

Roses are red, Violets are blue

Beets are pink and Turmeric is yellow?

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The colorful clothes we wear today was made by a lengthy process that most know as dyeing. Some of us may have even experimented with a DIY dyeing known as tie dyeing. People often use this method to revive old clothing items, bed sheets, or anything made of fabric. Currently we can dye our clothes with ready-made dyeing solutions but how did this dyeing process come to be? I will briefly talk about dyes and the history of dyeing clothes and what used to be used for dyeing fabric. I will also discuss my findings from my own resist dyeing project and the process I went through to achieve this research.

Dyes are used to add color to textiles and there are three main categories of dyes, there are natural dyes, synthetic dyes, and pigments. I will be focusing on natural dyes and how they work. As we can take away from the name, this category of dye is all natural. It comes from materials found from nature such as plants, minerals and sometimes bugs. Some examples would be indigo and woad for blue, madder and cochineal for red, and chamomile and safflower for yellow. It is not limited to these choices, for my project I used turmeric for yellow and red beets for red/pink. So, my choice of dye is originally from plants making it a natural dye. Using natural dyes require a lot of water to dissolve the dyestuff and make a concentrated bath for the fabric. Dyestuff is a substance that yields a dye or that can be used as a dye, especially when in solution. This process of using natural dyestuff dates back to about 15,000 BCE, which also includes the using them as paints.

The general use of turmeric dates back to about 4000 years ago from the Vedic culture based in India (Prasad & Aggarwal 2011) It was mainly used as a spice and had some religious significance. Turmeric also has a long history of being medicinal, which continues till today. Soon the merging of turmeric and textiles came to be through “Ayurvedic textiles”. Ayurvedic is the “knowledge or science of life”, a system of healing born in the Vedic culture. (Startup

Fashion, Bucci 2015) Ayurvedic fabrics was used to be in contact with the skin so that it can absorb the health benefits of turmeric. Interestingly, it has earned the nickname “Indian solid gold” due to the benefits. Turmeric gives a very bright hue of yellow and depending on the duration you keep your fabric in your dyestuff, turmeric can dye in shades of yellow. Obtaining turmeric was very easy and inexpensive for me. Since my family comes from a South Asian background, we always have turmeric in the house to cook with. Recently, my mother came back from Bangladesh and brought freshly grounded turmeric from her gardens. This made me expect the color of the dye to be very vibrant and my expectation were met. The second dyestuff I used was red beet, but I wasn’t very successful using it. Red beets as a dyestuff dates back to the 16th century and is native to the Mediterranean where it was used as a natural red dye and even used as a hair dye. Similar to turmeric beet have a wide range or medicinal properties and was mainly used as medicine. If the beet dyestuff is properly concentrated it can give colors from red to light pink. Accessing red beets was very easy and the price was not too expensive. Now I will share the process of resist dyeing with these two dyestuffs.

Resist Dyeing Process

- **Making the dyestuff:**



On the left I am mixing 2 tablespoons of turmeric with 4 cups water. On the right, I have 4 beets cut in water enough to cover the beets. I let each come to a boil and simmer for at least an hour to get the best pigment.



- **Tying my choice of clothing**



The first two photos I am doing a shibori inspired resist dyeing technique. Instead of using rubber bands I used string to get a tighter resist on a cotton long sleeve mock neck. I started from one corner of the shirt and worked my way down, making the second photo the result of tying. The photo on the far right is has a similar shibori style tie but randomly placed and covering a majority of the cotton shirt.

- **Prepping the shirts**



Here is a step I made a mistake for one of the shirts. I got too excited about the dyeing process that I forgot to prep my short sleeve t-shirt. That resulted in me doing the long sleeve shirt as a backup to get proper results. In this photo I have a mordant made of half cup of salt in 8 cups of water which I boiled first. After it came to a boil, I put in the long sleeve shirt to simmer for about one hour in hopes that the dyestuff will stick better.

- **Putting the clothes in the dyestuff**



The first two photos are of the long sleeve in the turmeric dyestuff and the far-right picture is of my red beet dyestuff. I let the long sleeve sit in the turmeric overnight and the one in red beet dyestuff I soaked it in for few minutes and put the shirt in a bag over night.

- **End Results**



These were the shirts after rinsing till the water ran clear. As we can see the Turmeric dyestuff came out very bright while the red beet one did not, but there definitely some key take away after this project.



I found that letting the red beet shirt soak less than the turmeric was one of the reasons it did not get that pigmented. The lack of prepping the short sleeve shirt was probably a reason the dyestuff did not stick well also.

Reference

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