

TRUE COLOURS

A GATHER GUIDE



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The ultimate guide to natural dyeing with
plants and flowers

An absolute beginner's guide to getting some colour out of a plant, & into some fabric¹

Intimidated. That is how I felt about getting started with natural dyeing. I mean, I adore neutral colours, I'm a sucker for a few ragged edge scraps of textiles and if you don't go weak at the knees for a bit of linen, are you even alive? I went through a phase of thinking it must be simple and natural, and the sort of thing our ancestors might have been able to do with an open fire, a crude pot and some woad. And then I started reading the books and the blogs.

There were words I didn't know. Mordant is from the latin to bite, which I love. Apparently, one can have a mordant sense of humour too, but you wouldn't want to be on the receiving end of it. Cutting.)

There were steps and stages and modifiers and pre-baths and after-baths. Not only that, every single book and blog I read said to do different things. Not just a bit, but sometimes an hour and

¹ this is going to be primarily about dyeing linen and hemp because this is what I have been experimenting with. I will do a guide on silk but only when I am completely sure I have found a source of ethical silk. I'll do a guide on wool when I have learned to knit, or when Jules Hogan agrees to supply me with her utterly glorious creations to dye. The principles and the order of scouring, mordanting and dyeing are the same, but look up temperatures and timings.

sometimes a few days. To simmer or to not. Or didn't include volume measurements. And then there was scouring... Well, we'll get onto that.

I've was in formal education for way too long to be unaffected by it and I do honestly believe that there is nothing you can't learn from a bit of research (and some cheating with YouTube) but this defeated me. I had to call in the experts. My learning was heavily mentored by Christine Lewis and this guide is very much a collaboration between my beginner's mind (i.e. naivety) and her years of experience and her knowledge.

The number of times I stood over a dye bath with a piece of wet fabric in my hand and dithered. Like a novice cook attempting Christmas dinner, I had four books open on the counter, and my phone in my hand, desperate to find some certainty and clarity. This way madness lies. Take it from me. Pick a method (preferably this one), print it out, stick it on the fridge, follow it to the letter and stop googling it.

So, if you know what you are doing, this is very possibly not the guide for you. This is for you if you have some beautiful flowers that you have grown from my Dyeing Collection and you don't know where to start. Or, at the very very least, you have nettles.

Can I suggest you read the book all the way through and then come back to the beginning before you start? You don't want any surprises. Some of the steps take a day.

Let's get started.

G x



L-R: Linen dyed with dahlia with brief dip in iron water (light olive), soak in iron water (khaki) and no iron water (yellow).

Step 1: Buy things

I am not going to lie to you, there will be some kit requirements for this expedition. And just when you think you have everything, you will probably need something else. Can I gently request that you attempt to avoid Amazon? Christine put a list of equipment together for me and I have added links for the versions that I bought.

Christine: Natural dyes are endlessly intriguing, once you start creating your dyes and see the beautiful colours that emerge from the dye pot I'm sure you'll be hooked. You don't need a lot of expensive equipment to get started and don't worry if you haven't got the pH papers or a thermometer when you create your first dye baths. Do your research before gathering and using plants either foraged or from your garden, avoid using poisonous plants or those that may cause skin irritation.

Choose natural fabrics, wool, silk, hemp, linen or cotton and practice on old shirts, sheets etc.

This is not a comprehensive list. It's worth trying your local charity shops for natural fabrics, pans and heatproof jugs, teaspoons and tablespoons etc.

- Laundry pen/marker for labelling samples, or [tape](#)
- Natural fabric or yarns including some test swatches – don't go popping large pieces of fabric in the bath before testing. See recommended stockists lists at the end of the book.
- Mordants from wildcolours.co.uk
- Notebook and pen for recording your process
- A non-reactive pan or [stock pot](#). Stainless-steel is a good all-rounder and won't affect the colour of the dyes. I went for 14 litres but I wish I had gone larger because I'd be able to do bigger pieces of fabric. However, be mindful of what you can safely lift and carry, these are really heavy when they are full.
- Heat source. I did use my everhot cooker but if you would prefer to do this outside then you need a [portable hob or camping stove](#)
- Face mask, use to prevent inhalation of fine powdered mordants, dye stuff and vapours
- Long stainless-steel tongs for lifting fabric from the dye bath
- Rubber gloves
- Apron
- Heat proof measuring jugs and mixing bowls
- Wooden spoons, tablespoons and teaspoons

- Buckets preferably with lids – I use a [large beer brewing buckets](#) for mordants and wetting out fabrics. I have three, one for a tannin bath, one for alum and one for iron water.
- pH neutral laundry detergent i.e: Ecover liquid or [Dr Bronner's](#)
- Sieve/colander and muslin or old tea towels for straining dyes
- Scales
- Food/hot liquid thermometer

a dyeing language: some words to know

Colourfast

adjective

dyed in colours that will not fade or be washed out

Lightfast

adjective

(of a dye or pigment) not prone to discolour when exposed to light.



