



## The Art of Making Colors from Mythological Traditions to Organic Holi Colors

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### Aim

The study was work on, the basic and considering the environmental conditions, have made these organic holi colors it is better than the artificial colors. In this regard, have thoroughly investigated the Natural Colors Phenomina.

### Methodology

This experiment started with the extract of edible vegetables or flowers like, *Hibiscus rosa-sinensis*, *Rosa x hybrida*, *Spinacia oleracea*, *Beta vulgaris* extracted from beetroot and juices made from its extracted colour, and from this color we made different types of the form of colors union.

### Results

As a discussion colors that indicate to our mind that from which compound it is made and from things in this researched and found make natural colors from the juices of other vegetables and flowers, like we made green color from spinach extract, yellow from turmeric, beetroot and hibiscus rose to light red and dark red color and after preparing its colors, we mixed corn flour in it and changed it into such powder form. And in this we used rose water which we prepared ourselves in laboratory. This colors can be used in cultural festivals and different types of religions celebration we don't get any side effects from it.

### Interpretation

Every natural thing displays some colors. denoting natural colors from the same color by denoting color from that natural thing. It approves of natural dyes.

**Key Words:** Preparation of colors by extracting extracts from juices of vegetables and flowers, natural use of these colors and display of those colors as a many types of occasion.

### Introduction

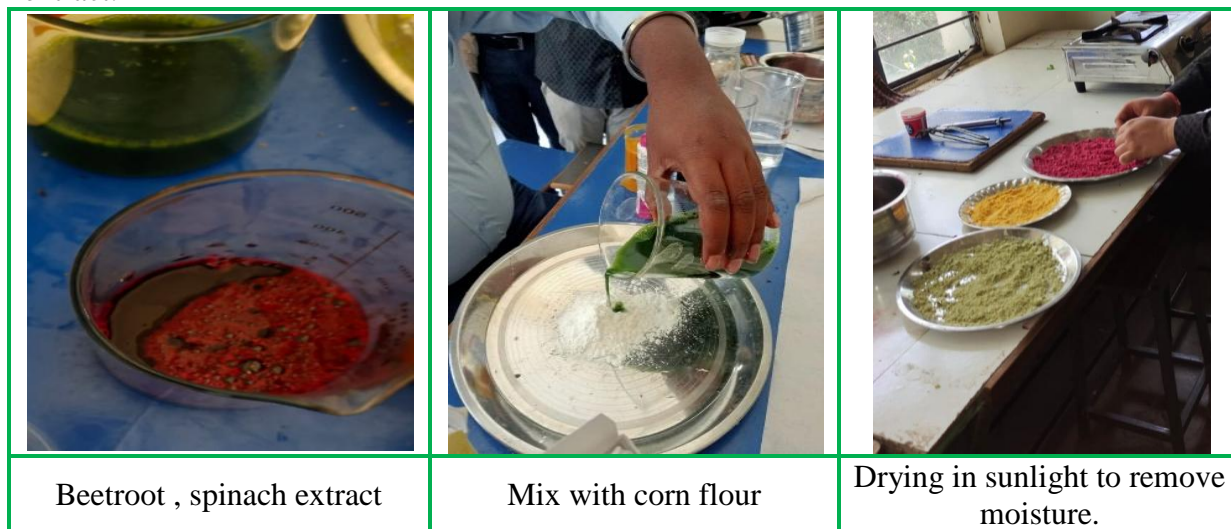
As you all know that nowadays the era of hurry has come. Nowadays people have given up worrying about their health in a hurry and they pick up whatever they want in the market. In such a situation, the main objective of searching the work of making organic holi colors is that people can get better knowledge of organic colors nature.

Organic holi colors are very good and the shine of these colors is also very beautiful. The method of making organic holi colors is very simple. You can also make it at home. Organic holi colors, it is recognized as these colors are not harmful for your body in any way. Not Harmful for your skin ,if these organic colors reach inside your body in any way. Even then they are not harmful because none of these are natural things that never provide toxic elements to your body. That's why it is considered very safe. Using these colors can do

many good things in such uses in festival and all off occasion. It is friendly toward environment because, it is made from extraction of natural things and materials require for this organic colour can be available at home in a very easy way . it prevents from many severe disease like Skin cancer, Eye problem, etc. It also has a good space into traditional occasion. Organic holi colors connect the people with nature and utilization of natural things into life and aware the people toward organic things and explore itself into the nature.

### Raw Material

corn flour , turmeric , rose water , rose extract , hibiscus flower, rose , spinach , beetroot extract.



### Procedure for Making Colors

In this process, first of all we took utensils on which we put corn starch means corn flour. We made beetroot juice on that maize flour. Then we made beetroot juice by grinding it in a mixer and took extracts. We made pink color from that beetroot . We used the rose water ,and rose extract to make that color. Due to which the fragrance also became sufficient in it and in this way our beetroot or organic pink colors was ready. To make the second color, we first took spinach and made green color from spinach. After taking out the extract, we mixed it in corn flour. After that we dried it and stored it in powder form. Similarly we made the third color. The third color we made from turmeric, on haldi mixed rose water and rose extract.

