Dyeing is Easy!

An introduction to simple dyeing techniques

by

Gilbert Muniz

SAFETY FIRST

Safety is paramount, so follow all guidelines suggested by both these instructions and the dye manufacturers. You shouldn't fear dyeing, but you should respect what these chemicals can do to you and your well-being. Always wear a mask when dealing with powders. Wear gloves when working with any dye liquid. When not using dyes or chemicals, they should be kept in air tight containers, out of direct sunlight and ALWAYS out of reach of pets and children.

When you are done with a container of dye, immediately replace the lid. When mixing dyes, keep them at arm's length and always keep your mask on when working with them. Once the dyes are in liquid solution, you can remove your mask if you want. When I dye, I usually just keep my mask and gloves on the entire time. NEVER keep open bottles of drinks or plates of food anywhere near open dye containers.

So, where do I start?

Before you begin any new process, please read all the instructions.

As you read these instructions, understand that they are simply a starting guide to get you into dyeing. I encourage you to experiment with techniques, formulas and amounts as you see fit.

These are the terms most used in these instructions.
It's best to familiarize yourself with this list so the dye process makes sense as you progress.

Activator – Any chemical that gets the dye powder to stick to the fiber. For MX dyes, you'll need soda ash. For acid dyes, you'll need vinegar or citric acid.

Back-Staining – When rinsing, fabric that is dyed one color that rests on fabric that is dyed another color can transfer colors between the two fabrics resulting in off-color stains and blotches.

Batching/Batch Setting – Setting your dye to the fiber by letting it soak in a soda ash water solution.

Burn Test – Burning a small amount of fabric with a flame to understand the type of fiber it is made from. Not always 100% accurate, but is a good indicator of general fiber make-up. If the burnt fiber smells like burning wood/paper and

crumbles, it is most likely cellulosic. If it smells like burning/fried hair and crumbles, it's probably protein based. If it smells like melted plastic and beads up on the burnt edge, it is probably synthetic or nylon.

Carrier – Any substance that allows the dye powder to be distributed to the fiber. The most common carrier is water.

Cellulose – Referring to plant based fibers. Examples are: Cotton, Flax (Linen), Hemp, Pineapple, Ramie, Rayon etc.

Fiber – The base substance that yarns are created from. The fiber yarns are what get woven into fabric. Fiber can be cellulosic based, protein based, synthetic or a blend.

Filtering – Sifting out extra dye particles to prevent spotting on the finished fabric.

Gradation – Dyeing fabric from one value to the next. This can be monochromatic or across multiple colors.

Hand – The feel of the fabric to the touch.

Immersion Dyeing – Using a generous amount of water that allows the fabric to flow freely in the dye pot. This yields a smooth, even color.

Low Immersion – Using a small amount of water to dye fabric, resulting in uneven, mottled color across the surface.

Mercerization – Process that increases luster and dye affinity on cotton fibers.

Pasting – Mixing dye powder with a small amount of water to get a paste that will more easily dissolve in a larger amount of water.

PFD -Prepared For Dyeing fabric or yarn. This has been pre-treated at the manufacturer to more readily accept dye.

Protein – Animal based fibers such as Silk and Wool.

Red Spotting – Small red dots of un-pasted dye that separate from the rest of the pasted dye and settle across the surface of the fabric.

Resist – Anything that causes the fabric to not accept dye. Common examples are Gutta, ties, stitching, batik, ect.

Rinsing – Removing excess dye from fabric.

Scouring – Removing any fabric surface treatment through chemical detergents, heat and agitation. Typically done in a washing machine.

Technical face – The side of the fabric that the dye was applied to or the side of the fabric that faces the world.

Supplies

You can get most of these at the dollar store or you can use old utensils from your kitchen, but once they touch dye chemicals, they are for dye only. NEVER use dye utensils for cooking/household chores again. Clearly label all utensils that are used for dye and always keep dye utensils and chemicals out of reach of children.

2 Cup (at least) measuring cup with spout – This can be plastic or Pyrex. Just make sure it can hold hot water.

Apron – Any old one will do, but make sure it is nothing you regularly cook with.

Coffee Filter – This is used to filter out unmixed dye after pasting.

Electric Kettle – I use this for any application that requires mixing with hot water. You can use heat water in a microwave if you want.

