



HARMFUL LIPSTICKS AND ITS DISTINCT PERCEPTION BEYOND BEAUTY

Dr. Ajith Kumar

2nd year PG Scholar, Department of Rasashastra & Bhaishajya Kalpana, KAHER's Shri B. M. K Ayurveda Mahavidyalaya, Belagavi, Karnataka.

Dr. P. G. Jadar

M.D. Ph.D(Ayu)., Professor, Department of Rasashastra & Bhaishajya Kalpana, KAHER's Shri B. M. K Ayurveda Mahavidyalaya, Belagavi, Karnataka.

ABSTRACT

From ancient times to the present era, the demand for cosmetics has been high. Lipstick is one such cosmetic that is widely used around the world. This formulation helps in enhancing the beauty of lips and also in brightening the smile as it instantly changes the face from looking drab to diva. There are many varieties and hundred shades of colour in lipstick that are worn by women for reasons like beauty, confidence and self-esteem. By considering all the above points it can be perceived that lipstick plays a very important role in today's generation. With due consideration to its importance, a distinct view regarding its harmful effects on the body is a must to know matter. Lipstick contains many synthetic and chemical ingredients such as preservatives, dyes, stabilizers, mineral pigments etc. Continuous use of these synthetic and toxic colours may cause problems like allergic reaction, irritation etc, chronic use may even cause skin cancer. Recently, research done by scientists working for Berkeley's school of public health at University of California depicted that lipstick and lip glosses contain potentially harmful levels of chromium, lead, aluminium, cadmium and other metals that are toxic to the human body. Keeping this in view, there is a need for preparation of herbal lipstick which is safe and non-hazardous to use. Moreover, these herbal lipsticks also help in keeping lips healthier. This paper describes the harmful effects of lipstick along with the importance of herbal lipstick which will be prepared from natural colour extracts from different plant sources.

KEYWORDS : Cosmetics, Hazardous Effects, Herbal Lipsticks, Synthetic Lipsticks

INTRODUCTION:

Cosmetics are the substances used to enhance the appearance of the human body. It includes lipsticks, creams, lotions, nail polish, facial makeups, hair sprays, hair colours, deodorants, baby products etc and many other types of products that are regularly used in developing and in developed countries. Among these, Lipsticks are the most commonly used cosmetics in the present era¹. Lipsticks are available in hundreds of shades of colours to satisfy the demand for the women. In the present day, colouring lips is a fashion in women's life and use of products has increased, choice of shades of colours, textures have been changed and become wider. These facts can be observed in the market. The global lipstick market size was valued at 12.3 billion USD in 2019 and also rising consciousness regarding personal grooming and appearance among young females². Lipsticks are used to impart an attractive colour and glossy moisture appearance to lips. It contains pigments, oils, waxes and emollients that apply colour, texture, and protection to the lips³. But synthetic Lipsticks contain harmful chemicals which have adverse effects on human health.⁴

The word "Herbal" is a sign of safety as compared to synthetic one. Herbal preparation which includes herbal tablets, herbal shampoo, herbal tonics, herbal lipsticks etc has become popular worldwide.⁵ Especially for lipsticks people are tending to move towards herbal products due to side effects of available synthetic preparation.⁶ Among these herbal preparations, Herbal Lipsticks are made up of pure ayurvedic herbs which don't have any side effects. There are many types of herbal cosmetics which are being used regularly and it satisfies everyone's beauty regime. Due to various adverse effects of Lipsticks available in synthetic preparation, the present work comes up to study the composition of lipsticks in the marketed samples and their hazardous effects and to study the safety and efficacy of herbal Lipsticks which is extensively used by the women of our communities with great surety and satisfaction.

MATERIALS AND METHOD:

Research articles of the last 10 years (2010 to 2020) were reviewed and the information obtained was studied for the presence of hazardous chemicals in lipsticks, their toxic

effects on health and advantages of herbal lipsticks. Ayurvedic classical texts like Charaka Samhita and articles on herbal cosmetics were reviewed to find a suitable alternative from herbal base for synthetic lipsticks that are presently available in the market.