### Harmful Substances found in Artificial Holi Colors

Sr. No.	Colors	Chemical substance from which it is obtained	Harmful effect and causes disease
1	Green	Copper sulphate	Eye disorders that cause blindness
2	Red	Mercury sulphite	Gives birth to cancer and is very dangerous.
3	Purple	Chromium iodide	Allergies aggravate asthma. Proves more harmful for asthma patients.
4	Silver	Aluminium bromide	cause lead to cancer
5	Black	Lead oxide	cause renal failures or learning Disability
6	Shiny	Mica granules and powdered glass	skin rashes and make skin Sensitive to sun
7	Pastes	Industrial dyes mixed with inferior Quality oil	Blindness

## Organic Holi Colours Features

No matter how attractive the synthetic colours may seem, it is very essential to check the quality so as to avoid health problems that may follow. This ancient festival of colours can be more fun and harmless if you play with natural or organic holi colours. In fact, in recent years, the importance of eco-friendly and chemical-free colours has been stressed. These colours are skin-friendly and are also not harmful to the environment Gaikwad et; al.

### The Basic Features of Organic Holi Colours are:

- ✚ Non-toxic
- ✚ Skin-friendly
- ✚ Free from heavy metals
- ✚ Easy to remove
- ✚ Organic ingredients

### Ingredients used in herbal organic holi colours are as follows:-

Sr. No.	Colour	Plant part from which it is obtained
1.	Yellow	Turmeric ( <i>Curcuma longa</i> ), dried marigold flowers, yellow chrysanthemums
2.	Green	<i>Spinacia oleracea</i>
3.	Red	Beetroot <i>Beta vulgaris</i>

**Environment Friendly:-** Synthetic colors have a negative impact on air, water, soil, biodiversity and the environment as a whole. On the other hand natural colors are eco-friendly which means you can splash around as much colors as you want without suffering any sort of (green) guilt (India today paper).

**Organic Holi Colors can also be made at Home:-** Household ingredients can be used to make colors at home. For this, to make dry powder colors, take a mixture of which fruits and vegetables, fruit, pomegranate flowers, hibiscus and rose water. 100 grams of Tesu flowers overnight to make water colors. It has been prevalent in our Hindu tradition since time immemorial and in olden times villagers celebrate Holi festival using these colours.

**How can we use organic holi colour used in different way:-** The specialty of organic color is that you can use it on your Holi festival, but even after going to the festival of Holi, according to Indian tradition, it is also appropriately used in Rangoli made on various festivals in Indian tradition. can be used. It is not harmful in any way and isa very useful and safe option for women and children at home.

## Materials and Methods

When it comes to colors, it can be directly linked to a lot of things, because colors are there, which shows us how important they play a role in our cultural walls, from our mythological traditions to our real life. These are the colors we created in our rsearch. Made keeping in



mind a perfection home method and the method is very natural. It is very safe for our skin. If we look at it, then we have made pink color from beetroot. Looking at its method, we took two cups of water. You can take rose water or your own plain water in it. You can take rose extract, add beetroot juice to it. After this, expose into the sunlight for 20 minutes so that the perfection of moisture comes out of it and then store it in a glass vessel and keep it.

## Results and Discussion

This work demonstrates that preparation of Organic holi colors from the extraction of Fruits, Vegetables and Flowers that provides:-

- ✚ Better knowledge toward Natural things and doesn't get any harmful effect.
- ✚ Preparation of colors in home made way.
- ✚ Cost effective.
- ✚ Free from the toxicity.

## Conclusions

Holi festival is famous and popular all over the world, but it comes with many diseases along with it. After holi, we see that the color always remains on our hands for three-four days because it is an artificial color or does not come off easily. It causes itching in your skin and its various types of skin related problems arise. Our organic holi colors can solve this and the special feature of holi colors that I have discovered is that they are made from domestic products. They are made from food items. That's why they are not so harmful for your skin and for your health as we find that various types of toxic elements are found in artificial holi colors which cause blindness if they go into the eyes and much more than this. One should not buy goods blindly and one should increase his natural basic capacity more so that more people can get employment and there is another aspect of holi that women are also involved in the work of home industry.