Facemask – I prefer the 3M 8210 Plus or higher masks. You don't need a full gas mask, but feel free to wear whatever you feel safe and comfortable wearing. It should be snug around your mouth and nose.

Gloves – I use nitrile gloves to dye. They are relatively inexpensive at most warehouse stores. You can also use dishwashing gloves or vinyl/rubber gloves if you want. When dyeing, I do recommend that you remove any rings, as prongs and stones can pierce the glove's surface.

Goggles – I usually just wear my regular glasses when I dye, if I need, but an inexpensive pair of goggles is fine. If you wear glasses, you can get some that fit over your prescription glasses or get prescription goggles at an eyeglass company.

Measuring Cups and Spoons – Grab a set of each from the dollar store. You'll need from 1 Cup to ¼ Cup, and from 1 Tablespoon to 1/8 teaspoon, if possible.

Microwave – This is not at all necessary, but if you want to do acid microwave dyeing or want a dedicated craft microwave, it's helpful.

Old Jar – About the size of a small jelly jar, plastic or glass. This is used for pasting dye.

Old Towels – You'll need a few for catching spills and wiping things down in between dye colors. It's also a good idea to cover your work surface with larger towels to stop spills.

Plastic Baby Spoons – I like the baby spoons because the bowls are smaller and can easily mix dye paste.

Plastic Containers – These can be anything from old plastic take-out food containers to purchased plastic containers from the store. You'll need a few different sizes depending on the technique. Plastic shoe boxes are great to start off with. If you plan on doing solid, flat color, you'll want to invest in a 2 ½ to 5-gallon bucket. Make sure your plastic containers had lids.

Plastic Mixing Spoons – Again, from the dollar store. Try to get a little set of them. It helps if they have long handles for when you are mixing things in deep buckets.

Scale (optional) – If you choose to measure by weight, you will need a scale that zeroes out with a container on it.

Stock Pot – Stainless steel is best, but not necessary. You'll use this for dyeing silk and wool.

Stove Top – you can use your kitchen stove top to heat the water for acid dye, but if you can get a small hot plate or propane burner, that will work too, AND you can set it up in a garage or outside.

Washing Machine – You do not need a separate washing machine for scouring or rinsing. I use my regular clothes washing machine for everything. I prefer the old fashioned top loading kind because I can regulate the water amount manually.

Dyes and Chemicals

These are the basic chemicals you'll need to dye fabric. Depending you're your fiber of choice, you might not need all the chemicals listed. Please read the entire list before beginning.

Acid Dye - Dyes used for silk, wool and nylon. These will give you the most vivid/intense colors on protein fibers. They require heat and vinegar to activate them. These come in a variety of colors. You can only use them on silk, wool (all varieties), feathers and nylon. You can get various values of colors by altering the amount of dye powder used. In water, acid dye carries further than MX dye, so you might use less than you think you need. You can mix various dry colors to get the desired color you want.

Citric Acid – An alternative to using vinegar with acid dye. Sold in a powdered crystal form, it does not have the odor, but does the same thing as vinegar.

Color Catchers – Available at most grocery stores, they are sheets of chemically treated fibers that attract loose dye particles during regular wash cycles.

Fiber Reactive Dye – Also called Procion or MX dye. This is used on cellulose fibers to alter their colors. Soda ash is used to bond the color to the fiber. Comes in several colors, and the colors can be blended at the dry powder or liquid level. Used mainly on cellulosic fibers, but can also be used on silk. The issue with dyeing silk with fiber reactive dye is that your colors will be a bit muddy and not a true representation of the color as it would be on cotton. For silk you will still use heat and vinegar to set.

Metaphos or Calgon – Both are water softeners. If you have a plumbing system with hard water, you'll need Calgon or Metaphos to neutralize the minerals.

Salt – Common, table salt. I personally do not use salt when dyeing fabric, but some dyers swear that it intensifies the color during immersion dyeing. I never see the difference.

Soda Ash – Sodium Carbonate. This is a chemical used to bond fiber reactive dye to cellulosic fibers. Available in pool supply stores as Ph Up. I keep my soda ash in an air tight container for easy access.

Synthrapol – A chemical detergent that is used to release unbonded dye particles from the dyed fabric. Also used during the scouring process. Synthrapol is available in regular suds (SP) and low suds (LF) options.

Retayne – a chemical detergent that helps loose dye particles stay bonded to fiber during regular washing cycles.