RESULTS AND DISCUSSION:

Most Lipsticks contain heavy metals like Lead, Manganese, chromium, cadmium etc. which is extremely harmful and causes many types of health hazards. Heavy metals and harmful chemicals in Lipsticks can also cause cancer.⁷ The harmful chemicals found in lipsticks and their adverse side effects on the body are listed in table 01. Use of impurified chemicals like lead, manganese, mica etc chemicals that are present in lipsticks cause adverse effects on the human body according to ayurvedic texts as well. Such effects are tabulated in table 02.

Table 01 - Harmful Chemicals In Lipsticks And Their Effects On Human Body

Sl. No	Harmful chemicals and Heavy metals	Effects on body
1.	Bisphenol-A (BPA)	endocrine disruptor, causes fertility and reproductive issues, birth defects, cancer.
2.	Petrochemicals	<ul style="list-style-type: none"> Endocrine disruption It affects growth and development, reproduction, intelligence.
3.	Preservatives- Formaldehyde and parabens	<ul style="list-style-type: none"> These are carcinogen causes Skin irritation, coughing, wheezing, eye irritation etc.
4.	Bismuth oxychloride	Carcinogenic property
5.	Lead	<ul style="list-style-type: none"> Neurotoxin effects on the nervous system. Brain damage, Hormonal imbalance and infertility.

6.	Chromium	It's a carcinogen especially linked to tumours of the stomach.
7.	Cadmium	It can damage kidneys and cause fragile bones.
8.	Manganese	It can cause Parkinson's like symptoms
9.	Aluminium	It is neurotoxin

Table 02 - Effects Of Ingestion Of Impurified Metals And Minerals On Human Body According To Ayurvedic Classics

SL. N	DHATU AND UPADHATU	EFFECTS ON BODY
1.	Naga (lead)	Prameha, kshaya, kamala etc.
2.	Vaikrantha (Manganese, calcium, lithium, silicon)	Kilasa, pandu, daha, parshwa pida etc.
3	Yashada (zinc)	Kushta, kilasa, gulma, prameha
4.	Abhraka (Ferro magnesium silicate)	kandu roga
5.	Swarna makshika (copper pyrite)	kushta

In the literature of Ayurveda, especially in charaka samhita, herbs that induce natural colour for skin have been explained as Varnya Mahakashaya. The drugs like Chandana, Haridra, Manjistha, Nagakesara, Madhooaka, Sariva, Yashtimadhu are mentioned to get glowing complexion and also it is been mentioned that Amalaki, Guduchi, Chakramarda acts as Kushtahara.⁸ Pooja Mishra et.al (2012) have formulated the herbal Lipsticks as per the method described (Sharma, 2005; Jain et al., 2005) for formulating a lipstick from herbal base. They have chosen ingredients such as Niger oil, Kokum butter, Beeswax, Ripe fruit powder of shikakai, Turmeric powder, Strawberry essence, Lemon juice, Vanilla essence etc. They have elaborated the explanation on evaluation of herbal Lipsticks-as it is very much essential to maintain the uniform standard for all herbal Lipsticks as per the Drug and Cosmetics Act. Parameters such as melting point, breaking point, thixotropy character, force of application, surface anomalies etc. were evaluated for the finally developed herbal lipstick(Mittal et al., 2003; Dwivedi et al.,2009). In this paper it was concluded that this formulated herbal lipstick seemed to be a better option to women with minimal side effects although a detailed clinical trial may be done to access the formulation for its safety.⁹ Nileshwari P. Chaudhari et. al (2018) has mentioned the components of lipsticks such as waxes, oils, pigments, and emollients. Here solid waxes and softening agents help in providing hardness and creaminess which helps again in lubrication of lipsticks during application.

