

# Regulation of synthetic colours & other colours in India

March 9, 2023

**In news**– On the occasion of Holi, most of us play with harmful colours. In this context, let's understand what are organic and synthetic colours & how these colours are regulated in India.

## **Cause of concern-**

- Traditionally, Holi, a harvest festival, was played with colours made of spring flowers which bloom this time of the year, and other natural ingredients such as leaves, tree bark, etc.
- Over the years, colours made from chemicals flooded the market, easy on the pocket and leaving long-lasting stains.
- Today, genuinely natural gulaal or colour is made from dried flower petals, vegetable dyes, starch, leaves, etc. However, some manufacturers also use food-grade colours, which, though technically fit for consumption, are synthetic.
- **Not all manufacturers display any accreditation or hallmark to prove that their product is all it claims to be.**
- **While some packets do state they are certified by National Accreditation Board** for Testing and Calibration Laboratories or the International Organization for Standardization (ISO), others simply say they are “lab-tested”.
- The list of ingredients most mentions flowers and plants, but if the starch or essential oil used is not mentioned, that means the list is incomplete.

## **FSSAI permitted food colours and flavours-**

Only the FSSAI permitted food colours and flavours can be used in food items. **FSSAI-Approved Food Colours are:**

- Erythrosine- It imparts the food a red colour,
- $\beta$ -carotene: It is commonly called C.I. natural yellow 26 and belongs to the class of carotenoids. It contains all trans- $\beta$ -carotene
- Chlorophyll: Chlorophyll, also known as C. I. Natural green 3, is a plant-based green pigment is used as a colouring material for foods.
- Riboflavin: It is yellow to orange-yellow and approved for the use in food products as a colourant.

### **Why are synthetic colours unsafe?**

- Multiple studies over the years have shown that **synthetic colours have chemicals that can harm your skin, respiratory tract, and eyes.**
- These chemicals also **harm the environment, adding particulate matter (PM)** to the air and taking years to decompose.
- A 2009 study in the Indian Journal of Dermatology, titled 'The Holi Dermatoses: Annual Spate of Skin Diseases Following the Spring Festival in India', says, "Some of the popular colors and their **ingredients are black (lead oxide), green (copper sulfate and malachite green), silver (aluminum bromide), blue (Prussian blue), and red (mercury sulfate).**
- **The dry colors, commonly known as 'gulals' or 'abeer', have two components – a colorant and a base, both of which may cause cutaneous problems.**
- **Mica dust is often added as a sparkling agent** to the dry powders that can lead to multiple microtraumas of skin and predisposition to infections.
- Use of contaminated starch or wheat flour can further increase the chances of skin or ocular infections.
- Particulate matter are basically tiny pieces of solids or liquids suspended in the air, that can get into your

eyes, nose, throat, and lungs, causing infections and breathing trouble.

- **A 2016 study published in the National Library of Medicine, titled 'Holi colours contain PM10 and can induce pro-inflammatory responses.'**

### **About Holi festival-**

- Holi also known as the Festival of Colours, Festival of Spring, and Festival of Love, is one of the most popular and significant festivals in Hinduism. It celebrates the eternal and divine love of the god Radha and Krishna.
- The day also signifies the triumph of good over evil, as it commemorates the victory of Vishnu as Narasimha Narayana over Hiranyakashipu. It originated and is predominantly celebrated in the Indian subcontinent but has also spread to other regions of Asia and parts of the Western world through the Indian diaspora.
- Holi celebrates the arrival of Spring in India, the end of winter, and the blossoming of love, and for many, it is a festive day to meet others, play and laugh, forget and forgive, and repair broken relationships.
- The festival is also an invocation for a good spring harvest season.
- It lasts for a night and a day, starting on the evening of the Purnima (Full Moon Day) falling in the Hindu calendar month of Phalguna, which falls around the middle of March in the Gregorian calendar.

### **National Accreditation Board for Testing and Calibration Laboratories (NABL)-**

- It is a Constituent Board of Quality Council of India. NABL has been established with the objective to provide Government, Industry Associations and Industry in general with a scheme for third-party assessment of the quality and technical competence of testing and calibration laboratories.

- In order to achieve this objective, NABL provides laboratory accreditation services to laboratories that are performing tests / calibrations in accordance with ISO/IEC 17025:2005 and ISO 15189:2012 for medical laboratories. These services are offered in a non-discriminatory manner and are accessible to all testing and calibration laboratories in India and abroad, regardless of their ownership, legal status, size and degree of independence.
- Based on evaluation of NABL operations by APAC in 2000, NABL has been granted signatory member status by APAC and International Laboratory Accreditation Cooperation (ILAC) under their Mutual Recognition Arrangements (MRAs).