Fugitive

Remember invisible ink? Some dyes are the same. You work and you boil and you steep and they look amazing. And then... they don't. The colour just goes. These are fugitive dyes. I love that they are called that, although it does sort of imply that they are out there, on the run, waiting to be caught. They aren't. Once the colour has gone, it's gone. A real shame because some of the easiest and most accessible plants to use for dyeing are in this category. I was soaking some beetroot in the kitchen (I was too lazy to scrub them straightaway) and the water went the most beautiful plummy red. It looked perfect for dyeing, but it wouldn't have worked. Beetroot is more of a stain.

(A mordant will not improve the light and wash fastness of stains or fugitive dyes.)

Other fugitive dyes:

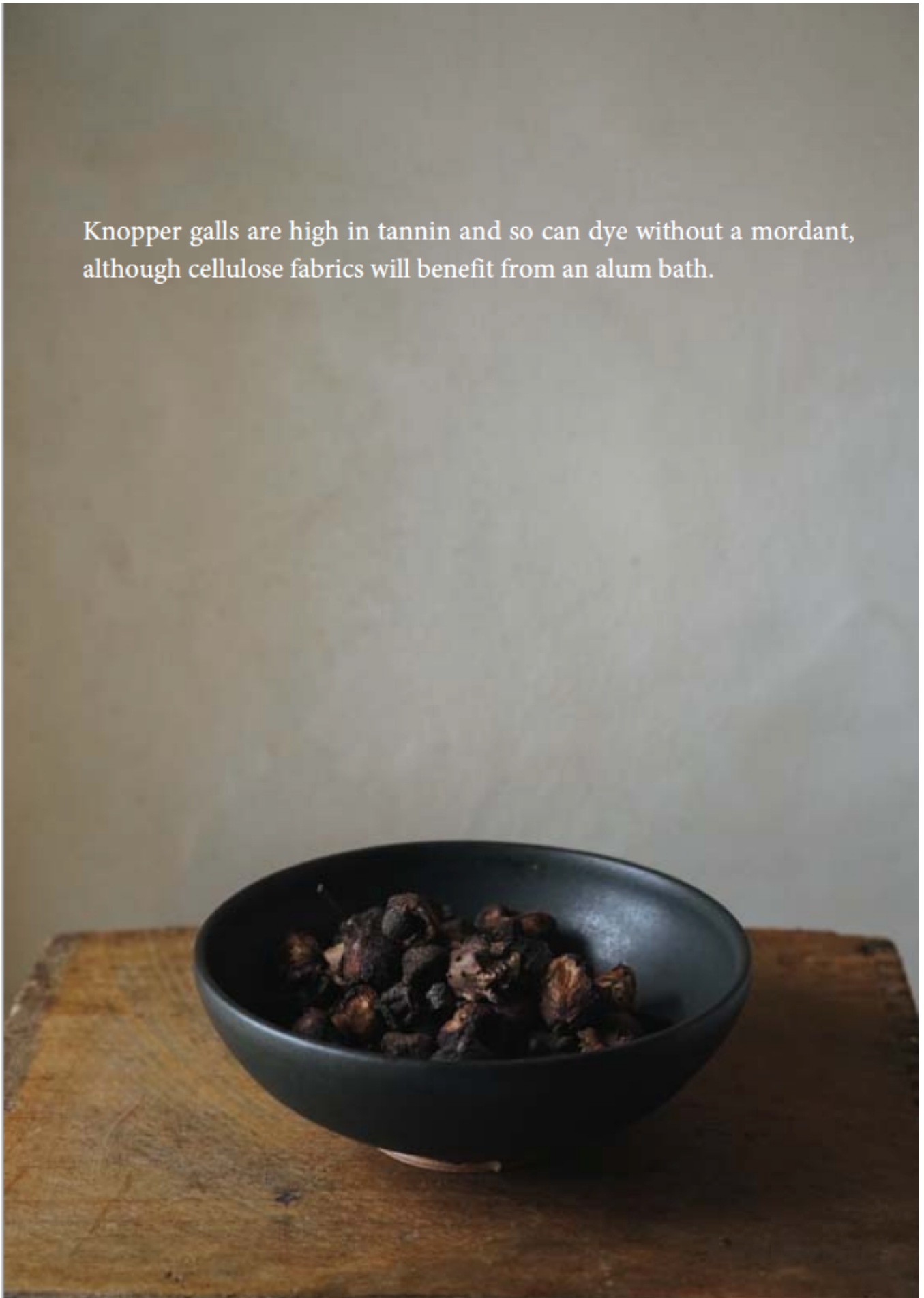
Red cabbage

Turmeric

Berries

Roses

Knopper galls are high in tannin and so can dye without a mordant, although cellulose fabrics will benefit from an alum bath.



Adjective dyes

Most dye material falls into this category, mordanting is required to fix the colour and to improve wash and lightfastness.

Madder, weld, sulphur cosmos, coreopsis and nettles, the list is endless!

