



## Getting Started with Natural Dyes

### Using whole dyestuff and extracts

I have a relaxed approach to dyeing cloth with natural dyes. Probably not a big surprise there.

I've found the most success by being open to whatever you get. See...the unexpected and delightful magic of natural dyeing can also be a source of frustration.

There are so many variables that effect what color you'll get...when the dye material was collected, how much rain we had that year, what trace minerals you have in your water, how high the heat was in the dye pot, how long you left your material in the pot...and on and on and on.

But it doesn't have to be complicated if you embrace the element of surprise.

To be clear, there are some lovely souls who approach natural dyeing very scientifically and monitor everything they do so that they have a better chance of recreating their results and controlling the outcome...and I have some of that in me, but I find that when you're starting out, an adventurous spirit is best.

Know too that sometimes you won't get an even dye, especially when using natural dyes...consider it part of the charm!

Getting a certain color from plants is awesome to be sure, but how amazing is it that we can take our onion skins and the walnuts that drop in the city park and dye our cloth with it. That our cloth then takes on a sense of place, connecting us to the earth and our personal journey. I love it!

And what if, just what if, the plants we use to dye that are also medicinal plants - like goldenrod - impart some of that healing in the cloth. I love the very idea.

So, let go of your expectations and prepared to be delighted!

Oh...and plan on this taking you a couple of days. Like baking sourdough bread...a little work here, wait a good long while, a little more work there and eventually...magic!

# What you need to get started

The purpose of this is to get you started using a simple and easy “tea” method for making dye and dyeing your cloth and, if you are hooked, I'll point you in the direction of more indepth books to help feed the hunger!

Like anything with so much alchemy, there are a lot of ideas on what the best methods are for naturally dyeing and I'm going to show you how I do it, but know that there are lots of differing ideas floating about.

Many of these items you can find in a thrift store, or perhaps you have some duplicates in your own kitchen. The tools you use for dyeing should never be used with food again.

## Tools/Equipment

- a large stainless steel or enamel pot (to be used only for dyeing hereafter - aluminum or copper pots will affect the color)
- a stirring utensil and a spoon or two! (I like to use long tongs for stirring my cloth – again don't use this on food after)
- a scale to weigh the goods to be dyed and the dye and perhaps a measuring spoon
- Either your stove top or an external burner
- a bucket or pail to mordant your cloth in (if needed)
- a glass jar for whisking up extracts (oh and maybe a whisk or a fork in a pinch)
- sieve and cheesecloth
- kitchen gloves - long gauntlet style gloves to protect your hands and forearm
- apron
- a dye journal - it's great fun and very handy to record your process (you always think you will remember but rarely do)

## Materials

- a natural dish soap and/or natural laundry soap for scouring the fabric
- Mordant (if needed) : used to fix the dye to the cloth/yarn  
You'll want Alum Acetate for cellulose fibers like cotton or linen  
and Alum Potassium Sulfate for protein fibers like wool or silk.

Some dyes, like walnuts, onion skins and avocado pits don't require a mordant (although they may give a darker color if you use one) because they naturally contain tannins and tannins behave like a mordant. These kind of dyes are called substantive dyes. (dyes that require a mordant are called adjective dyes)

- Dye materials - either whole plant matter or extracts that you purchase (list on page 8)  
I love to get people started with food waste like onion skins or avocado pits.  
You can also harvest plants to use as a dye or purchase a natural dye extract from an online source (see back page)
- Cloth or yarn (goods) to dye - natural dyes only work with natural fibers...kind of a nice synergy there, wouldn't you say?  
Fibers like cellulose fibers - cotton, bamboo, hemp, linen, rayon....or protein fibers - wool, silk

Generally speaking when dyeing with plant matter, you want a 1:1 ratio of plant matter to cloth/yarn. Meaning that 200 grams of onion skins will give a medium deep yellow tone on 200 grams of cloth/yarn. Dye Extracts, that you purchase, often tell you on the packaging how much they can dye (by weight).

## Overview & Timing

There are 5 basic steps.

1. scour fabric (1 hour or so)
2. mordant fabric (2-24 hours)
3. prepare dye bath (2-24 hours)
4. dye the goods (2-24 hours)
5. allow goods to dry and then wash the goods (several hours)

Let's talk about timing.

Natural dyeing is simple and fairly hands-off, but time-consuming. You do a little work, let it do its thing for several hours and then do a little more work...there can be a meditation and a peacefulness to it, if you let there be!

Here's a sample of what your process could look like -

Day 1 - scour and mordant fabric; leave fabric in mordant overnight and prepare dye bath and leave the dyestuff in overnight

Day 2 - strain dye bath and dye goods - allow to cool overnight

Day 3 - squeeze excess dye out of the goods (back in the pot) and hang the goods to dry - maybe reheat the dyebath and add more goods  
Once dry, rinse the goods and then wash them and dry again

Some times savers -

You can scour and mordant your fabric anytime and then allow it to dry and store it away for when you are ready to dye. You can also begin making your dye bath while your fabric is in the mordant.

