistry,  
school of Sciences,ITM university,  
Gwalior,(Madhya Pradesh), India(received  
12 November ,2017 accepted 12  
December,2017)(published by research  
trend ,www.resarchtrend.net)
- [6]. Extraction of natural pigment from beet  
root (tanmay Sarkar , mrinalkantilsen and  
sumannihar.
- [7]. Formulation and evaluation of herbal  
Eyeshadow from beetroot (beta vulgaris)  
extract  
Rani\*,G.pooja,V.harshvardhan,B.vamshi  
madhav,B.pallavi.
- [8]. HDRD Gove of India project report by  
prof. Farhan J. AhemadJamiahamdard ,  
New Delhi