Thiox/Color Remover – Thiourea Dioxide. Used as a dye stripper/decolourant. Needs hot water to activate and releases an intense odor that is similar to hair perm solution. Recommended done outside or in a well-ventilated garage.

Urea – A chemical humectant that basically keeps what you're working on wetter, for a longer period. I no longer use urea water in my general dyeing.

Vinegar – Basic household chemical (mild acid) used in cooking and setting acid dye to protein fibers. Any store brand vinegar will work. Do not use apple cider vinegar – it might affect the finished color.

Water – If you do have hard water and do not want to use a water softener, use distilled water to set your dyes. The cheapest, store brand distilled water is fine. Tap water is perfectly fine for most dye applications.

Fabric Selection

Regardless of the fabric you choose, I suggest you get at least an 1/8th of a yard to test out. If you find a fabric in a store, take a picture of the bolt end to get all the information from the manufacturer so you can get it again if you like working with it. If you are unsure of the content, it's best to test a swatch with a burn test. Mercerized fabric will yield more intense colors, but is not necessary if you are just starting out. Be sure to avoid fabrics that have been previously batiked. The residual wax resist in them can sometimes inhibit colors bonding. You can dye fiber blends, but any polyester in the fabric will not dye. You might be able to stain it a little, but it will not be permanent. When in doubt, dye a test swatch.

For Fiber Reactive Dyes, you can buy PFD fabrics, greige goods, store stock or black and white commercial prints. Common fabrics to dye are cotton sheeting, cotton muslin, cotton broadcloth, rayon challis, linen, lawn, corduroy and velveteen. When selecting muslin, you can get it either bleached or unbleached. Both are fine to work with, but unbleached muslin will result in a slightly duller/earthy color value. If you get bleached muslin, dye a test swatch to make sure that the color will take to the fiber the way you want. Some brands of bleached muslin will never take the dye the way you want because of the bleach concentration left in the fabric.

For acid dyes, you can buy PFD fabrics, greige goods, store stock or black and white commercial prints. Common fabrics to dye are China silk, silk dupioni and silk velvet*. Work with white or ivory fabric stock.

*Silk velvet is not fully silk. It has a silk base and a rayon pile. I dye silk velvet with fiber reactive dyes. I find that they stain the base enough that it doesn't matter in the end.

Techniques for Cellulosic Fibers

Scouring

Scouring removes excess oils and chemicals from the production of the fabric. Even if the fabric is sold as PFD, you need to scour it first to make the fibers readily available to accept the dye particles. The simplest way to scour is to use your washing machine. When I cut my fabric to scour, I keep it in 1 to 3yard lengths. If you want to dye fat quarters, wash the yardage first then cut the fabric into the desired sizes. I would not recommend washing more than 8 yards at a time. If you wash in a front loader, you might want to get the low foam version of Synthrapol. I will usually buy a bolt of fabric and scour it all at one time. When dry, I store it in a plastic tub that way it is ready to dye when I need it.

Set your machine for a normal cycle on the hottest water setting you have.
Run the water and add Synthrapol and soda ash:

For every 2 yards of 45" wide fabric, wash with ¼ teaspoon of soda ash and ¼ teaspoon Synthrapol. For 4 yards of 45" wide fabric add ½ teaspoon of soda ash and ½ teaspoon of Synthrapol. If you want to wash more fabric at one time increase the soda ash and Synthrapol proportionally.

When the full cycle finishes, dry the fabric in a dryer (NO DRYER SHEETS) or on a line.

Pasting

Pasting makes a dye powder slurry that more easily dissolves in larger amounts of water. Dumping dry dye in a large vat of water can leave you with lots of undissolved clumps of powder. This can cause red stains and uneven dispersion of

color. Pasting can take a long time depending on the color. I have noticed that grays and greens require more pasting than other colors.

Measure out the required amount of dye into a small jar.

Add ¼ teaspoons of water to the dye and stir slowly with a plastic baby spoon. As you mix, you can add more water just to get a smooth paste going. Continuing stirring and adding tiny amounts of water until all dye particles have dissolved.

Once the powder has dissolved into a smooth paste, you can begin adding more water until you have the required amount for your dyeing. As you add water, slowly stir until the paste is completely dissolved into the water.

Continue to the next step in your dye process.

