



Ways to Celebrate Eco-Friendly Holi

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Abstract:

Holi is a spring festival, also known as the festival of colours or the festival of love. These colours are made from harmful chemicals like lead, glass pieces and other alkaline materials. Since, numerous communities use colours for Holi affecting health of numerous people, it is essential to look out for alternatives for colours in order to protect our health and save the environment. The paper identifies the harmful effects of the colours and suggests alternate eco-friendly ways of celebrating the festival.

Keywords – Eco-friendly, Holi, chemicals

Introduction -

Several stories are associated with Holi in Hindu scriptures but the colours to play Holi festival only find its origin in the trees and flowers in spring season. Earlier, colors were made from natural products. In fact, all the colors used in various Hindu celebrations, art forms and paintings were made using natural products. Lord Krishna played Holi using the Tesu flowers which are found in abundance during the season.

Currently, the markets are full of various packaged and loose colours, dyes and sprays these days. Also, a large number of people are purchasing these open and unhygienic powders and wet colours in least regard to their skin and health. Various non-packaged colours and paints available in the market are adulterated with high content of chromium, silica, lead and alkaline material. The experts, added in the past few years, several cases had come into light in which glass particles were also added. Synthetic Holi colours contain cheap, toxic substances which affect human health including mica, acids, alkalis, pieces of glass, etc. The mildest forms of adverse health effects include hair and skin problems like abrasions, irritation, itching, rashes, allergies, eye infections, hair roughness, etc. whilst the more serious forms include poisoning, impaired vision, respiratory problems and cancer. The risks increase when these colours are mixed with oils and fluids and applied to the skin.

These chemical colours are usually sold loose in the market and consumers have little or no information about the source of the colours, or their harmful effects. Even when sold in a packaged form with a clear sign indicating these colours are 'for industrial use only', consumers do not understand the implications.

Description:

Other harmful substances found in Holi colours and their health effects are:

- Chromium: Can cause bronchial asthma, allergies.
- Nickel: Can cause dermatitis pneumonia.
- Cadmium: Can cause weak and brittle bones (Itai Itai disease).
- Zinc: Can lead to fever.
- Iron: Can cause skin sensitivity to light.
- Mica (*abeer*): This is a shiny powder used to give colours a metallic look. It can cause skin allergies and irritation.





A new trend of late is to market relatively non-toxic chemical dyes as eco-friendly Holi colours. Whilst these may be safer than the regular chemical colours, they are by no means natural or 100% safe or biodegradable, even when mixed to edible fillers like flours or starch. In addition to effects on human health, chemical Holi colours also affect our environment, poisoning our soil and water and remaining there for centuries.

In order to avoid usage of harmful chemicals while saving lakhs of litres of water, we launched “An Eco-friendly Holi” campaign at Shri Shivaji Science College. The campaign is going on from the past 10 years at college with active participation from the staff and students. The participants have been encouraging the natural way of celebrating Holi outside college as well.

Table. 1-The chemical composition of Holi colours

Colour	Contents	Effects
Black	Lead Oxide	Lead crosses the placenta and is transferred to the unborn baby. It can cause damage to the nervous system. It also increases the risk of miscarriage, having a low birth weight baby or premature birth
Green	Copper Sulphate and malachite green	It can pass through the placenta. It can affect fetal growth and cause damage to the skeletal system and in some cases can be fatal
Silver	Aluminium Bromide	Carcinogenic Skin allergies or discoloration, dermatitis and irritation of mucous membrane.
Blue	Prussian blue	Skin irritation or dermatitis. Eye allergy, temporary blindness, or watering, soreness and redness of the eyes
Purple	Chromium iodide	Bronchial asthma, Allergies
Purple	Gentian violet	In the concentrated form, it can cause more serious eye problems like keratoconjunctivitis and dark purple staining of the cornea.
Red	Mercury sulphite	Mercury can pass through the placenta to a growing baby and affect fetal growth, the nervous system, cause disability and in extreme cases even prove fatal. Renal failure and skin irritation

Table. 2-Methods of making natural Colours:

Saffron Colour	The Flame of the Forest (<i>Butea monosperma</i>), known as Tesu, Palash or Dhak, is the source of the wonderful, traditional color for Holi. The -owers are soaked overnight in water. The mixture can be used as it is and can also be boiled. Palash -owers are the best to play Holi with.
Green Dry Colour	(1) Use henna powder, separately or mix with equal quantity of any suitable -our to attain a lovely green shade. (2) Make use of henna mixed with amla to make brown color. It is good for the skin and the hair.
Dry Yellow Colour	Dry yellow color can be obtained by mixing turmeric powder and besan (gram pulse -our) or by grinding Amaltas (<i>Cassia stula</i>) and Marigold -owers dried in shade.
Wet Yellow Colour	(1) Add one teaspoon of turmeric powder to two litres of water and stir well. This can be boiled to increase the concentration of color and further diluted. (2) Soak Amaltas (<i>Cassia stula</i>) or Marigold -owers in water. Boil and leave overnight.

Conclusion:

It is important that we realise the harmful effects of the chemical colours and wastage of water during Holi. Hence, it is imperative for us, as responsible citizens to practise eco-friendly ways of celebrating festivals such as Holi. The identified natural substances can be used for playing Holi in order to avoid harm to our health and environment.





References

1. Religions – Hinduism: Holi, BBC. Retrieved on 2011-03-21
2. Holi Festival as celebrated in Western United States
3. Toxics Link (February 2000). The Ugly Truth behind the Colorful World Fact sheet
4. Goethe, Johann Wolfgang von, Theory of Colors, Translated by Charles Lock Eastlake, M.I.T Press, 1970, ISBN 0-262-57021-1

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