Substantive dyes

Dyes that don't need a mordant (a mineral salt or plant based substance that enables the dye to fix onto the fibres) although cellulose fibres and textiles will benefit from the mordanting process. Yes, that means you can skip a step...

Oak galls, acorns, walnut husks, black tea, pomegranate rinds fall into this category.

Vat dyes

Indigo and woad are classed as vat dyes. As indigo is insoluble in water it has to undergo a fermentation process to enable the extraction of the indigo pigment. Indigo and woad are also substantive, no need to mordant your yarn or textile. These are a bit advanced for me and I will admit I haven't tried them yet. Maybe for volume II of this book...

You may notice that I haven't talked a lot about choosing the colour that you want to get and matching that to the plant material that you are going to harvest or source. That is because I don't want you to think that this is like commercial dyeing where you buy the pot, put it in the washing machine, and everything comes out exactly the same colour. There are so many variables involved, including the hardness of your water, the mordants you use, how you extract the dye, the time of year and the stage of life of the plant. All I can suggest is that you keep experimenting and trying out different things .



Health and Safety

It's preferable to work outside but if you are working in your kitchen then ensure that it is well ventilated and cover all surfaces with old cloths or paper. I started my dyeing journey in late autumn and so I did use my kitchen. The windows were always open and everything was cleared out by suppertime. Do not drink or eat when you are working with natural dyes. Not even tea. Especially not tea.

I labelled absolutely everything that was used for dyeing with dymo tape. All the spoons and things the tape didn't stick to was marked with bright red nail polish. If you live with other people who might use the kitchen, you need to tell them what this means. Never ever use the same pots and utensils for food use. Once you have taken a saucepan for dyeing, that's it, it is never going back to culinary.

Always wear rubber gloves and a face mask to protect you from inhaling fine mordant and dye powders, and vapour.

Label all dyes and mordants clearly. For the chemicals that I have bought in, I make sure I leave everything in their original packets with labels, put inside a sealable glass jar, and then kept together in a plastic lidded box out of reach of children and pets.

Ensure that you are not using toxic plantstuff.



Step 2: Choose your fabric

What is it made from?

There are natural fabrics and there are synthetic fabrics. Synthetic fibres are man-made through chemical synthesis and they are, essentially, a sort of plastic. I'm sure there is a way of dyeing them, but it is probably not with plants and I don't know how to do it.

What we are talking about here are natural fibres. These are fibres created from naturally occurring materials, and then processed into yarn or cloth. It is helpful to make the distinction between fibres that come from plants, and fibres that come from animals.

Plants:

Linen (from flax)

Cotton

Hemp

Although these materials are sourced from plants, there are not equivalent in terms of sustainability and the environmental impact that growing for the fashion industry has is not inconsiderable. Cotton is particularly intensive in how much water and pesticides

it needs to get a profitable crop so I can I suggest that you either source second-hand items or be very careful with organic sources? I am a great fan of hemp but it does need very careful scouring. More of that later.

Just to confuse things, plant fibres are often referred to as 'cellulose' to those in the know.

Animal:

Wool

Silk

Don't dismiss this if you are vegan, the wool industry is in trouble and shearing a sheep does not necessarily mean exploitation. However, sourcing wool from local farmers with high welfare standards is essential. I am going to be honest, I can't knit so wool tends not to be on my radar.

Silk on the other hand, I adore because at heart I am a florist and almost every florist loves a draping ribbon. However, silk comes

from the mulberry silkworm, *Bombyx mori*, and, traditionally, is extracted by boiling to silkworms in their cocoons. There are some ethical silks available which is harvested after the silkworms have left their cocoons but it does take some finding. If you look up Peace silk, or Ahimsa silk, you should be able to find it, but do check that they are a reputable source.

Alternatives? Most things that aren't silk that look like silk are actually polyester, a form of plastic, petroleum-based material, and this is really not going to take in any colour. I would suggest bamboo silk, so good Ayten Gasson makes lingerie out of it.

There are other animal sourced fibres such as hair but that really is beyond the scope of this book. And if plants are called 'cellulose', then animal fibres are called 'protein'. Not essential knowledge but mildly helpful for the next but one step (mordanting).

How much do you need?

I thought my first project would be a duvet cover. Maybe a tablecloth. So when I was talking to Christine about whether to get a 14 or 16 litre stock pot and she said 'oh 16 litres would be more than big enough for two or three napkins' I had to massively re-adjust my expectations. Many of the calculations and steps that you take will be determined by the weight of your fabric which is, itself, a product of the thickness and density of the fabric (this will often be listed when you buy it) and the size of the fabric you have. So it makes sense that if you have a very heavy fabric (a heavyweight

hemp for example), then you might only be able to do a napkin or two at ones, but if it is a very light linen or muslin, then you might be able to do a table runner. Hemp is tricky so can I suggest you start with something simpler? Yes, of course I started with hemp...

Step 3: Weigh your fabric

I know I know, how complicated can it be to weigh fabric, surely I don't need to explain this bit? But I sort of do. You need to weigh fabric dry, completely dry, because any moisture in it weighs a lot.