Filtering

I only filter dyes that I know separate in the dye bath. Filtering helps with red spots and getting more smooth color, so you might want to experiment to see what technique works for your dye.

After pasting, place a coffee filter over a clean jar or bowl large enough to hold the required amount of water for your dye process. You can secure the filter over the open mouth of the jar with a rubber band if necessary.

Pour half the required amount of water into the pasted dye jar and stir to dissolve the paste as much as possible.

SLOWLY pour the dissolved paste/dye water over the filtered jar mouth. Fill the dye paste jar with the remaining water you need and swirl around to get all the excess liquid dye on the jar wall, then pour that liquid over the filter.

Discard the filter and stir the dye water again. Continue to the next step of your dye process.

NOTE: I recently got a French press for filtering dyes. After pasting, add water to the jar and stir. Transfer this to the glass of the press, then press down the plunger. I usually plunge a few times to make sure the dye is dissolved, then pour with the plunger down to catch any loose dye particles.

Making Soda Ash Water

Soda ash dissolves better in warm water. This is when having a dedicated electric kettle for dyeing comes in handy. You can also warm the water in the microwave if you want.

In a heat proof container, mix:

-For 1 cup of soda ash water - 1 cup of hot water and 1 ½ teaspoons (slightly heaping) soda ash

-For 1 quart of soda ash water – 1 quart of hot water and 2 tablespoons (slightly heaping) soda ash

Stir until dissolved (no more grainy sounds, water is slightly clear). Try to use the soda ash water while still warm, but room temperature is fine.

Batching

Batching gives the fabric time to soak up the dye particles and permanently bond them to the fibers. This is invaluable in low-immersion dyeing, tie dyeing and dye painting (using certain techniques).

There is a debate in dye circles about how long fabric should batch. Times range from 1 to 24 hours. There is an argument that says once the chemicals meet, the reaction happens, the process is done, and no amount of soaking with help it. Another argument says that the longer the fabric soaks, the darker the colors will get. I personally don't see the

difference in something that batches for 4 hours vs. 12 hours. If there is a difference, it's so subtle my eyes couldn't pick up on it

My solution is somewhere in the middle of this discussion. I say that the reaction happens instantly, but that the fabric needs to soak for a little while to ensure all the fibers get wet with soda ash water and the color can travel. I personally allow my fabric to batch for about two to three hours. I am often forgetful or lazy and let them soak for longer, but rarely do I allow them to rest for 24 hours. You never need to let the fabric batch for more than 24 hours because ANY reaction that is going to happen will have happened way before then. Feel free to experiment with batching times to get the results you want.

Rinsing

Rinsing removes excess dye particles that did not bond to the fiber. Even with diligent rinsing, the dye in fabrics can be reactivated with heat and water. There are certain colors that rinse cleanly, and certain colors that require several rinsings to get them stabilized. Don't be afraid of these colors, they just require extra care. Colors that typically need extra rinsing beyond what I describe are fuchsia, reds, black, dark blues and medium to dark purples. When in doubt, ALWAYS rinse more than you think you need. Wear gloves when rinsing fabric.

It is not necessary to rinse each color separately. You can group them in analogous colors in the washing machine. If you are worried about back staining, keep the dark colors together and the light colors together.

To begin rinsing, dump the container of dyed fabric and dye water into a stainless steel or plastic sink. Rinse the container with clean water and let it dry.

Run a modest stream of warm water over the dyed fabric. Scrunch and squeeze the fabric under the stream until the dye begins to run slightly clear. When the run-off water goes mostly clear (this can take some time depending on the color) rinse the fabric in the washing machine. I use a plastic tray to transfer the fabric to the laundry room.

Wash the fabric on a regular cycle using hot water and Synthrapol:

I yd of fabric – ¼ teaspoon Synthrapol – low water

3 yds of fabric – ½ teaspoon Synthrapol – low water

6 yds of fabric – 1 teaspoon Synthrapol – medium water

After the first full wash cycle ends, run another hot, full cycle with half the required Synthrapol. After this cycle, test the colorfastness of the dye by pressing a corner of the damp fabric with a hot iron, over a scrap of white muslin. If the color bleeds, run another full cycle like the second cycle. When this cycle ends, test again. If bleeding still occurs, run another full, hot cycle like the second rinse cycle. It is not unusual to have to run 5 or 6 wash cycles for super dark dye colors. There are hand dyed fabric companies that rinse up to 10 times. I rarely ever have to rinse more than 3 times, even with dark colors, but rinse as much as you need.

