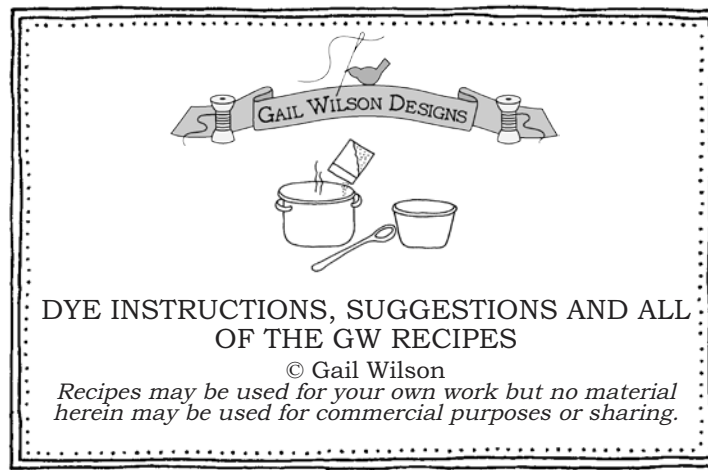




I use Rit dyes for two simple reasons. One is that they are commonly available and the other is their ease of use. Both of these factors have been important because of my work designing kits and patterns that most people will be able to do (if they follow the instructions). So all of the recipes given are made with Rit Dyes.

GAIL'S COLOR THEORIES - I have always loved the palette of colors one sees in early Americana when old paint and the patina of age is present. One of the best color lessons I ever had was when I began collection early antiques - cupboards, small things, quilts, etc, all with old paint and much patina. At the time, we were living in temporary rental house where the growing collection was simply stored. We bought an old house and began a year of renovations. As I began to choose paint colors for walls and woodwork and a couple of the old floors, I began to be worried. I was brought up in an environment where all had to match or at least "go". My new old house was either going to be a colossal color nightmare or it would work. No two things were even close to "matching" or "going" together. None of the upholsteries on the wing chairs, none of the woven rag rugs nor any of the curtains followed my mother's idea of "going" together. But when we moved it all in, it took my breath away and still does. Other people, even those who do not like or understand old primitives, love the colors. The truth is, they all work. Those old colors all jumbled together always look good. That was when I started to put together lots of deep colors. Then got braver and added in not so deeps. It is this kind of palette I like to work with. It does not have color crayon or primary colors. All are either deep tones or dusty tones by adding gray or tan. I also never use black. The reason is that in old stuff there is hardly ever true black. Old black fabrics turn a very dark brown. So, I use a black/brown. It reads as black, but is not. It helps it to "go" with the rest of this palette.

WHAT YOU SHOULD KNOW

Dyeing is a pretty inexact job. You might think that knowledge of color theory will give you all the answers, such as yellow + blue = green. This would be true if the dyes themselves could be made of pure and true colors. But pure and true colors are just an idea. In reality we use all kinds of minerals and chemicals to arrive at colors in dyes, paints, hair color, etc., and these ingredients may or may not be true colors. Plus, there are other factors at work, particularly with dyeing, such as how different fibers take the colors, some dyes are more potent than others, and the most bottom of lines, we do not know what colors the chemists at Rit decided to call Royal Blue, Dark Green, or Pearl Gray, so blue + yellow will make a green, but what green?

So what to do? You have taken one step in buying these instructions and recipes from me. In my workshop we have experimented so much over many years that we have learned some basic things about arriving at desirable colors, particularly with Rit. Even though we have developed recipes to arrive at certain results, you will soon see what is commonly referred to as dye lots - you simply do not get exactly the same results every time. One time you measure a tablespoon and it is one amount, next time it may be just a hair more or less and you add this to the other variables and you have differences. So, unless you are easy to please, you should always do a test swatch. All of this is quite fast, so take the time to do the small test swatch, and you will learn a lot - and have fun. You can see that I have included what may seem like redundant recipes. How many teal blues can we have here anyway? The answer to that is that we are always tweaking our colors. If you have the silk dye swatches, then you will find corresponding recipes for those swatches. I have included all of my favorite recipes developed over time. The newest ones represent an attempt to arrive at a condensed basic palette, but I wanted to include all the recipes, since many of the old ones were used for a larger palette for wool dyeing. Keep in mind that the same recipes can be used on silk, wool or cottons and linens.

