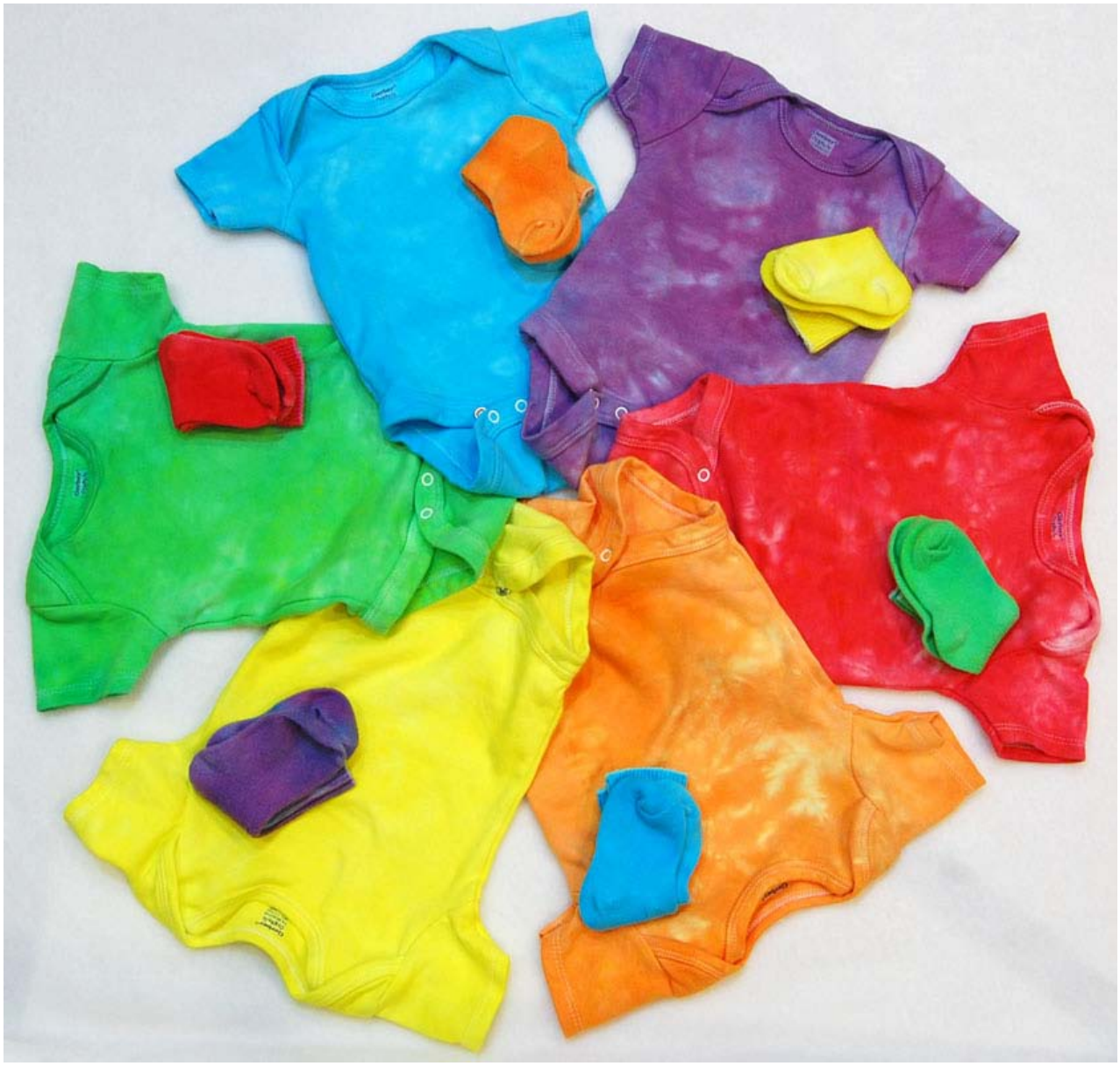
Dyeing a Color Wheel of Onesies: a Tutorial from Candied Fabrics