When the fabric is rinsed to your liking, you can dry it in the dryer (NO DRYER SHEETS), on a line, or press the damp fabric with a hot iron. Always press on the wrong side of the fabric.

Dye Amounts

When dyeing fabric, most instructions refer to the weight of the fabric for determining the amount of dye to use. This is good for technical information, but most people starting out don't weigh their fabric. I have based my dye formulas on

45” wide muslin yardage. I wholeheartedly encourage you to experiment with both fabrics and dye amounts to get the results you want. Use these instructions as a general guideline only, but they are never set in stone.

For a light color – ¼ - ½ tsp of dye powder per yard of 45” wide muslin

For a medium color –1-2 teaspoons dye powder per yard of 45” wide muslin

For a dark color – 1-2 tablespoons of dye powder per yard of 45” wide muslin

For an intense dark color – 4 tablespoons of dye powder per yard of 45” wide muslin

For multiple colors on one piece of fabric, use the amount of dye you want for the intensity of the individual colors you want. All of these measurements are based on level volumes of dye in the measuring spoons.

To lean how dye amount affects the fabric try this simple, 6 step, monochromatic gradation experiment. Cut 6 fat quarters and dye with the following:

1st fat quarter – 1/8 teaspoon dye powder

2nd fat quarter – ¼ teaspoon dye powder

3rd fat quarter – ¼ + 1/8 teaspoon dye powder

4th fat quarter – ½ teaspoon dye powder

5th fat quarter – ½ + ¼ teaspoon dye powder

6th fat quarter – 1 teaspoon dye powder

Dye Processes

Low Immersion

Low immersion dyeing uses small amount of water to result in a mottled, uneven color, spread across the surface of the fabric. There is little to no agitation of the fabric to help spread the dye through the fibers. It is possible you will get white/undyed spots with low immersion dyeing, but that is often the point. You can use multiple colors of dye, but try to keep the water levels as suggested. For example: if you want to dye a fat quarter two different colors, you will use 1/8 cup water per color to add up to ¼ cup water. Too much water will give you more even color, but it won’t be as smooth as full immersion dyeing. Compacting the fabric in tight container will give you the most mottled effect.

-Scour your fabric

-Fill a container large enough to hold the fabric with warm water and soak your scoured fabric for about 10 minutes. The warm water helps to carry the dye across the surface of the fabric. After 10 minutes or so, wring out the fabric leaving the fabric damp.

-Arrange your fabric in a plastic container by scrunching, twisting or pleating it with the technical face right side up.

-Paste your dye

-Add the required amount of water to the just pasted dye based on yardage:

Fat quarter – ¼ cup water
½ yard – ½ cup water
1 yard – 1 cup water

-Make sure the dye paste is fully dissolved in the required water, filtering if desired.

-Pour the dye water on the fabric however you want. Create fun patterns with the dye colors if using multiple colors. At this point you have a few of options:

-Don't touch the fabric once the dye water has been poured on it.
-Re-scrunch, twist or pleat the fabric to get the dye water to touch more of the fabric.
-Pres down on the fabric to soak it in more of the dye water.

-Let the fabric soak in the dye water for 15 to 20 minutes

-While fabric soaks, make soda ash water

-After 15 to 20 minutes, add the warm soda water to the dye water bath. The amount of soda ash water is equal to the amount of dye water used. For example: if you used ¼ cup of water on a fat quarter, you'll use ¼ cup of soda ash water. You can now follow the three options you have before for different effects:

-Don't touch the fabric once the soda ash water has been poured on it.
-Re-scrunch, twist or pleat the fabric to get the soda ash water to touch more of the fabric.
-Pres down on the fabric to soak it in more of the soda ash water.

-Let the fabric batch set

-Rinse

Immersion Dyeing

Immersion dyeing is the best way to get smooth flat color over the entire surface of the fabric. It requires more water and a larger container. I use a 5 gallon bucket for immersion dyeing. The container needs to be large enough for the fabric to move freely.

-Scour fabric.

-Paste dye powder amount according to your desired dye effect. Add about 1 cup of water to the pasted dye and stir to dissolve completely. Set aside.

-Fill the bucket half way with room temperature water.

-Soak the fabric in the bucket for a few minutes, remove, wring out and then set aside.