WHAT FABRICS CAN BE USED

I learned while taking textile design in college that silk was an extraordinary fiber for accepting color, but as a dollmaker I did not bother with silks until recently because I was in love with prints and the more humble look of these cottons - similar to my love for old quilts. I had not imagined that I would have a need for solids other than fine weight flannels and homespuns to use for say boy doll trousers. So, the majority of my early dyeing efforts was first with making undesirable colors the desired color - an example was some early simple Santas I wished to kit, but in those days the only red flannel for his robe was an ubiquitous fire engine red, not at all what a country Santa would be caught dead in. So, I experimented and found it was easy to get an old red by overdyeing the screaming red flannel with brown. It was actually my work with Santas - new ones required every year - that began my real efforts with dyeing wools, for, once again, the palette of colors available was always sadly lacking. And then I discovered that even if I found a good color, I now was spoiled with the look of hand dyed - the new fabric looked just plain too new and even. Now fast forward as they say to more recent times where Gail, the dollmaker, is now very interested in Kate Greenaway paintings of children and other costumes of the 18th and 19th centuries where solid colors are now desirable. But what to use since cottons do not always dye satisfactorily, especially in the rich deep tones I love especially, and even in the softer tints, there is a lot of fading of color. Then I remembered silk. And once I went serious silk shopping and learned which silks were good for dolls in my preferred smaller scale, the rest of the story goes like the proverbial dominoes falling. Here is what I recommend:

Cottons and linens (only pure cotton and linen - no poly) will only dye to acceptable if you begin with colors somewhat in the range of what you want. For instance - the fire engine red flannel does well in its new life as old red because it has enough depth of color already going for it. I only add overdyer to brown up the red that is already there. What this means is that, unlike silk or wool, it is difficult to bring whites up to full bodied color. But if the effect that you are going for is a soft muted look that someday will have fading, then a handkerchief weight linen or cotton or, my favorite, my utility muslin, will give very nice effects and have the required drape.

Wools, like silks, will dye exceptionally well. A small amount of nylon in the blend is OK, but no poly. To get nice rich colors for Penny Rug projects or Santa's clothing and accessories, you can even use the ugliest of checks and plaids, no matter the previous color. Dull and bland grays, tans, and other sappy colors metamorphose into the best of the best. While teaching a Santa in Australia during their hot summer where no wools were in sight in the stores, the students all wanted my Santa's deep mustard wool robe. The shop owner turned up yards of baby blue, pink and mint green and told me, to have at it. I applied my mustard recipe and like magic, all three were indistinguishable from what they had been and from each other. The dye simply takes over. Of course, you cannot overdyer a very dark, like black, into a lighter color like mustard. You need only to use a bit of common sense when choosing.

Silks have already had their praises sung. But let me encourage the use of silks in dollmaking because for historical dolls, it is accurate - silks were used a lot on people clothes, especially in the earlier times when real luxury was printed cottons. If you use Habotai or china silks (plain weaves) or taffetas, you can even have your dyed silks look ordinary. I say this because since I favor humble looks, the idea of silk conjures up fancy and elegant. Of course you can dye jacquards (fabric with a woven in pattern, usually raised or with another type of thread to show it off) or brocades just as well and arrive at fancy just as easily. I actually began using silks first as dyeable (so I could get the color needed) and light weight enough fabric to make my own bias trims, sashes and linings where other fabrics were just too bulky. Next, came making bonnets from silks and needing fine weights for very tiny dolls (2" - 3"). And now I love the idea of dresses and other layers of solid silks and one final frontier - painting or ink-jet printing on pre-dyed silk colors, bringing me back full circle to my college days in textile design. Yes, you can first dye the background color of the silk (or cotton), then paint on with acrylic paints your design, or using supplies commonly available now, treat your pre-dyed fabric pieces with special solutions (example is Bubble Jet), when dry, iron to freezer paper that is of a size that can run through your ink jet printer. For this, of course, you need printable artwork from somebody or if you are up to it, you can make your own with appropriate computer software. For those not techno-minded, a light table with your silk placed over a drawn design, is easily painted in by hand and/or using special pens. Since we are talking about dolls, it is easy to make enough fabric for a doll garment even if you are limited to paper size that can run through your printer.