The weight of the fabric you will be dyeing is the fabric that you have left after you have boiled away all the coatings and waxes and dirt in the scouring stage. However, if you have a system going and you are on a roll, you might not want to dry the fabric between scouring and mordanting. I have one of those houses where it takes everything an age to dry and it is not a good use of energy (or water) to dry something to weigh it and then pre-soak it again, just to put it in a bucket of mordant.

I don't have a tidy solution to that except to say that I weigh before scouring and mentally take about 10% off to account for what comes off during scouring. I think (and Christine might disagree) that as long as you aren't trying to dye a kilo of fabric in a milk pan, we're all within our margins of error.

Just for reference, one thick hemp/cotton napkin is 65g whereas nearly 2 metres of cotton muslin is 100g.

Why is weight important? Because you absolutely need to know your WOF (weight of fabric) to answer the following questions.

How much water do I need per 100g of fabric, and how much can I fit in my stock pot?

You will need approximately 1 gallon (4 litres) to 100g fabric. It needs to be enough for the fabric to be able to move around freely.

How much mordant do I need per 100g of fabric?

8g alum sulphate

How much dyestuff do I need per 100g of fabric?

Ideally equal weight of dyestuff to fabric, to get a good strong colour.

I made everything into bundles of 250g. Sometimes this was scraps and some linen furoshiki squares in a bundle together, sometimes this was one single piece of linen flax of 2m by 1m.

Step 4: Scouring

I know, you thought it was going to get interesting quickly. It isn't. There are steps to go through before you start getting clever with colour and before you do anything at all, you need to get scouring.

Scouring simply means getting rid of any chemicals or coatings on your fabric that will repel or interfere with the dyes. The instructions below are for plant fibres (linen, cotton, hemp). Please do not put anything woollen into a 95 degree wash.

I view my washing machine in the same way as many people consider the contraceptive pill. I truly believe that it has played a vital role in liberating women from domestic drudgery. Washing things is necessary. Washing things by hand is unbelievably tedious and boring. Putting things in a washing machine and getting on with something else allows me to contribute meaningfully to society.

If you are using plant fibres, put your fabric in your washing machine and put it on a hot wash (95 degrees). Obviously it is not environmentally responsible to just put a few napkins in so it is worth thinking ahead about what other projects you might be doing. (I suppose you could just put your bed sheets in.) This will

introduce you to the importance of labelling. After a few forays into the joys of dyeing, you will find yourself standing quietly with a bundle of fabric (probably slightly damp) in your hands, thinking 'is it washed or scoured? Scoured or tannined? Tannined or mordanted? And what on earth is this in this bucket...



I don't have the space to put things in their own designated places as they go through the process so paper tape, dymo labels, bulldog clips and scraps of paper are the only way.

Back to the washing machine. Use a neutral washing powder such as ecover, or put a splash of Dr Bronners soap in with it. Take a moment to appreciate the work that it does, and then go and do something more interesting.

Whilst it is on, put your stock pot on the hob, about two thirds full. As it gets hot, add a three heaped tablespoons of washing soda and a squirt of Dr Bronner's or ecover (the sort of amount you would use of washing up liquid in a load of washing up). When the fabric has finished in the washing machine, pull it out and drop it straight in the pan. Give it a good stir. It'll bubble up a lot, especially as it boils, so you will have to keep pushing the fabric underneath the water again every fifteen minutes or so.

Christine would like me to say that you should use 2 teaspoons washing soda per 100g cellulose fabric. I am a bit more heavy handed than this.

Put the lid on. Boil for two hours. I never promised this would be glamorous. Or quick.

You will not believe the dirt that comes out. Christine has suggested that some fabrics are more resistant to getting the dirt

out than others and she has told me to do the hemp twice. I cannot pretend I was thrilled about this because I have spent many many evenings recently cooking my supper amongst pots of boiling dirty water.

After two hours, drain carefully; these stock pots get heavy and that volume of water keeps its heat for a surprisingly long time.

Rinse.

Squeeze.

If the water was genuinely filthy, do it again. I promise you will thank me later.

For wool, you need to get the grease and oils off the fibre, even if it looks and feels clean. Fill a bowl with warm water (between 50 and 60 C), add some Dr Bronner's liquid and leave the wool to soak for two hours or overnight. Rinse gently because agitating the wool or changes in temperature can cause the wool to mat together and to felt.



Step 5: Mordanting

If you are using a substantive dye (acorns, walnut hulls, tea, coffee, pomegranates) then you can skip this step, and go straight onto Step 6.)

You now have fabric ready to dye. You will have dye soon. You need something to stick them together. If you do not get the dye to 'bite' into the fabric, it will simply wash off.

What mordant you use depends on a few things:

Do you want to be able to wash the fabric? Napkins, yes. Fabric gift wrap? Probably not.

What fabric are you dyeing? Plant fibres need a lot more work to get the colour in.