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## References

1. Holi – the festival of colors. Indiaexpress.com -Festivals of India. Available from: <http://www.indiaexpress.com/rangoli/Holi.html>. [last accessed on 2008 May 13].
2. Fuchs, S., "The funeral rites of the Nimar Balahis" , in George Washington University Institute for Ethnographic Research, 1940, Vol. 13, pp. 49-79
3. Garg R.K., Kaur R., Kumari H., "New visualizing agents for latent fingerprints: Synthetic food and festival colors" , in Egyptian Journal of Forensic Sciences, 2011, Vol. 1, Issues 3-4, pp. 133-139
4. Ganesh Mulwad, "Holi Mumbai 2020: Know How Mumbaikars Reveal Their Happy Colors!" World Journal of Pharmacy and Pharmaceutical Sciences, Vol. 3, Issue 9, 2014.
5. Chauhan D, Arora R, Das S, Shroff D, Narula R. Bilateral periorbital necrotizing fasciitis following exposure to Holi colors: A case report. Indian J Ophthalmol 2007;55:373-4.
6. Katrin Bossmann, Sabine Bach, Conny Höflich, Kerttu Valtanen, Rita Heinze, Anett Neumann, Wolfgang Straff and Katrin Süring, Holi colours contain PM10 and can induce pro-inflammatory responses Journal of Occupational Medicine and Toxicology (2016) 11:42
7. Sudip Kumar Ghosh, Debabrata Bandyopadhyay, Gobinda Chatterjee, Debabrata Saha The 'Holi' Dermatoses: Annual Spate Of Skin Diseases Following The Spring Festival In India, Indian J Dermatol 2009;54(3):240-2

8. Dada T, Sharma N, Kumar A. Chemical injury due to colors used at the festival of Holi. *Natl Med J India* 1997;10:256.
9. Velpandian T, Saha K, Ravi AK, Kumari SS, Biswas NR, Ghose S. Ocular hazards of the colors used during the festival-of-colors (Holi) in India: Malachite green toxicity. *J Hazard Mater* 2007;139:204-8.
10. Kapoor, V.P. and Pushpangadan, P., "Natural dye-based Herbal Gulal", *Natural Product Radiance*, 2002 pp. 8-14.
11. The safe Holi campaign. Kalpavriksh Environment Action Group. Available from: <http://www.kalpavriksh.org/f1/f1.4/GAHoli1> [last accessed on 2008 May 13].
12. Bell ML, Ebisu K, Leaderer BP, Gent JF, Lee HJ, Koutrakis P, et al. Associations of PM<sub>2.5</sub> constituents and sources with hospital admissions: analysis of four counties in Connecticut and Massachusetts (USA) for persons  $\geq 65$  years of age. *Environ Health Perspect*. 2014;122(2):138–44.
13. Pachauri T, Singla V, Satsangi A, Lakhani A, Kumari KM. Characterization of major pollution events (dust, haze, and two festival events) at Agra, India. *Environ Sci Pollut Res Int*. 2013;20(8):5737–52.
14. Adar SD, Filigrana PA, Clements N, Peel JL. Ambient coarse particulate matter and human health: a systematic review and meta-analysis. *Curr Environ Health Rep*. 2014;1:258–74.
15. Faustini A, Stafoggia M, Colais P, Berti G, Bisanti L, Cadum E, et al. Air pollution and multiple acute respiratory outcomes. *Eur Respir J*. 2013;42(2):304–13
16. Zeka A, Zanobetti A, Schwartz J. Short term effects of particulate matter on cause specific mortality: effects of lags and modification by city characteristics. *Occup Environ Med*. 2005;62(10):718–25.
17. Yitshak-Sade M, Novack V, Katra I, Gorodischer R, Tal A, Novack L. Nonanthropogenic dust exposure and asthma medication purchase in children. *Eur Respir J*. 2015;45:652–60.
18. Liebers V, Stubel H, Duser M, Bruning T, Raulf-Heimsoth M. Standardization of whole blood assay for determination of pyrogenic activity in organic dust samples. *Int J Hyg Environ Health*. 2009;212(5):547–56.
19. Monn C, Becker S. Cytotoxicity and induction of proinflammatory cytokines from human monocytes exposed to fine (PM<sub>2.5</sub>) and coarse particles (PM<sub>10-2.5</sub>) in outdoor and indoor air. *Toxicol Appl Pharmacol*. 1999; 155(3):245–52.
20. Brown DM, Donaldson K, Stone V. Effects of PM<sub>10</sub> in human peripheral blood monocytes and J774 macrophages. *Respir Res*. 2004;5:29.
21. Bengalli R, Molteni E, Longhin E, Refsnes M, Camatini M, Gualtieri M. Release of IL-1 beta triggered by Milan summer PM<sub>10</sub>: molecular pathways involved in the cytokine release. *Biomed Res Int*. 2013;2013:158093.
22. Yang EJ, Kim S, Kim JS, Choi IH. Inflammasome formation and IL-1beta release by human blood monocytes in response to silver nanoparticles. *Biomaterials*. 2012;33(28):6858–67.
23. Hansen LA, Poulsen OM, Wurtz H. Endotoxin potency in the A549 lung epithelial cell bioassay and the limulus amebocyte lysate assay. *J Immunol Methods*. 1999;226(1-2):49–58.
24. Miyata R, van Eeden SF. The innate and adaptive immune response induced by alveolar macrophages exposed to ambient particulate matter. *Toxicol Appl Pharmacol*. 2011;257(2):209–26.
25. Bush RK, Portnoy JM, Saxon A, Terr AI, Wood RA. The medical effects of mold exposure. *J Allergy Clin Immunol*. 2006;117(2):326–33.