TEST SWATCHES

Dyeing is a balancing act. Amount of water/size of pot, amount of fabric, amount of dye, are all factors that must be balanced to get the right results. Learning to have a sense of this is a wonderful tool. Otherwise, random great results cannot be obtained again reliably.

Cut and test 2 - 4" square scraps and keep records of amounts of dye used and length of time in the dye bath. Once you have stirred the now simmering dyebath very well - at least one minute, pre-wet your silk in hot water (so dye will disperse better into the fibers) and then dunk and swish the swatch piece in the dye with tongs or hemostats until saturated - do more as needed. Have ready a bowl of water to rinse it

in when you pull it out. Blot out excess water and check color. Remember that wet things look more than twice as dark as dry. Put back in if not dark enough. If too dark, add more water and start over. Towel blot, iron dry your swatch for quick results. The longer you leave the fabric in, the darker it gets. Keep your dye batch in the pot until you know you have the depth of color you want, because you can always dye longer. Time it to see how long it takes and take notes on your recipes and how they worked on each piece.

HOW TO USE THE DYE:

PREPARE THE STUFF TO BE DYED

Most fabrics come with finishers (starches and sizings to make them look better in the store). These make it harder for the dyes to penetrate evenly or at all. Sometimes you can get dyeable fabrics which are sold on purpose for dyeing with no finishers. Wools often have an oily residue as do a lot of cheaper imported goods in cottons. An example is some doll size knitted mittens that came imported from China and had a surface hard to get the dye through, even though they seemed "natural". A product called Synthrapol is available for pre-washing fabrics to get out these dye barriers. Lacking this, most fabrics can simply be machine washed with soap. Or, in the case of my little imported mittens, an overnight soak in hot water with a few drops of dish soap added. Soap helps break up surface tension so dirt and oils can get out.

HOW MUCH DYE, POT SIZE, WATER, ETC.

- The amount of fabric that can be dyed evenly at a time is a matter of the ratio of space (water) it can be stirred around in so that dye can get at all the surface equally. If the fabric gets too bunched up, your dye will be uneven. Sometimes, such as with rug hooking wool, this is desirable. Most of the time, there is just enough desirable subtle unevenness by default, so as to not go asking for more.
- In general, the lesser amount of water to dye means quicker dyeing but this also can make it be too fast and absorb irregularly which is why you would not want to make it too dye intense. So my recipes are calculated to dye quickly, but not too quickly, allowing for enough water to move the fabric around in but have just enough dye (so as not to waste dye) to do the job. On the whole, you can get 2 - 3 uses from a single batch, small or big, and more if you either leave the item in longer (always stirring) or are happy with paler results. Keep in mind that the dye bath will yield different results not only on different fabrics but in the same batch due to the fact that color is being sucked out of the bath as you go. It is always best to arrive at an in-between where you have enough dye to get the color, plenty of water to allow free flow in and around the material, but need a few minutes to achieve the results. If it takes longer than about 15 minutes to get the intensity of color, you needed more dye.

Silk, cotton, linens - dye a fat quarter at a time in the small batch.

Wools should be dyed in a larger batch into which you can dye two half yard pieces at a time or the equivalent.

- Shrinkage: Remember to account for shrinkage. If you know it by testing, then you can be exact. Wool shrinks the most, so for instance, we allow 40 inches to end up with a yard.
- Small Batch: Use a smaller pot (stainless steel or enamel is best, not aluminum), that holds, with room to spare, a gallon of water. Into this size batch, the parts used in the recipes will be teaspoons.
- Large Batch: For wool or dyeing half or full yards use a canner size pot (20 quarts or 5 gallons). Into this size batch, the parts used in the recipes will be quarter cups (4 tbsps). In a batch this size, you may need to leave in longer due to water amount variances.
- Time in the Dye: In general, 1 -2 minutes for lighter colors and up to 5 minutes for deeper, richer colors. Leave your dye bath at the ready for redipping if the color is not deep enough.

