



Why do I dye my own fabric?

Because I am obsessed with colour – particularly blues, teals, purples, burgundies...where do I stop. And I like the fabric to have some texture! And I like to mix and overlay colors to create new ones!

You can't buy this fabric! So, you have to dye your own! Fabric2Dye4!

I've been dyeing fabric since the 1980s (hard to believe that I am that old!) The only fabric I buy now is white fabric, preferably PFD (Prepared for Dyeing). PFD fabric is not easy to find in Australia, so I also buy white fabric and prepare it for dyeing by scouring it. There are other ways to do this, but I now boil it for 20 minutes in an Urn.

There are many ways of colouring your own fabric, using both dyes and fabric paint.

When you dye fabric with Procion MX Dyes, the molecules of the dye form a permanent covalent bond with the fabric molecules. Procion dyes are non-toxic, easy to use and applied at room temperature. They are wash-fast and light-fast. They do not change the hand of the fabric – it remains as soft as it was originally. Fibre-reactive dyes work on 100% cellulose fibres – cotton, linen, hemp, viscose rayon, jute, ramie and silk. The dye is transparent, so can be used to over-dye commercial or previously dyed fabrics; the colour will be affected by the previous layer of colour.

Fabric paint (sometimes referred to as Ink) is usually an acrylic compound and sits on the surface of the fabric which affects the feel of the cloth. Depending on the technique used, the cloth will always be a little stiffer than the original fabric and can sometimes feel quite firm, even heavy. Textile paints will work on any fibre or combination of fibres.

There is a place for both dyes and paints in the colouring of cloth, particularly for art textiles. Combining dyes as a first layer and then using thickened dyes or paints for printing, stamping, screen printing, sun printing, mono-printing – all produce beautiful pieces of fabric.

Avoid fabrics with permanent-press, stain-resistant, flame-retardant or water-repellent finishes. These fabrics will not dye well and are difficult to paint successfully.

Preparing fabric for dyeing with Procion MX dyes

There are two options:

- PFD fabric is fabric that is already Prepared for Dyeing - I use a mercerised broadcloth, and a cotton poplin that I purchase as PFD fabrics and I dye them without any further preparation. Though some sources believe that you should pre-wash these as well, I never have.
- I also use quilters percale, cotton broadcloth, homespun and calico; and have over-dyed light-coloured quilting cotton fabrics.
- These commercial fabrics need to be prepared by scouring to remove all sizing, dirt, waxes, oils or other fabric finishes.
- If fabric is not completely clean and free of all finishes, it will not dye evenly.
- In this workshop we will be using Quilters Percale, which needs to be pre-washed.

Scouring commercial fabrics

You need to wash the fabrics in hot water, with the addition of some soda ash and a neutral detergent. People who do a lot of dyeing use Synthrapol.

For 3-4 metres of fabric, I simply put the fabric in the washing machine on a hot wash, with 1 teaspoon of soda ash (dissolved in hot water) and a 1 teaspoon of washing detergent, (not powder). Don't use detergent with added bleach or enzymes.

If you don't have suitable washing detergent, you can use dish-washing detergent.

You can find Soda Ash at Bunnings.

Some History

Procion MX dyes were created in Britain in 1954 by Imperial Chemical Industries Limited (ICI); they became available commercially in 1956. ICI discovered that a dye molecule containing certain chemical reactive groups could react with cellulose fibres under alkaline conditions. They determined that the dye molecule reacted with the fibre molecule and became part of the fibre rather than an independent substance trapped within it, or attached to it.

Pure Dyes

There are 14 pure dyes. These can be combined together in varying amounts to create a wonderful array of all colours imaginable.

Dye companies also sell mixed dyes, but it is a much better idea, not to say more economical, to buy only the pure dyes and mix your own colours.

Table of Pure Dyes, with their equivalents

Colour Code - Pure Dyes	KraftKolour (Australia)	Dharma (USA)	Pro Chemical & Dye (USA)
Yellow MX-8G	Yellow MX8G	#1 Lemon Yellow	#108 Sun Yellow
Yellow MX-4G	Yellow MX4G		#114 Lemon Yellow
Yellow MX-GR		#3 Golden Yellow	#112 Tangerine Yellow
Yellow MX-3RA		#4 Deep Yellow	# 104 Golden Yellow
Orange MX-2R	Deep Orange MX2R	#6 Deep Orange	#202 Strong Orange
Red MX-5B	Red MX5B	#12 Light Red	#305 Mixing Red
Red MX-8B	Red MX8B	#13 Fuchsia	#308 Fuchsia
Magenta MX-B or (MX-BR)	Magenta MXB		#802 Boysenberry
Violet MX-2R or (MX-GN)	Violet MXRA	#117 Grape	#801 Grape
Blue MX-R	Blue MXR	#26 Sky Blue	#400 Basic Blue
Blue MX-G	Blue MXG	#23 Cerulean Blue	#406 Intense Blue
Blue MX-2G	Blue MX2G	#22 Cobalt Blue	#402-c Mixing Blue
Blue MX-4GD	Blue MX4GD		#414 Deep Navy
Turquoise MX-G	Turquoise MXG	#25 Turquoise	#410 Turquoise

Understanding MX Dye Codes

The letters following MX refer to the German names for colours: G for gelb=yellow (think gold); R for rot=red; B for blau=blue. The other letters can be ignored. The numbers in the code refer to the strength of the colour bias.