-At this point you can add about 1 to 2 cups of salt to the water and stir to dissolve. I rarely use the salt, but it doesn't hurt the dye bath.

-Add dissolved dye to the water in the bucket and stir to distribute it.

-Add damp fabric to the dye bath and stir for about 10 minutes. Go in one direction, then the other, and keep switching directions to make sure the fabric is evenly dyed. If you want coverage, but do not want smooth even color, just let the fabric stand in the water without stirring.

-Make soda ash solution by dissolving 8 tablespoons of soda ash into a couple of cups of warm water. Set aside.

-After about 10 minutes, while wearing gloves, remove dyed fabric from the water and set aside for a minute. I use a plastic tray to hold it.

-Pour the dissolved soda ash water into the dye bath and stir.

-Return the wet fabric to the dye bath and stir continuously for 5 to 10 minutes. You will need to stir every 10 minutes or so for an hour to get the most dye penetration. If you are dyeing a super dark color, you'll can extend the soaking and stirring for up to 2 hours.

-After the hour (or 2 hours for extra dark colors) remove the fabric from the bucket squeezing out excess liquid over the pot.

-Rinse the fabric.

You can discard the used dye water down the drain or flush it down the toilet. Unless you have a special septic system, most household drains can handle exhausted (unable to dye fabric any longer) dye baths. You can change the amount of water and size of the container for larger or smaller amounts of fabric, if needed. 2 ½ gallon buckets are great for dyeing fat quarters.

Soda-Soak Method

This technique is adapted from tie dyeing. It involves soaking the fabric in activator first, then adding dye. The benefit of this technique is that you can get crazy, multicolored textures without having to dye and re-dye fabric with immersion techniques. This works best, in my opinion, in one yard pieces.

-Scour fabric.

-Make a quart of warm soda ash water.

-Soak fabric in soda ash water for about 15 to 20 minutes. Half way through soaking, while wearing gloves, wring out the fabric and rearrange it in the water, then continue to let soak.

-Paste your dye as needed. I typically make up my different colors in about ¼ cup of water, regardless of how many colors I use. I will rarely use more than 4 or 5 colors per 1 yard of fabric.

-Remove the soaked fabric, wring it damp dry, and arrange in aplastic container but scrunching, twisting or pleating the fabric with the technical face up.

-Have fun pouring the dye over the fabric in strategic locations, or any way you want. If you want a more blended effect, re-scrunch the dyed fabric and allow the colors to blend together.

-Batch set the fabric.

-Rinse the fabric.

Techniques for Silk Fibers

Scouring silk is just like scouring cellulosic fibers except that silk is typically more delicate. You'll follow the same process, but I scour my silk in a mesh lingerie bag to reduce abrasion on the fabric surface. Pasting, filtering and rinsing all work the same as with cellulosic dyes as well. The only exception being that when rinsing, I use a mesh lingerie bag to reduce abrasion on the fabric surface. Please note the dye manufacturer you are using for silk. Depending on the color, the dye might require warm or hot water to paste in.

Acid dyes for silk are activated with vinegar, not soda ash. Citric acid is available instead vinegar, but if you're worried about the vinegar odor, it goes away completely in the rinsing process.

Silk does not need to batch set, as heat is the catalyst that bonds the dye to the fiber. Either constant heat from a range top, or high impact heat from a microwave will be sufficient to set the dye. These are the two techniques are what will be discussed in these instructions.

SPECIAL NOTE: Silk can be dyed with fiber reactive dyes. You will follow the exact same procedure as with cellulosic fibers – even the soda ash, omitting vinegar; however, you cannot leave the silk to soak/batch in the soda water for longer than a few hours, as the soda ash tends to strip the luster from the silk. The fiber reactive dyes yield solid color, but to me, they are not usually as bright or deep as using acid dyes, but feel free to experiment.

Dye Amounts

Acid dye travels further across the surface of the fabric more than fiber reactive dyes do. You'll use a lot less dye than you think you'll need for one yard of 45" wide fabric. My general formulas for acid dye are as follows:

Light color – ¼ teaspoon per I yard of fabric

Medium color – ½ teaspoon per I yard fabric

Dark color – 1 teaspoon per 1 yard of fabric

Really dark color – 2 teaspoons per 1 yard of fabric.

As always, these are just a general guideline. Experiment with dye amounts to get the results you want depending on the thickness of the fabric.