What are you going to be using to make your dye? There are some dye-stuffs that have a lot of tannins in and they do a fair bit of biting all on their own. Tea, for example. However, I am not quite brave enough to dye without mordants though. It is a huge amount of work to waste to get insipid colours.

Mordanting is one of the things that I found most confusing when I started as there are lots of things that seem to be, if not contradictory then at the very least divergent in their opinion about how things should be done. Oh, and also confusing is that people talk about alum (which is alum potassium sulfate) and alum acetate (which isn't aluminium lactate, but is sort of like it...) I have a chemistry A level but it was a very very long time ago.

So, I am going to give you the recipe that I settled on to start with and just not mention the others. Do not try and experiment on your first round of dyeing, you will simply confuse yourself.

Print out the next page and do not google anything mid-mordant. Just follow it step by step by step.

Two step mordanting

This works for all **plant fibres**, and gives good saturated, strong colours.

You need oak gall powder and alum powder from wildcolours.co.uk

Put two big buckets near a sink with hot water, but where you won't trip over them. Put a label on one that says 'tannin' and the other that says 'alum'.

If you have not already weighed your fabric, weigh it. As above, I try and aim for around 250g for a round of dyeing.

Tannin bath: Fill the first bucket about two thirds full with hot water out of the tap.

Put the kettle on. Weigh out the oak gall powder in a glass jar. You need 8% of your fabric's weight in oak gall powder. So for 100g of fabric you need 8g. For 250g of fabric, I use 20g.

$$8/100 \times 250g = 20g$$

Put enough boiling water into the jar to make a paste. Stir until there are no lumps. Add more boiling water so that you can pour the contents of the jar into the bucket of hot water. Pour. Give the bucket a stir.

Shake out the scoured fabric a bit and make sure it is not folded in half. If it dried after the scouring, it will need soaking in clean water for a few hours. Add the fabric to the bath. Give it a good stir and a poke to make sure it is all covered in the tannin.

Leave for 24 hours. Give it a stir and a poke every so often.

Alum: When the 24 hours is pretty much up, fill the second bucket two thirds full with hot tap water and put the kettle on.

Weigh out 15% of your weight of fabric in alum powder into a jar.
(Wear a mask and gloves.)

$$15/100 \times 250g = 37.5g$$

Carefully add some hot water out of the kettle to the jar and stir to dissolve. Tip this carefully into the bucket of hot water.

Weigh 1.5% of your fabric's weight in soda ash, and repeat what you did with the jar of alum. Be careful and wear a mask and gloves, and add the soda ash mix to the alum bath slowly and carefully.

$$1.5/100 \times 250g = 3.75g$$

With rubber gloves on, pull the fabric out of the tannin bath, give it a brief rinse under the tap with cold water, give it a squeeze and lower it gently into the alum bath. As before, lots of stirs and pokes in the first ten minutes or so, and then every so often for 24 hours.

DO NOT THROW YOUR TANNIN BATH AWAY. KEEP IT IN THE BUCKET AND REUSE.

You are nearly at the exciting bit I promise. As soon as the fabric is in the alum bath, you can get on with making your dye bath.

DO NOT THROW YOUR ALUM BATH AWAY EITHER.

Step 6: Creating your dye

Basically, this is all the principles of making a really good cup of tea, but on a bigger scale both in terms of volume and steeping time.

Extracting colour generally means putting the plant material in a big pot of water, heating it (a good rule of thumb for leaves and flowers is about thirty minutes) and then letting it steep. General wisdom seemed to suggest that you could heat for thirty minutes and the dye is good to go, or you could leave in cold for 1-3 days.

I found the just heating method to give very pale, disappointing results but heating and then leaving for a day or so, much better. I haven't quite dared try the just cold method; everyone knows that using anything other than a just boiled kettle makes for a dreadful cup of tea.

General rule of thumb, you need the same amount of plant material as your weight of fabric. Unless you are doing onion skins or dock roots, in which case you need twice as many. Yes, that is sacks and sacks of onion skins. They are unbelievably light.

1. Harvest your dyeing material.

Leaves:

Flowers:

Oak leaves

Black knight scabious

Nettles

Yellow dahlias

Bracken

Weld

Willow

Orange cosmos

Black tea

Marigolds

Roots:

Barks & nuts

Madder

Alder cones

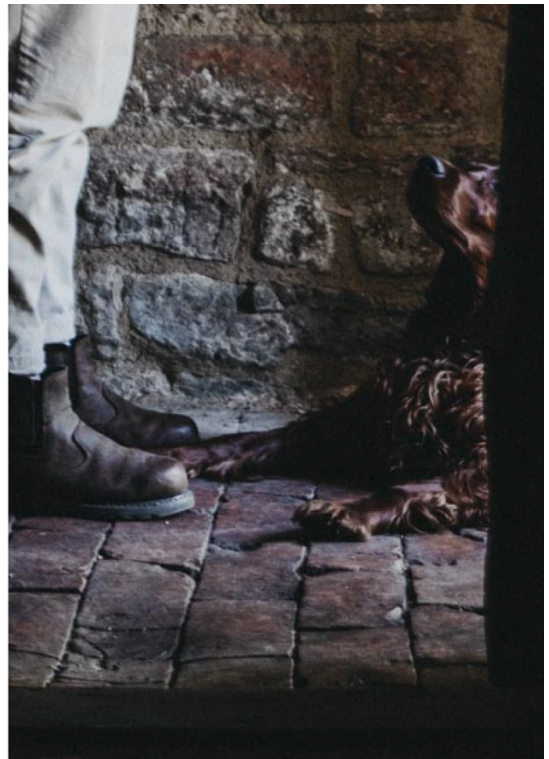
Dock

Acorns

Lady's bedstraw

Make sure there is no dirt or debris on the dyeing material. Flowers and leaves tend to be fine, but acorns and roots will need a bit of a wash and a rinse. Weigh what you have. General principle is that there is enough dye in 100g of plantstuff to dye 100g of fabric. Irritatingly, onion skins and dock roots need 200g of plantstuff to every 100g of fabric. This is irritating because they both give incredible colours (gold and rusty brown respectively), onion skins are very light so you need a lot of onions, and I'm not digging up a kilos worth of dock roots.

Willow. Some people swear by the pinks you can get from weeping willow, left to steep for a few days. I've tried this once. I got day-glo yellow and the smell was indescribable. I'm never trying again but willow is so prolific that I've left it in as a suggestion.



2. Steep.

Yes, think tea. Most plants benefit from a bit of chopping up although even I lose the will to live chopping a kilo of nettles and with the very colour rich plants, it's unlikely to make much of a difference. With roots, it is essential.

Put the plant material in your stock pot and cover with water. You are going to add more water before you add the fabric so it doesn't need to be a full pot, just enough to cover the material.

Bring to a simmer and keep it there for about an hour. **DO NOT BOIL.** Remove from the heat and leave for a day.



3. Strain into another pan or a bucket.

Pour the contents as if you are draining pasta, but catch all the cooking water. With rubber gloves, give the plant material a bit of a squeeze to get the most of the colour out.

You might be able to get another dye bath out of the material. If there is still a lot of colour in the plant material, it's worth re-steeping. I re-use nettles at least once and a pot full of dahlias went round at least three times before they finally got put on the compost.

You should now have a pan of intensely coloured liquid. This is your dye.



Step 5: Actually dyeing

There are two ways of getting the dye into the fabric. One takes weeks but no energy, and the other is quicker but means heating your pot. I find that material made of plant fibres need the heat to start off the process so I use hot dye baths. If you are dyeing wool or silk, cold is worth a try.

If you dried your fabric after mordanting, then soak it for a least two hours before you put it into the dye bath.

Cold dyeing: If you are not heating the dye, a lidded

bucket is probably easier than a pot. Put the dye into the bucket and then dilute enough so that the fabric can move around freely – that is, it's covered and then some and when you stir it, it can swish around. This won't weaken the dye, the number of pigment molecules in the bucket is the important thing, not the concentration. Give the bucket a good mix.

Take your mordanted fabric. Feed it carefully into the bucket, using a spoon to make sure that the fabric doesn't bubble straight up and that the dye gets into all the creases and folds.

Keep stirring for a few minutes. Leave for one to three weeks. Check every so often that the same bit of fabric isn't above the surface.

When you have left it as long as you would like, rinse.

Dry.

Hot dyeing: The same general principles, just quicker. Put the dye into your stock pot and then add enough water to come up to about two thirds full. Add the fabric and stir continuously for about ten minutes. Bring to just below a simmer.

Leave on the heat for about an hour. But absolutely do not let it boil. Keep going back to it every five minutes or so and just stirring and moving the fabric around.

After an hour, take the pot off the heat. Put a lid on and leave for twelve hours or so.

Rinse. (Do not tip your dye bath away.)

Dry.

Isn't it wonderful?



Top L-R: Dahlias flowers harvested and left for insects to leave; steeped until the colour has leached out
Bottom L-R: dye extracted and labelled; fabric in dye bath



Exhaust baths

Do not throw the dye bath away. You can keep going until the water goes clear, although the colours you get from it will get paler. The fabric on the left was a deep midnight blue from a fresh dye bath of black knight scabious with an iron modifier. I left it in quite a long time so there wasn't much left in the pot, but the second piece of fabric took on a beautiful soft pale grey. The water in the dye bath was clear by the end.



Just one more thing:

modifiers

There are some additions that can change the colour of your dye. It appears that this is related to shifting the pH of the dye.

There is a general sense that acids shift colours towards the warm, and alkali towards the earthy. I have experimented and some of the shifts are subtle and some are dramatic.

The first three things I dyed were pale and insipid. The second three things were uniformly charcoal because I discovered iron water.

An example. I had surprising success with dahlia flowers. They created a strong, sunshine yellow, cheerful sort of tablecloth. Cheerful textiles aren't my sort of thing, so I went for muddy and earthy. (Actually, I was after a sort of old gold yellow, but even I realised that was a bit specific.) I have a bottle of iron water, recipe below, and so I dipped my yellow tablecloth in it. There was a about fifteen litres of water and a slosh of iron water in the dipping bucket. Turns out that is a very strong solution and in contact, the yellow turned khaki. Actually, I absolutely love it, so it was fine, but I have learned to treat iron water modifiers with respect. I dilute it a lot more now, and dip and rinse pretty quickly.

Modifier method one:

Prepare a bucket of your chosen modifier diluted in clean tap water. After the dyeing process has finished, rinse the fabric and immerse in the modifier bucket. Leave either for a few seconds or up to ten minutes for deeper changes. I found when I just did a 'dip' modifier, it is hard to get the modifier to touch the fabric evenly so it did come out really quite patchy.

Modifier method two:

Add some modifier to the dye bath before the fabric is added. Again, use some restraint; I took 24 hours to harvest nettles, simmer and steep to make a beautiful deep green dye. I added a bit of iron water and it turned jet black. It dyed everything it touched a patchy grey (I also didn't filter it properly).

Modifier options:

Acids to brighten

clear vinegar, citric acid, lemon juice

Alkalis to earth

baking soda, baking powder, soda crystals & wood ash

Iron to sadden



How to make iron water

First thing, a warning. This is unbelievably powerful stuff. I have accidentally dyed patched of my kitchen worktop black, turned a tablecloth inadvertently charcoal, ruined a full bucket of tannin mordant by turning it blue just by using the same spoon for an iron bath to stir the mordant. I picked up the jar to move it and my fingers went black. I did not listen to the exhortations to keep *everything* iron related very separate; I do now. Keep spoons, pans, jars and buckets used for iron separate. All that said, it is absolutely magic and I wouldn't be without it.

Find something made of steel. I used a bit of wire wool I found in my husband's workshop, a few bits of metal that he had used to mend a rusted through wheelbarrow, and some nails from the back of a drawer.

Put the metal in a sealable jar. (Instructions differ on whether the jar should be sealed or not, I went for it being covered by not airtight, so used a preserving jar but without a proper rubber seal.) Pour in clear distilled vinegar up to about a third of the jar and then fill the rest with water. Give it a bit of a swish. Don't shake it if it isn't sealed obviously. This stuff stains like you wouldn't believe. See above.

Leave for a few days. It will go orange.



My first efforts were to use the water out of a bucket of rainwater that had had the metal in. This wasn't intentional, it had just been left in the courtyard after the job had been finished and when it started to show signs of rust, I thought I would let it keep going to create the iron water. However, this didn't work at all, even though there was a lot of orange rust in it. You need the vinegar as well for some reason.

This is seriously strong stuff and my kitchen worktops do now have black splodges on them wherever I have put the jar. Be very very

sparing with it. My best success has been putting a few tablespoons of it into a 25 litre bucket and then filling it half full of water. I find anything more than that just turns everything black.

Make sure you filter the rust flakes out, otherwise they will speckle on the fabric. I initially put the iron water through a quite fine nylon sieve but that doesn't seem to be quite enough (I still got quite uneven changes and there were marks on the fabric) so now I am careful to put it through a piece of fabric as well as the sieve.

Can be added directly into dye baths (about a tablespoon, and mix well before adding the fabric) or used as a separate bath after dyeing is complete.

Wash iron modified fabric thoroughly with hot soapy water immediately otherwise it will keep changing.

Record of dye process

Date:

Type of fabric:

Dye:

Step	Summary	Notes
Weight of fabric	Weigh dry	WOF:
Wash	Hot wash in washing machine with pH-neutral soap	
Scour	Boil with washing soda & pH-neutral soap	
Tannin mordant	8% of WOF dissolved in hot tap water. Leave for 12 hours	Time in: Time out:
Alum mordant	15% WOF of Alum, 1.5% WOF of soda ash	Time in: Time out:
Dye bath	Simmer plant material in just enough water for an hour and then leave overnight. Strain. Add enough water for fabric to move. Simmer fabric in dye for an hour and then leave overnight. Stir often.	Notes on materials: Time in: Time out:
Modifier	Add to dye bath, or use a modifier bath after dyeing is complete. Note shifts in colour.	

What next?

So, you have some fabric. What do you reckon?

If it is perfect as it is, make it into a napkin, a coaster or, if you are very advanced, sew a bag.

If you would like it a bit darker, or a different shade, you can put it through again. Layer dyeing just means wetting the fabric thoroughly, adding to dye bath again to build up strength of colour or to change colour by over dyeing.

You can do this without mordanting, but if you want really strong shades, re-mordant and literally go through the whole process again from mordanting onwards. (That is, don't scour again.)

If you are starting the process again, either with the same fabric or some more, you can refresh your mordant baths and your dye baths by adding 50% of the tannin or mordant, or topping up your dye baths with more of the concentrated plant extract.