My go-to present for a baby shower is a bunch of dyed onesies and socks. Quick to do and oh so useful, they're always a favorite at the shower. I love seeing them all laid out in a color wheel:



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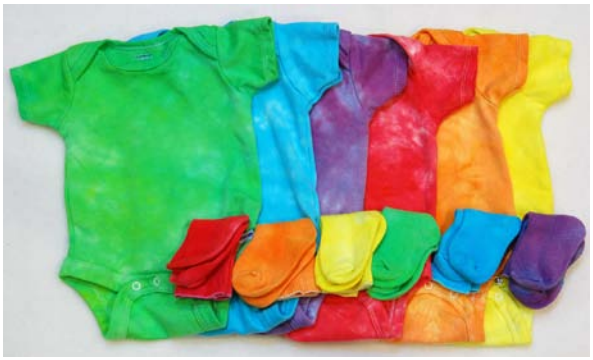
What you'll need

- 6 onesies and 6 pairs of socks, 100% cotton
- Soda Ash (Sodium Carbonatet, it's often called "pH Up" and is available in the pool supply aisle of big box stores, your local pool supply store or at online dye suppliers).
- 3 primary colors of Procion MX Fiber Reactive Dyes. Available from:
    - http://www.dharmatrading.com/ for West coast folk
    - http://www.prochemicalanddye.com/ for East coast folk
    - These dyes may also be available locally at craft supply stores, but these do have a shelf life and need to be stored properly (heat and moisture destroy their reactivity) so "buyer beware".
    - For this tutorial I used these dyes:

Dye Color	Code	Dharma's name	PROchem's name
Yellow	yellow MX-8G	#1 lemon yellow	#108 sun yellow
Fuscia	red MX-5B	#12 light red	#305 mixing red
Turquoise	turquoise MX-G	#25 turquoise	#410 Turquoise

- 6 small-ish plastic containers (I used 3 cup cheap store brand "Tupperware")
- 1 larger bucket
- 3 plastic cups and spoons
- 3 containers for dye (I use recycled water bottles with "sports squirter tops")
- 1 measuring cup you'll no longer use for food
- A small graduated cylinder, syringe or a teaspoon and tablespoon
- Disposable gloves (or those Playtex dishwashing gloves)

Overview



The type of dyeing we will be doing is called low water immersion dyeing. A minimum of liquid is used to suspend the dye, this allows a maximum distribution of dye in small volumes, so it can be done in a small volume, like an old yogurt container. What we'll be doing is:

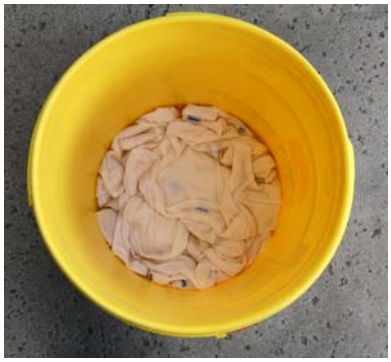
1. Onesie preparation
2. Dye preparation
3. Dyeing
4. Washout & Enjoyment!

A word about safety: all the chemicals we use are as safe as or safer than the stuff you use cleaning the bathroom. That being said, Procion MX in powder MUST be treated with RESPECT. It is a very fine powder, and should not be allowed to come in contact with your skin or mucous membranes (especially your lungs). Prolonged exposure to the powder could cause your body to develop a severe allergic response to the dye, such that you could never use it again. As "prolonged exposure" is different for everyone, you have to minimize contact with the powder: Thus always wear a particulate filter mask and rubber or latex gloves when around the powder form of Procion MX and clean up any spills immediately! Common sense also tells us to wear old clothes you don't mind getting dye on, just in case.