TIPS AND NOTES

- Remember that dry things look much lighter than wet.
- All fabrics will dye more evenly if they are pre-washed and still barely damp (wet fibers absorb more evenly - ever try to use a dried sponge?).
- Never put more dye into a pot with fabric in it.
- Caution about gray (Pearl Gray) - Adding gray should be done carefully and with test swatches ahead of dyeing the real thing due to its sensitivity. Too much gray can alter the intended purpose and actually change the color into something you did not expect. One example is that the GW Mustard when gray is added to the Light recipe, can turn the color from the yellow family to a greener color.
- Note that colors are given for full-bodied deep colors. To get a paler version, just use more water in proportion to the color.
- Check out the Rit website for lots of color recipes. Go to www.ritdye.com and click on the "ABC's of Dyeing", then "Brilliant Color" and then "Custom Color Recipes."
- If a color is too red or pink, try a light overdye of green to get it browner. Use color principles to get where you need to go. (The blue and yellow make green idea).
- Antiqued - for this, I recommend my paint overdye as better, but you can also get there with Rit Tan.
- To mute or gray out a too bright color, add some Pearl Gray. Sometimes Tan works too for this.
- If you are overdyeing an already existing color, results will vary, but usually pleasingly so.

MORE ABOUT DYEING WOOLS:

Most wools will dye beautifully with Rit. Rit is not the best dye, but it does do a good job on wool. Look for ugly light and dark plaids, checks, houndstooths and tweeds for variations. The colors in these ***absolutely do not matter*** - the dye will always take over. You can also alter plain colors you may already have. The procedure is to heat up your water to boiling, then stir in the powdered dye. Stir for a full minute. I like to use a slotted flat kitchen tool so it swishes through the water and really mixes. I find cheap plastic ones work well - you don't want cheap metal ones that will rust. Some are round with round holes. Then throw in the wool piece and stir it around until it has had about the same time as your test swatch. Remember that things that are wet look much darker than when dry. Sometimes I re-wet my sample so when I am comparing to the stuff in the pot, I am comparing wet to wet. I usually wear heavy rubber gloves so I can squeeze out a section of the fabric to see it without so much water in it. Once you have seen your wool is at the ready point, have a large bucket or basin to pull the wool out into to transport to your washer waiting full of water. Dump in and distribute. Agitate for only 15 seconds, then move the dial to spin. After an initial amount of spin time, stop and rearrange wool if it is a plain color (helps evenness). Otherwise, just let it spin out. Immediately put in your dryer to dry. Take out immediately when dry so wrinkles don't set in. When you are done all your colors, run a wash with bleach in it and clean out the washer edges. I use this opportunity to wash my workshop towels or the dog beds. Then let these dry in the dryer. I never have trouble with dye residue if I do this. I also use a cloth with a heavy duty cleaner on it to wipe down all surfaces to make sure the machines are clean for clothes. You will have fabulous lint from your dryer if you do a lot of wool dying.

MORE ABOUT DYEING SILK:

This is intended as a simple way to get what you want in colors for silks. It is not meant to be all inclusive about the best ways to dye silk, but rather a way dollmakers in particular to alter fabrics to suit their needs without a lot of knowledge or hard to find supplies.

Most silks take dye especially well. You can use a silk intended for dyeing or most any other silk even if it is already a color (of course, results will vary if it has any depth of color you are going over). There are many dyes that will work, but Rit is simple and it works well. It is very rewarding to get your own colors and buying a length of off-white dyeable silk is an economical way to get lots of colors for dolls. I suggest you cut off 3" from one end of some of the silk you intend to use or from a cut of my inexpensive dyeable silk and then cut this up into 3" squares which will serve as your test swatches. Always keep track of your recipes with your swatches so you can repeat the color later. In general, the more dye to water ratio, the deeper the color and so adding more water lessens the intensity of color and brings it down to a pastel. If you like dusty or muted colors, add some Pearl Gray or Tan to the color. Use basic color knowledge to help you get colors you want. Example: you want a coral. The color you got instead is too pink. So, you will need to add some yellow (red + yellow = orange). If it is too flashy, then you need some gray. You can also use the same dyes on already dyed silk, getting even more varied effects. Here a good example is you have found a red silk but it is fire engine red, not deep red. A light wash in brown will fix that nicely. Embellish the silk with an all-over hand embroidered pattern or possibly some quilting, and you will have a true heirloom doll outfit. Once you have a dye color you like, you can also dye silk ribbon to match.

This need not be a scary thing. Silk dyes exceptionally well and hardly ever is there a mistake that cannot be made into a new and wonderful color. Just follow the simple steps below and have fun. Remember this is only a doll. The swatch test should tell you how long to leave it in. Once you have it, do the ribbon piece in the same way. If you have a hot iron ready, you can iron the pieces for a quick dry if you have blotted out most of the moisture. When doing the real dye, just make sure to prewet the silk in hot water and keep it moving once it hits the dye. Have a bowl of warm rinse water handy and an old towel to blot and you are in business.