Oil such as castor oil or liquid paraffin can be used as this helps in spreading the pigments and gives shine to the lipsticks. Colouring agent and perfume helps in providing colour and aroma respectively. Miscellaneous agents such as preservatives, flavours, antioxidants help in stabilizing the formulation. They have even mentioned many numbers of extraction of natural colouring agents such as i) Extraction of Bixin From Bixa Ornella (Annatto) ii) Extraction of Betanin from Beta Vulgaris (Beetroot) iii) Extraction of Lycopene from Daucus Carota (Carrot) iv) Extraction of Betalains from Hylocereus Polirhizus (Dragon Fruit) v) Extraction of Lycopene from Lycopersicon Esculentum (Tomato) vi) Extraction of Anthocyanins from Ipomoea Batatas (Potato) vii) Extraction of Phenolic Compound from Citrus Sinensis (Orange) viii) Extraction of Lycopene from Citrullus Lanatus (Watermelon). Ideal characteristics of good lipsticks include i) Non-breakable while application ii) It should not melt at room temperature iii) Free from microbial content iv) Nontoxic v) Maintain lip colour for a longer period vi) Pleasant smell and taste.¹⁰ Rautela Sunil et.al (2013) has reviewed formulation

and evaluation of herbal lipsticks. The article concluded that herbal lipsticks are safe with less side effects compared to synthetic ones. The article worked on formulation and evaluation of herbal lipsticks with proven ayurvedic ingredients to minimize the side effects produced by synthetic ones. The list of ingredients used in formulating the herbal lipstick along with their ratio is given in table 03. The evaluation parameters and their values obtained for the finally developed herbal lipsticks are mentioned in table 04. Apart from all these there are many other advantages of using herbal lipsticks. Many plant ingredients have nutrients that help in keeping lips healthier. The phytochemicals present in the herbs acts as antioxidants, anti-microbial, anti-inflammatory etc. As they are derived from plant sources, they have many shades of colours (Grapes, blueberry, avocado, purple cabbage, kiwi) by which different combination and shades can be obtained from above.¹¹ These herbs acts as natural sources of colours extracted from animals, various parts of plants such as fruits, roots, seeds, leaves etc, insects and algae.

Table 03 - Ingredients With Their Prescribed Quantity In The Formulation Of A Herbal Lipstick

S.No	Ingredient	Importance	Quantity (gram)
1	Castor oil	Blending agent	16
2	Paraffin wax	Glossy & hardness	28
3	Bee's wax	Glossy & hardness	36
4	Beetroot juice	Colouring agent	06
5	Ripe fruit powder of Shikakai	Surfactant	12
6	Lemon oil	Antioxidant	01
7	Orange essence	Flavouring agent	1.5
8	Vanilla essence	Preservative	q.s

Table 04 - Evaluation Of Formulated Herbal Lipstick

S. N	Evaluation parameter	Inference
1	Colour	Red
2	pH	6.5±0.3
3	Skin irritation test	No
4	Melting point	60-61
5	Breaking point	31
6	Thixotropy character	9
7	Force of application	Good
8	Perfume stability	+++
9	Surface anomalies	No defect
10	Aging stability	Smooth
11	Solubility test	Chloroform soluble

DISCUSSION:

'Gara visha' in ayurveda is an artificial combination of both poisonous as well as non-poisonous substances that exerts toxic effects after an interval of time. Garavisha (artificial poison) does not kill the person instantly but it gradually affects the body. From the above points that were found we can say that the lipsticks which are available in the market, due to the presence of chemicals and heavy metals and due to the health hazards, that occur on regular use of such Lipsticks, can be correlated with 'Gara visha' in Ayurveda.³ But in the present era, women has even become addicted to Lipsticks due to its attractive look after use. The use of such harmful lipsticks still prevails in the society in spite of the awareness that it could get ingested accidentally while eating unknowingly. Continuing such ingestion of lipsticks would definitely exceed daily intake permitted for aluminum, cadmium, chromium, manganese and thus it results as major emerging health concerns in recent times.

CONCLUSION

This review article concludes that lipstick prepared out of herbal ingredients is very safe to use with minimal side effects, and lipsticks that are prepared out of using natural colors from

plant sources acts as nutrients, anti-Oxidants, antimicrobial, anti-inflammatory which even helps in keeping lips healthier. By using these herbal lipsticks, the adverse effects can be reduced to a greater extent. So, this article encourages the preparation and usage of herbal lipsticks there by addressing major health concerns raised due to use of harmful chemicals.

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