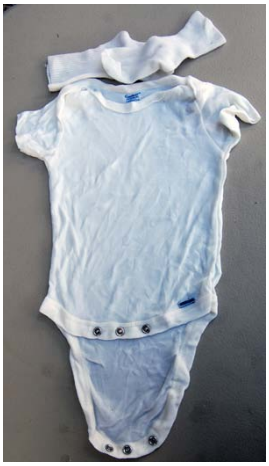
1) Onesie Preparation

1. You need to have onesies & socks that are 100% cotton (5-10% lycra or polyester in the socks is fine). Procion MX dyes dye natural fabrics only, they can dye cotton in basic conditions and wool or silk in hot, acidic conditions. They can NOT dye polyester or other artificial fibers, so if you use a blended fabric, the undyed polyester fibers will give the fabric a light, "heathery" appearance.
2. Soak the clothes in a solution made from:
    - 1 gallon warm water
    - ½ cup Soda Ash

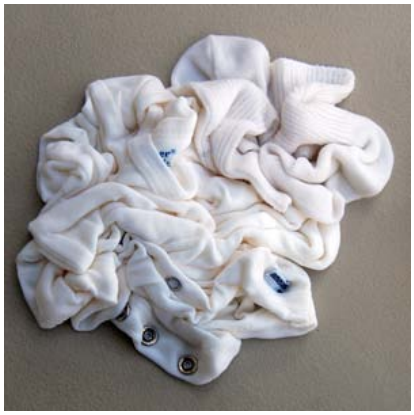
    30 minutes should do it, longer is fine though
3. Once the clothes are fully saturated, wring them out and place them in 6 small plastic containers – 1 shirt and a pair of socks/container. I like to "scrumple" them – I create lots of nooks and crannies for the dye to settle in, this is how I get my awesome texture. See the pictures for a good example of what "scrumpling" is – what it is NOT as balling the fabric up in a ball – this creates large areas that remain undyed, something I don't find very attractive.



Soaking the clothes in Soda Ash



1. Lay shirt flat

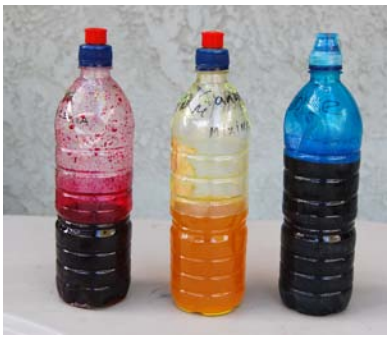


2. Push the shirt together from all sides to create the scrumpling

3. Place the shirt & socks in a container that creates a tight fit.

2) Dye Preparation

Procion MX dyes are wonderful dyes. They are fiber reactive, which means that they actually form bonds with the molecules of the cotton fabric, once bonded, they are there for good, so they are washfast (once you have rinsed away the unbonded dye molecules). You can achieve very vibrant colors (if that is what you want) with a minimum of fuss. The two things these dyes need to be active are a basic solution (pH ~10.5) and warmth: the dyeing should take place at room temperature (70° F or above) and with blood warm solutions (70° F to 90° F—no higher). Once the dye is activated by placing it in a warm, basic solution, it will react very quickly, and be ~95% reacted within 2 hours.



1. In a plastic cup, measure 5 g of dye powder (this is about 2 teaspoons of dye, but weight is much more accurate)

2. In another plastic cup measure 1 cup of lukewarm water.
3. Add a small amount of water to the dye, mixing it into a paste.
4. Continue adding small amounts of water 'til the powder is completely dissolved.
5. Repeat this process with your other dye.
6. Pour this dye into your dye storage containers.