THE DYE RECIPES

These recipes are based on if you are using a small amount of water (1 gallon), the part = a teaspoon. If you are using a larger amount of water (canner size of 20 quarts) the part = 1/4 cup. See previous how-to for actual dyeing instructions. Recipes use all Rit colors.

3 tsp = 1 tbsp 4 tbsp = 1/4 cup

* Pinch = same idea as in cooking recipes

* Large Recipe = using 1/4 cup as 1 part

* Small Recipe = using 1 tbsp as 1 part

GW COLOR ORIGINAL PALETTE

SCARLET (deep but truer red)

1 part Wine
1/2 part Scarlet

WINE (a purplier red)

1 1/2 parts Wine

EGGPLANT

1 part wine
1/2 scarlet
1/4 royal blue

OLD RED

1 part scarlet
1/2 dark brown

TURKEY RED

1 part Tangerine
1 part Scarlet
Lg Recipe - 2 tsp. Dk Brown
Sm Recipe - pinch of Dk Brown

BURGUNDY (deep wine)

1 part Scarlet
(-) 1/2 part Dk Brown
(-) 1/2 part Tangerine

DEEP DUSTY MAUVE

1 part wine
1/2 part scarlet
1 part tan

LIGHT DUSTY MAUVE

1 part mauve
1 part pearl gray

SALMON - DEEP

1 part gray
1 part mauve
1 part tangerine

SALMON - DUSTY LIGHTER

above recipe with more water

MUSTARD

1 part tan
1/2 part golden yellow
1/4 part dark green

GOLD - not as deep as mustard

1/2 part tan
1/2 part golden yellow
1/4 part dark green

RUST (orange)

16 parts Tangerine (1 cup)
4 part Scarlet (1/4 cup)
1 part Dk Brown (1 tblsp)

NAVY

1 part denim
1/2 teal

SLATE BLUE

1/2 denim
1/2 teal
1 pearl gray

DUSTY WEDGWOOD BLUE

above recipe with more water

BASIC TEAL

1 part Dk Green
1 part Royal Blue

DEEP TEAL

1 part royal blue
1 part kelly green
1/2 part pearl gray

BASIC DARK GREEN

1 1/2 parts Dk Green

BROWN

1 part scarlet
2 parts dark brown

DEEP PURPLE

1 parts purple
1/2 part brown

DUSTY LAVENDER

1 parts purple
1/1 part gray
1/4 part tan
1/4 part royal

OLIVE

3 parts Golden Yellow
1 part Dk Green
1 part Tangerine
For greener olive, use more Dk Green and no Tangerine

CHOCOLATE (very dark brown)

1-1/2 part Pearl Gray
1 part Dk Brown
1 part Tangerine

GAK GREEN (aka acid green)

Lg Recipe = 9 parts Golden Yellow
1 part Kelly Green
Sm Recipe= 1 rounded tsp Golden Yellow plus a pinch Kelly Green

BASIC BLUE

1 part Royal Blue

CHESTNUT

6 parts tan
1 part tangerine
4 parts yellow

OLD BLACK

1 part Black
1 part Dk Brown

GW NEW SILK PALETTE (can also be used on other fabrics)

TRUE BLUE

2 parts denim blue
1 part teal

INDIGO BLUE

2 parts denim blue
2 parts pearl gray
1 part dark green

GOOD GREEN

2 parts royal blue
1 part tan
1 part teal
1 part kelly green

TEAL GREEN

2 parts pearl gray
1 part royal blue
2 parts dark green
2 parts yellow gold

TEAL BLUE

1 part royal blue
1 part tan
1 part teal

OLD ROSE

1 part mauve
2 parts pearl gray
½ part tangerine

SCARLET/PINK

2 parts mauve
1 part scarlet

EGGPLANT

1 part tan
1 part purple

SALMON

2 parts tan
1 part mauve

PURPLE

4 parts purple
1 part tan
1 part royal blue
1 part gray

MUSTARD

4 parts yellow gold
3 parts tan
pinch* of dark green

BROWN

1 part dark brown
1 part tan

BLACK/BROWN

2 parts dark brown
1 part black