The importance of this is so that you can see the cast of the dye, eg Blue MXR is a blue with red bias; Blue MXG is a blue with a yellow bias – so you would use Blue MXR if you wanted to produce purples or burgundies; and Blue MXG if you wanted clear greens.

You can also see that Blue MX4GD has more of a yellow cast than Blue MX2G, which again has more of a yellow cast than Blue MXG.

What else do you need?

- Soda ash – soda ash is the fixative that bonds the dye to the fabric. It changes the PH of the solution. Find it in the swimming pool section of the hardware store.
- Non-iodized salt – I buy swimming pool salt. Salt has an electrostatic charge that forces the dye to bond with the fabric.
- Urea – urea is a humectant. It increases the solubility of the dye powder and prevents fabric drying too quickly during the batching process. Also used as a fertiliser – find it in the gardening section.

Suppliers

Procion MX Dyes

- KraftKolour (AU) - <https://www.kraftkolour.net.au/>
- Dharma Trading (USA) - <https://www.dharmatrading.com/>
- Pro Chemical & Dye (USA) - <https://prochemicalanddye.net/>

Note: there are lots of descriptions/instructions and informational material to be downloaded from all 3 websites. Another website of interest is Paula Burch's- <http://www.pburch.net/dyeing.shtml>

Soda ash, salt, urea

- Bunnings (AU)
- Hardware stores

Approaches to Dyeing

There are as many methods of fabric dyeing as there are teachers; essentially, they fall into two categories

- Explore Playfully
- Experiment Scientifically

Explore Playfully – probably the best-known proponent of this method is Ann Johnston - <http://annjohnston.net/>

Her books: *Color by Accident: Exploring Low-Water Immersion Dyeing* and *Color by Design: Paint and Print with Dye* are excellent references.

These are a great place to start, particularly if you want to produce some beautiful fabric and are not concerned about being able to reproduce it. Dye is measured in teaspoons and tablespoons.

Experiment Scientifically – this approach uses the original formulas created at ICI and published in their instructional manuals. The lady credited with being the source of these formulas is Elin Noble, who for many years, managed the dye laboratory at Pro Chemical & Dye.

Her book: *Dyes & Paints – A Hands-On Guide to Coloring Fabric* is an excellent reference.

I think most people start exploring playfully; once you are hooked, you want to experiment scientifically.

The Scientific Method involves weighing your fabric and weighing your dye powder. Sounds tedious, I know, but is not really. If you know the weight of 1m of your fabric, and continue to use the same fabric, you only have to weigh it once. If you use dye solutions, you only need to weigh out the dyes you want to use once in a dyeing session or even less often if you refrigerate your dye concentrate solution. This method gives consistent, excellent results that are easily reproduced. You will also find that you use less dye powder to get the same intensity of colour. There is much less excess dye left after batching and therefore you use much less water in the washing-out process, after batching.

It is the method we will use in this Fabric2Dye4 workshops – Low-Water Immersion dyeing. All of the maths has already been done for you.

You will need in your Dyeing Kit:

- 1m Quilters Percale or PFD fabric
- 2.5gms Procion Dye: Blue MX2R
- 2gms Procion Dye: Brown MX2RB
- 1 x 30ml syringe
- 2 stirrers
- 125gm Soda Ash
- 38gms Urea

What else do you need?

- A face mask
- Plastic gloves – dish washing gloves work well
- Containers that you will never use in the kitchen again.
- 2 x 1.5 litre containers – one for the Salt solution; one for the Soda Ash solution
- 1 x 500ml container to mix the Chemical water (urea)
- 2 x 250ml containers to mix the three dyes. Plastic drink bottles that you can put the lid on and shake to mix the dye work well.
- A measuring jug – 250ml is a really good size
- 4 small containers (yogurt containers are good) to dye the four blue gradations
- 8 medium containers to dye the eight brown/neutral gradations
- 375gms salt (non-iodised)
- Scissors
- Plastic table cloth or plastic table to work on – do NOT dye in the kitchen!
- A couple of buckets (10 litres) for rinsing
- Detergent for final wash –Synthrapol, if you have it, or a laundry detergent without bleach or whiteners, or dishwashing detergent.
- Iron
- Closed shoes
- Old clothes or apron

Claude Monet: “Color is my day-long obsession, joy and torment”

Edouard Manet: “Color is a matter of taste and of sensitivity”

Wassily Kandinsky: “Each color lives by its mysterious life”

Lyn Kenny

Fabric2Dye4 – Color your world!

“Whether you believe you can or you can’t, you’re right!”