Immersion Dyeing

Silk immersion dyeing works pretty much the same way as when immersion dyeing with fiber reactive dyes; however, acid dyes require a heat source. A stainless steel stock pot on a cooking range or hot plate is as complex as it gets.

-Scour fabric.

-Paste dye powder amount according to your desired dye effect. Add about 1 cup of water to the pasted dye and stir to dissolve completely. Set aside.

-Fill a stock pot with enough water to allow the fabric free movement when stirred, and heat the water to a continuous temperature. It should hot, but not simmering and definitely not boiling (Around 185 degrees). You'll maintain this temperature during the whole dyeing process.

-Soak the fabric in the pot for a few minutes, remove, wring out and then set aside.

-At this point you can add about 1 to 2 cups of salt to the water and stir to dissolve. I never use the salt, but it doesn't hurt the dye bath.

-Add dissolved dye to the water in the pot and stir to distribute it.

-Add damp fabric to the dye bath and stir for about 10 minutes. Go in one direction, then the other, and keep switching directions to make sure the fabric is evenly dyed. If you want coverage, but do not want smooth even color, just let the fabric stand in the water without stirring.

-After about 10 minutes, while wearing gloves, remove dyed fabric from the water and set aside for a minute. I use a plastic tray to hold it.

-Pour in about 2 cups of vinegar and stir to dissolve.

-Return the wet fabric to the dye bath and stir continuously for 5 to 10 minutes. You will need to stir every 10 minutes or so for about half an hour to get the most dye penetration. If you are dyeing a super dark color, you'll can extend the soaking and stirring for up to 1 hour.

-After the half hour (or 1 hour for extra dark colors) remove the fabric from the pot squeezing out excess liquid over the pot.

-Rinse the fabric per silk instructions and discard exhausted dye bath down drain once cooled.

Silk Microwave Dyeing

This is my preferred method for dyeing silk. It yields crazy color combinations and you can use lots of small amounts of dye to get wild results. If you are using a lot of different colors, don't dissolve the paste in more than 1/8 cup of water. I use around 4 to 5 colors per 45" wide yard piece. Each color measures a scant ¼ teaspoon of dry acid dye powder. Have fun experimenting with the amount of dye you want to use.

-Scour fabric.

-Soak fabric in enough vinegar to cover it, for about 15 to 20 minutes.

-Paste your dyes, then dissolve in water.

-Remove the soaked vinegar fabric and wring it out to a damp dry. Place it in a microwave safe bowl and scrunch, twist or pleat into a desired shape.

-Pour your dissolved dye over the fabric any way you want. Press the fabric to blend the colors or leave it alone so the colors don't blend too much.

-Loosely cover the bowl with a lid (leave room for steam to escape) and heat in the microwave for 30 seconds. Let the microwave stop and then heat it again for 30 seconds. Repeat two more times for a total of 2 minutes.

-Carefully remove the bowl from the microwave (CAUTION: IT IS GOING TO BE HOT!).

- Rinse fabric per the silk instructions.

Notes

-Take notes when you dye. If you try a strange color combination write it down in notebook so you can recreate it the next time you want.

-Heat and water reactivate dye. If you are making something out of your hand dyed fabric like an oven mitt or trivet make sure that it is well rinsed; otherwise, hot pans can cause the dye to transfer to kitchen surfaces. Once you make something with your hand dyed fabric, you can wash your pieces in cold water with any ordinary detergent. To help lift off any excess dye particles, use Synthrapol. Never use Woolite or bleach on hand dyed fabrics.

-Rinsing in the kitchen sink is fine if it's stainless steel. If you clean it well with disinfectants afterwards, it will be fine. I rinse in my kitchen sink and I use bleach cleaner to clean it up after rinsing. If you get some slight stains, try cleaning your sink with Scrubbing Bubbles.

-As long as you are dyeing fabric, you can toss in some small scraps of scoured fabric in the dye baths. You can also dye cotton or silk embroidery floss in dye baths.

-You can dye fabric outside, but the temperature needs to be above 70° F. Warm temperatures are fine, cold temperatures can inhibit the flow of the dye across the surface of the fabric.

-I dispose of my dye baths in the toilet, usually. If it's a small bath, I will just pour it down the sink. Most dye baths are safe for septic systems, but check with your particular system's requirements if you have questions.

Personal Notes: