

HOW TO NATURALLY DYE LINEN



BY KATHRYN DAVEY

COURSE OUTLINE

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WHAT IS NATURAL DYEING?

Natural dyeing is an ancient practice of extracting colourants and dyes from plants, invertebrates, or minerals for the purpose of dyeing cloth and natural fibres. There are many colours available to us from the natural world and the process of extracting colour is a simple and enjoyable experience. If you follow the steps in this guide, you will be on your way to developing confidence in accessing colours from the natural world.



A VERY BRIEF HISTORY

Evidence has been found of cave paintings using mineral based dyes as early as 12,000 BC. There is also evidence of textile dyeing during the Neolithic period.

However, we do not know exactly how or when our pre-historic ancestors started applying dyes to natural fibres. We suspect that cooking and other daily practices may have resulted in the discovery of food and plants as dye stuff. We do know that natural dyes have been used to colour textiles for at least 6,000 years.

Archaeologists have found many vibrant examples of preserved garments, textiles and rugs throughout the ancient world.

The practice of natural dyeing was mastered by the Phoenicians, Greeks, Romans, and Egyptians. There are examples of Indigo being used across South America, Africa and Asia for centuries. As society grew, the Roman Empire spread and trade routes opened up. As a result, many dyes were shared around the world.

In the mid-nineteenth century synthetic dyes were discovered and developed for economic reasons. Synthetic dyes were cheaper to produce and easier to control. This development led to the demise of the natural dyeing market.

WHY USE NATURAL DYES?

Connect With Nature

Natural dyeing is soothing, meditative, and grounding; it is a wonderful way to connect with your environment and appreciate the beauty of nature.

Eco- Conscious And Safe

Natural dyeing is an environmentally safe and nontoxic way to develop colour naturally. There is a plethora of colours available to us through the natural world; plant dyes have an innate beauty and life to them that are lacking in synthetic dyes. Opening ourselves up to the unlimited possibilities of colour is a deeply satisfying process for many.

Learn A New Skill

By learning how to work with natural dyes and understanding the process, you can begin to build confidence, develop a creative hobby, and cultivate an ancient craft and practice.

Reuse And Renew

As a shift towards a more sustainable way of living occurs, making our own clothes, repairing the ones we have, and finding new ways to repurpose what we already own is becoming more common place. Being able to take what you have and give it a new life by dyeing with plants is a wonderful way to create a more sustainable future together.

EQUIPMENT NEEDED

To get started with natural dyeing, you will need some basic equipment that can be found easily and inexpensively.

Beginners will need a heat source, water, dye pot, and dye stuff. Please keep all home cooking utensils separate from dyeing equipment.

As you develop your practice, you can add to your tool box, but I recommend keeping it simple when you first start.



Dye Pots

When you first start out, find the biggest stainless steel pot that you already have and don't mind using for your natural dyeing. If you have an old aluminium pot lying around, use that! When it comes to size, you just need a pot large enough that your fabric has space to take up the dye without being squashed or crammed against the sides. The metal of a pot can act as a mordant and influence the resulting shades from the dye bath. Many experienced dyers choose to work with specific metals such as aluminium or copper for their dyeing.

Utensils

Spoons for mixing and stirring, including a teaspoon, tablespoon, and wooden spoons of various sizes. A whisk to blend powders. Tongs to lift fabric out of dye pot. A strainer to sift out plant material or to extract your fabric when it is too hot to handle.

Mordants and Powders

Soda crystals, soda ash, eco-friendly unscented, non-citrus detergent for scouring linen. Tannin may be sold as tannin powder, Oak Gall, Gallnut, Myrobalan, Black Walnut etc. These can all be found in dye supply stores online, I have listed in the reference section at the end.

Dyeing Journal

This can be a wonderful way for you to document your process recipes recipes. It can help you keep track of how you achieved a certain colour so you can recreate again if necessary. When you first start, write everything down, fabric type, fabric weight, how you prepared, mordanted & dyed your fabric. Attached a small swatch beside your information so you have a visual colour reference included.

Extras

You will need bowls and buckets for various different parts of your process. If you start to develop your practice, a weighing scale would be a useful tool to have. Gloves to handle hot fabric, and a face mask.

THE BASIC STEPS

Please read through the following steps in full before starting your dyeing project. This way, you will have a basic understanding of what comes next in each section.



PREPARING YOUR LINEN

In order for you to achieve successful results with natural dyeing, you need to prepare your linen correctly by a process known as scouring. Scouring is the method of removing oils, residues, and waxes from the fibre in order to let the dye soak into the fabric in an even and consistent manner.

However the linen sold with this PDF as well as fabrics marked PDF (Prepared for Dye) do not need scouring. I would recommend putting them through a cold wash prior to mordanting with 1 tsp. washing up liquid per 1 yard of fabric. Wash your linen as you normally would, but do not use detergent, just use the washing up liquid or dish soap instead.



MORDANTING YOUR LINEN

A mordant will do a number of things. It will help fix the dye to the fabric, it will increase colour fastness (how washing and light affect colour), and it will assist in achieving strong brilliant shades. Linen is a plant and cellulose fiber, so it can be mordanted with a tannin.

Tannin is a natural and safe substance that comes from dye stuff high in tannic acid. The tannin acts as a mordant, helping the dye to bond with the fiber or fabric. Tannins can be clear, or they can impart a base colour to the fabric. The tannins I use in the studio are Oak Gall, which is clear or Myrobalan, which gives a yellow base. This can be purchased online from dye supply stores. (See the references at the back of this booklet for suppliers.)

One thing to note: when adding your fabric to the mordant, fabric should be wet. I always like to soak my fabric before adding to a mordant or dye bath.



HOW MUCH MORDANT DO I NEED?

1 Yard of IL020 Light (3.5 oz / 125g)
Add 1/2 Tbsp tannin to 1/2 cup water
Dissolve, add to pot and stir until mixed through.

1 Yard of IL019 Middle (5.3 oz / 185g)
2 3/4 Tbsp tannin to 1/2 cup water
Dissolve, add to pot and stir until mixed through.

1 Yard of 4C22 Heavy (7.1 oz / 245g)
4 Tbsp tannin to 3/4 cup water
Dissolve, add to pot and stir until mixed through.

1 Yard of IL090 Canvas (8 oz / 280g)
4 1/4 Tbsp tannin to 3/4 cup water
Dissolve, add to pot and stir until mixed through.

1 Yard of IL095 Canvas (10.2 oz / 345g)
5 1/4 Tbsp tannin to 1 cup water
Dissolve, add to pot and stir until mixed through.



NOW WHAT DO I DO?

A 3-5 gallon pot should be big enough to mordant and dye 1 yard of linen. Don't get too caught up on quantities or ratios at the moment, natural dyeing is like cooking. So as long as you follow the steps, you should achieve successful results.

1. Fill your pot with enough water that your linen is covered and can move freely.
2. Based on the measurements above, add tannin to warm water and stir until dissolved.
3. Add dissolved tannin to your pot and stir, then add your pre-soaked linen.



4. Slowly bring to a simmer, stirring your linen every 10-15 minutes, top up with water if necessary to keep linen covered throughout the process.

5. Turn off the heat, let your linen cool, then remove and rinse.

6. At this point, you can dry and store your linen until you are ready to dye or move onto the next step.



PREPARING YOUR DYE BATH & DYEING YOUR LINEN

Now that you have done all the necessary work to prepare your linen, you get to move onto the fun part. You can dye with so many things in your kitchen, garden, parks and neighbourhoods.

Take a look around you and see what grows in abundance, that is a good place to start. In your kitchen, try experimenting with onion skins, avocado stones, tea or coffee red cabbage, carrot tops, black beans, and so many more. Notice what trees grow in your surroundings, you can use all parts of a tree: bark, leaves, and twigs.

If you feel brave, order some small quantities of dye powder online. Although the process is the same for many dyes, some will need to simmer for hours to release the colour, whereas others will be more immediate. Do your research on the specific dye you are using and follow the necessary steps.



DYEING WITH POWDERED DYES

1. Add dye powder to 1 cup of hot water.
2. Mix powder until it dissolves completely. Then, using a strainer, add dissolved dye to your pot.
3. Bring to necessary temperature. Different dyes will require different temperatures. This information is usually provided with the dyes.
4. Turn down to a gentle simmer for at least 30 minutes.
5. Add your washed, mordanted, wetted linen, stirring every 15-20 minutes. Leave in the dye until your fabric has the desired depth of shade.
6. Turn off the heat, let your your fabric cool, then remove and wash.

*Based on 100g of fabric, 1 tsp will give a light shade, 1 tbsp will give richer, darker shades.



DYEING WITH PLANTS, ROOTS, LEAVES OR BARK

Roughly 1 part plant material : 2 parts water

1. Add your plant material to pot.
2. Bring to boil, then turn down to a simmer.
3. Leave on low simmer for at least 2-3 hours, topping up with water if needed.
4. You want the dye bath to be strong in colour. If the water is a weak shade, leave the dye matter simmering for longer or add more, and continue to simmer.



5. When you can see that the water has changed colour and the dye has been released, strain out the plant material.

6. Add your washed, mordanted, wetted linen to the pot, and leave in the dye until it has the desired depth of shade, stirring every 15-20 minutes.

7. Turn off the heat and let your fabric cool, then remove and wash.



WASHING AND AFTERCARE

Once you have finished dyeing your linen, you will need to wash it to remove any excess dye. You can do this by hand or in your washing machine.

Choose an eco- friendly detergent. I recommend a neutral, unscented, non- citrus detergent. Citrus or perfume additives usually make a detergent more acidic. This will affect the PH of the wash, which in turn may affect the colour of your fabric. Try to find a gentle detergent if possible.

Hand or machine wash on cool cycle using 1 tsp or detergent. You may want to add a rinse cycle if the fabric has been in the dye pot for a long time or if the shade is quite dark.

Dry as you normally dry your linen.



TROUBLESHOOTING

Inconsistent or Blotchy Results

This usually occurs when the fabric needs to be scoured more thoroughly, so make sure you do not skip this step.

Weak Colour

This could be for a few reasons. You might need to scour your fabric more thoroughly, ensure that it is mordanted properly or you might need to add more dye material to the dye pot. You could also try leaving your fabric in the dye pot overnight.

Linen Changes Colour In The Wash

Detergent is too acidic or alkaline, or mineral content of water is too high.



RESOURCES

DYE SUPPLIES USA

botanicalcolors.com
dharmatrading.com

DYE SUPPLIES UK AND EUROPE

georgeweil.com

LINEN FABRIC, PATTERNS AND TUTORIALS

fabrics-store.com



A NOTE ON SAFETY

Natural dyeing is a safe and beautiful process, but please follow some basic safety rules when working with natural dyes.

Have separate equipment just for dyeing, never mix your cooking and natural dyeing tools or pots.

Always work in a well-ventilated area.

Dispose of mordants and dye baths safely.

As with anything that involves hot water and heat, exercise caution.

Gloves and a face mask are recommended when working with mordants and dye baths.

Always do your research and due diligence when working with plant dyes, as some can be toxic or poisonous.

Keep all dye powders and dyes away from children, pets, and food storage areas.

Above all else, slow down, enjoy the process and be easy on yourself as you learn.