# Let's get started!

## I. Scour the fabric

You'll need to scour your fabric (or yarn) before you dye with it. This will help remove any oils or chemicals so that the dye adheres better and you get a more even result.

If you are going to dye yarn, be sure to open the skein (if the yarn is in a ball or cake, you'll have to unwind it...try using the back of chair to form loops) and tie it loosely at various spots (4-6 times).

- Cellulose Fibers (yarn or cloth) -

I use a natural dish washing liquid, like Seventh Generation. I fill my bucket halfway with very hot tap water.

Then I add a tablespoon or so of soap, stir it around and put in my cloth or yarn and stir that around. Then rinse the cloth really well and discard the scouring water.

Honestly, sometimes I simply wash my cloth in the washing machine with a natural laundry soap and rinse it extra long. That gives me good results too.

\*Some dyers use washing soda and boil or simmer their cloth for a length of time, but I find that to be harsh.

- Protein Fibers (yarn or cloth)

Really I use pretty much the same method with protein and cellulose fibers.

I use a natural dish washing liquid, like Seventh Generation. I heat up some water in my pot, just until it's warm (you can put your hands in it with ease), not hot. Note - be extra careful here not to get the water too hot, so that you don't felt the wool or damage the silk.

Then I add a tablespoon or so of soap, stir it around and put in my cloth or yarn and gently squeeze the cloth/yarn, no stirring or agitating wool so as to avoid felting. Then rinse the cloth/yarn really well and discard the scouring water

## 2. Mordant the Fabric/Yarn

A mordant is used to bond the dye molecules to the fibers in your fabric or yarn.

There are many different mordants you can use (mostly metals like copper or iron, which have some safety concerns) but the two considered the safest are Alum Acetate for cellulose fibers and Aluminum Potassium Sulfate for protein fibers.

\*Check out the book [Botanical Colours at your Fingertips](#) for Rebecca Desnos's method of using soy milk as a truly safe mordant.

There are some dye materials that don't require a mordant because they naturally have a high amount of tannin. Although you may find you get a darker color when you mordant before dyeing with them anyway.

Some common natural dyes that don't require a mordant: [onion skins, avocado pits and skins, turmeric, walnuts, acorn caps](#)

Note - You'll want to use a mask when measuring out the mordant and gloves when handling the goods.

To begin, weigh your dry fabric/yarn (goods).

### Mordanting Cellulose Fibers - using Aluminum Acetate

1. Fill a bucket with enough hot tap water to cover your fabric/yarn.
2. Dissolve 2 teaspoon (6g) of Aluminum Acetate in hot water for every 100 grams of dry goods you plan to dye.
3. Add the Aluminum Acetate liquid to the bucket of water and stir.
4. Add your scoured and wet goods.
5. Stir or squeeze the goods every 10 minutes or so, for about an hour.
6. Let the goods sit, covered, for 2-24 hours
7. Squeeze out the extra water (you can pour it down the drain), rinse well and either dye your cloth/yarn or let it dry for another time.

\*take care not to mordant your fabric/yarn more than once or with too much Alum, it can change the hand of the fabric.

### Mordanting Protein Fibers - using Aluminum Potassium Sulfate

1. Fill a pot with enough hot tap water to cover your fabric/yarn.
2. Dissolve 1 tablespoon (14g) of Aluminum Potassium Sulfate in hot water for every 100 grams of dry goods you plan to dye.
3. Add the Aluminum Acetate liquid to the pot of water and stir.
4. Add your scoured and wet goods and bring the pot to heat.
5. Slowly heat the pot and goods to roughly 180 degrees F (82 degrees C) and keep under a simmer for about an hour, being very careful not to agitate or boil the goods so that they don't felt.
6. Rotate the goods every 10 minutes or so.
7. Let the goods cool in the pot of water.
8. Squeeze out the extra water (you can pour it down the drain) and rinse well.
9. Either dye your cloth/yarn or let it dry for another time.

\*take care not to mordant your fabric/yarn more than once or with too much Alum, it can change the hand of the fabric.

### 3. Prepare the Dye Bath

If you are using a natural dye extract...

1. Wearing a mask, measure out the appropriate amount of powdered dye extract (knowing how much your dry goods weigh and how much extract you need for that weight) and mix it with a small amount of hot water in a glass jar.
2. Fill your dye pot with enough water to allow your goods to float freely, but not more than you need (too much water can dilute the dye).
3. Add the dye solution to your dye pot and mix well.

If you are using whole dyestuff (or plant pieces and parts)...you are basically going to make a tea.

1. Add your dyestuff to a pot of water - enough to cover the dyestuff and bring to heat (feel free to add water as your water evaporates while simmering)

Some plants like to be simmered and some like to be slowly coaxed along.