FAQ

The fabric looked ok in the dye bath but then the colour rinsed out. So disappointing. What did I do wrong?

You didn't scour it enough. How long were you boiling it for?

You didn't leave it in the mordant bath (or baths) long enough, or there wasn't enough tannin or alum in the bath.

You didn't leave it in the dye bath long enough. Some dyes, like nettles, take a very long time to take. Leave for a few days.

You used a fugitive dye. Nothing you can do about this one I am afraid.

My fabric is patchy. Why?

Lots of mine is patchy because I try and fit too much fabric in the pot. Story of my life; I always have eyes bigger than my stomach. However, this is natural handmade thing of beauty and patchiness can be celebrated.

Also, you need to stir for the first ten minutes after you put the fabric in the dye bath to make sure the fabric is moving around and the dye gets to each bit.

Also, not enough scouring and uneven mordanting (stir it more) will leave uneven colour.

You didn't put dry fabric in the dye-bath did you? I absolutely told you to pre-wet. You won't do it again.

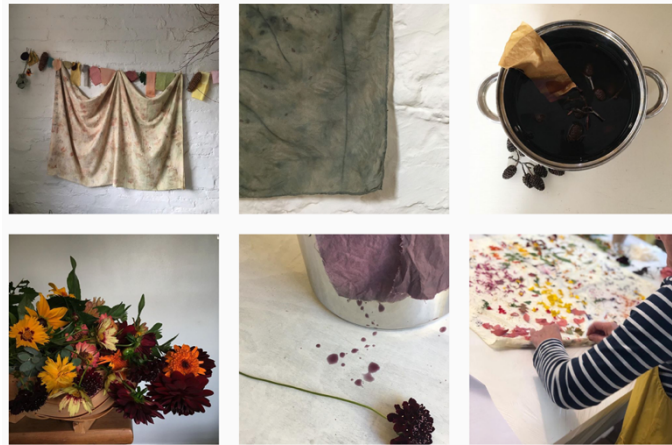
Inspiration, mentoring & learning

People to follow on Instagram

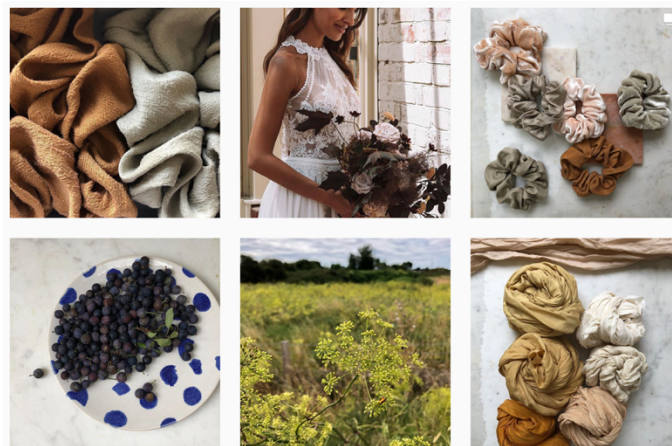
UK & Ireland based dyers

[Christine Lewis Studio](#)

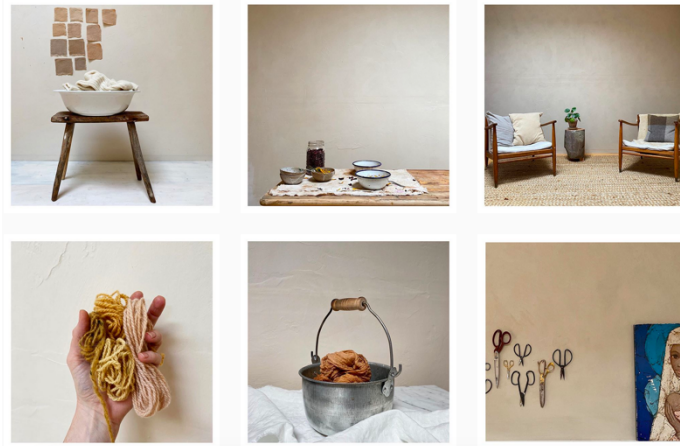
Christine runs in person workshops and her website also has wonderful resources and beautiful pictures.



The Natural Dyeworks



Kathryn Davey



Japanese textiles

[Den nibiuro](#)

Also have a look under the hashtag #kakishibu. This is a traditional Japanese method of dyeing with fermented persimmons and the results are out of this world.



Other resources

Videos

BillyNou's just gorgeous YouTube channel
Botanical Colour's [Feedback Fridays](#)

Books

Please buy from Hive or uk.bookshops.org

[Botanical Inks by Babs Behan](#)

[The Wild Dyer by Abigail Booth](#)

[Wild Colour - Jenny Dean](#)

Where to buy

Seeds for growing

Grace Alexander Flowers

Fabric

Merchant and Mills

The Hemp Shop

Pots and equipment

Dunelm

Lidded buckets

Wilko brewery range

Mordants & colours

Wildcolours.co.uk