3) Dyeing

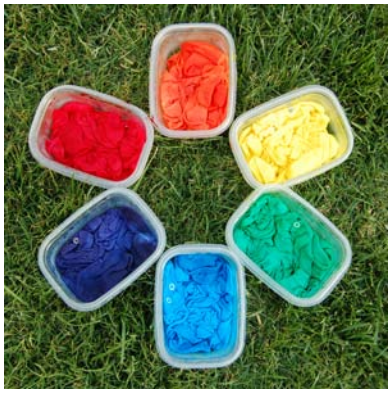
You will now be measuring your dyes to create the 6 colors of the color wheel. I provide you with 2 mixing charts – one using teaspoons and tablespoons, the other in metric. I would print this out and cross out the one you aren't going to use so you don't get confused! In either case, you're going to have ¼ cup (60 ml) of dye for each shirt/sock pair

1. Wearing your gloves, distribute the dye according to the chart below.

   Notice that I didn't use straight Fuchsia, but mix it with a little yellow so the shirt is red – if the baby is a boy, it may be hard for his mom or Dad to dress him in such a strong "girlie" color (no sexism intended!). If the baby is a girl, feel free to dye a shirt with straight Fuchsia dye instead of the mixed red.

	Onesies, 60 ml/shirt			**Onesies, ¼ cup/shirt** **T= Tablespoon, t = teaspoon**		
	Sun Yellow	**Turquoise**	**Mix Red**	**Sun Yellow**	**Turquoise**	**Mix Red**
Red	12 ml		48 ml	2½ t		3T + ½ t
Orange	54 ml		6 ml	3 T + 1½ t		1½ t
Yellow	48 ml			¼ cup		
Green	30 ml	30 ml		2 T	2 T	
Turquoise		60 ml			¼ cup	
Purple		42 ml	18 ml		2 T + 2½ t	1 T + ½ t

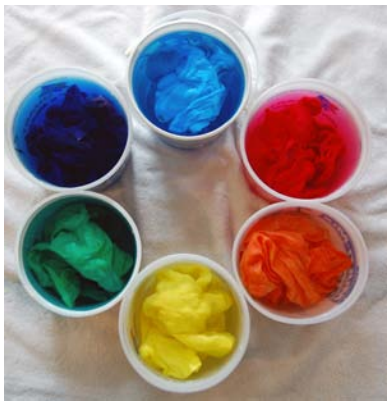
2. Gently pour each dye onto the shirt in its container. When you first do this there will be white spots like this:
3. Using your gloved hands, push down and squeeze the shirts a couple of times, you should end up not seeing any white spots after just a couple of squeezes. Make sure to **rinse off your gloved hands** in between dyebaths!
4. If you want less texture, massage the shirts every 10-15 min. for the next hour or so. The less you massage, the more texture you get – so I just give it a quick one at the beginning and that's it!



4) Washout & Enjoyment!

Leave the fabric to either sit in the sun or in a warm part of your house. After 2 hours, if the dyes were kept at room temperature, ~95% of the dye will have reacted with the fiber. You can wash the fabric then, or wait. I usually wait overnight to eke out that last little bit of dyeing (if your room is cool, the reaction will take longer). You also can leave these til you have time, it is at your convenience.

1. Dump one shirt in your sink (be careful of splashes, the dye can still stain your counter top, your grout and your clothes!!!) Rinse in cool water til the fabric loses its slippery feel and loses very little color when squeezed. When the slipperiness is gone, so is most of the soda ash, so the odds of any dye reacting with other fiber now are remote.
2. Repeat with the other 5 fabrics. At this point you can let them sit in a big bath of water for a bit to help with diffusion. You can also let them sit by themselves in 6 smaller rinse buckets.



3. After a few hours of sitting in water, wash them (altogether at this point) in the hottest temp your washing machine can do. I use a small amount of Synthrapol, which is a detergent that is sold to help keep any washed away dye particles from depositing on the other fabrics, but if you did that first soak in individual containers, you probably won't need it and plain old detergent (without bleach!) will be fine.
4. After the washing machine runs all the way through, I usually run it again, stopping it in the middle of the washing agitation, lifting the lid and scooping out some water in a clear glass. If you see no color, your washing days are over – if you do, back to the washing machine for you!