Generally speaking the harder the plant part the harsher the process for getting out the color.

pits, wood and firm bark (chop into small bits if possible)- bring to a boil and then simmer for 1-2 hours  
roots, stems, thinner bark and leaves (cut into small pieces) - simmer on low for an hour or two  
flowers or berries (crush the berries) -heat on low for an hour or so and then allow to sit, covered

2. If you can stand it, let the dyestuff sit in the hot water until it's cool and possibly overnight.
3. Strain the dye bath through muslin and a sieve - the little bits and pieces will give you an uneven dye if you leave them in the pot and prepare to dye! (hmmm, that came out wrong...)
4. You can compost the spent dye stuff or try heating it again in fresh water and see if you get more dye...this works especially well for avocado pits!

## 4. Dye your Goods!

1. Add your pre-wetted goods to the strained dye bath - add a small amount of water if needed, water will dilute the bath, so try not to add more than you need to allow the goods to float freely.
2. Lightly simmer the goods for an hour or so, turning and stirring every 10 minutes or so as you go.  
\*keep in mind that the wet goods will dry at least two shades lighter.
3. Turn off the pot and \*allow the dye bath to cool with the goods inside...maybe overnight or even for a day or two - giving them an occasional stir.

\*I have to admit, this is what I do sometimes, and it gets the best, deepest color...but other times, I pull the goods out, squeeze the excess dye back into the pot and hang them to dry. Then I dye more things!

You can always reheat the dye bath later and dye again if it looks like it still has color in it. This is a fun way to get a gradient of color as the second bath will give lighter color.

4. You can dump the dye bath down your drain or water your lawn.

For best color, allow the goods to dry before rinsing them.

## 5. Wash your Goods

Rinse the dyed fabric/yarn thoroughly with water to remove any excess dye and then wash cellulose fibers in the washing machine with laundry soap and protein fibers by hand using a wool wash or mild soap.

## Caring for your naturally dyed goods

Natural dyes are more sensitive to light than chemical dyes and should be kept out of direct sun for long periods of time (like on the line drying...). They can be washed however you choose to wash your fabric/yarn, but keep in mind that harsh detergents can change the pH level of the cloth and that can change the color of some dyes.

## Dye plants & extracts:

\*don't require a mordant (not an exhaustive list!)

### Whole Plants (that you can forage or grow)

tansy - flowers - yellow  
rhubarb - leaves, root - butter yellow  
comfrey - leaves, stems - pale yellow  
goldenrod - plant tops - yellow  
marigold - flowers - yellow  
rhubarb - root and leaves - yellows and oranges  
\*acorns and oak galls - pale to dark brown  
\*black walnuts - hulls - brown  
black eyed susan - wilted flowers - putty brown  
weeping willow - leaves and bark - russet orange, pink  
dyers coreopsis - flower heads - rich ocher, burnt orange  
hibiscus - leaves - reds and pink  
blackthorn - berries - pink, purple  
elderberries - berries - purple lilac  
blackberries - berries - bright purple  
alder cones - soft brown, pale pink  
Hopi black sunflower - deep purple/black

### Food Dyes

\*yellow onion - skins - deep yellow  
\*turmeric - vibrant, deepish yellow  
\*coffee grounds - used grounds work great - pale brown  
\*black tea - use old tea bags - warm browns  
\*red onion - skins - warm tan or brown  
red cabbage - leaves - icy blue, pale purple  
black beans - use the cooking water - pale blue, lilac, soft pink  
\*avocado pits and skins - crush the pits when softened, can use more than once - baby pink, orange pink

### Extracts

(these are known as strong and light-fast dyes and you can purchase these as extracts, some as whole dyestuff and some as seeds to grow in your garden)

weld - leaves, stems and flowers - neon yellow  
osage orange - heart wood - vibrant yellow (fades rather quickly)  
cutch - wood - copper to terra cotta  
madder - roots - Red, pink, maroon  
brazilwood - heartwood - pink/red  
quebracho - heartwood - corals and pinks  
cochineal - bugs you can buy as an extract or dried bugs to be ground - fuchsia pink or if heated longer a purple  
logwood - heartwood - purples  
lac - purples  
alakeet - root - purples  
woad - leaves - blue, aqua, lilac  
indigo - leaves; a special dye that is actually fermented into a vat - vibrant blue

# Resources

## Books I love

The Modern Natural Dyer by Kristine Vejar  
Wild Dyer by Abigail Booth  
Botanical Colours at your Fingertips by Rebecca Desnos

## Videos

Creativebug has a natural dye series by Kristine Vejar of A Verb for Keeping Warm that is a great companion to her book.

## Places to order extracts and natural cloth/yarn

Dharma Trading - [dharma trading.com](http://dharma trading.com)  
dyes and undyed fabric/yarn  
Botanical Colors - [botanicalcolors.com](http://botanicalcolors.com)  
dyes  
A Verb for Keeping Warm - [averbforkeepingwarm.com](http://averbforkeepingwarm.com)  
dyes and kits  
The Woolery - [woolery.com](http://woolery.com)  
for lists of dye plants and also to purchase dyes and seeds to grow your own  
  
Organic Cotton Plus - [organiccottonplus.com](http://organiccottonplus.com)  
organic, undyed fabric and yarn