Dyeing for Weavers

A BEGINNERS GUIDE TO FIBRE REACTIVES FOR CELLULOSE FIBRES

We all know that the crafts of spinning and weaving need little to make them more exciting or interesting but dyeing is the ultimate catalyst for these skills. It takes some time and effort but it is easy and the rewards are great. Spinners can dye in the fibre state for a more visually interesting spinning. Weavers can dye any colour yarn ready for a project. When you start to dye, a new world of creativity opens up. You will no longer be limited by available colours and shades, anything is possible.

A big advantage to dyeing your own yarns is that you only need to purchase white or neutral shaded yarn to create any colour or combination of colours possible. This limits storage needs and there will be no wasteful collection and hording of yarns in 'wrong' colours.

User friendly dyeing with fibre reactives

Fibre reactive dyes are the newest class of dyes, developed in 1956. The dye chemically reacts with the fibres to form a permanent bond. Initially designed for dyeing cellulose fibres such as cotton and rayon, they can also be used on protein fibres such as wool by using different chemical assistants in the dye pot. The instructions below are for dyes such as Drimarene K, for use on cotton, rayon and silk. Lanasol fibre reactives can be used on wool and protein fibres by using different chemical assistants. (See page 8 & 9))

The dyes are available in a powdered form and will store indefinitely in this condition. These powders are concentrated and must be diluted with water before using, to form a solution for easier handling. Once a dye solution has been made up, its strength and concentration will start to deteriorate after three months, although it will still be capable of dyeing yarn. The advantage of buying dye powder is that the dyes can be freshly made up as you require them.

When a dye powder is mixed with water it becomes a DYE SOLUTION. This solution is added to water with other chemical assistants to form the dye bath which colours the yarn. The amount of dye solution added to the dye bath depends on the total weight of the yarn to be dyed and the strength of the colour required. There is no such thing as a white dye and colours are lightened by simply adding less dye solution.

The dye powders come in a range of basic colours which can be mixed to create new colours and shades. The simplest method is to mix the basic primary colours into a dye solution and store them in a jar. Mix these to produce new colours. For example red and blue will produce many different shades of purple when mixed in varying proportions.

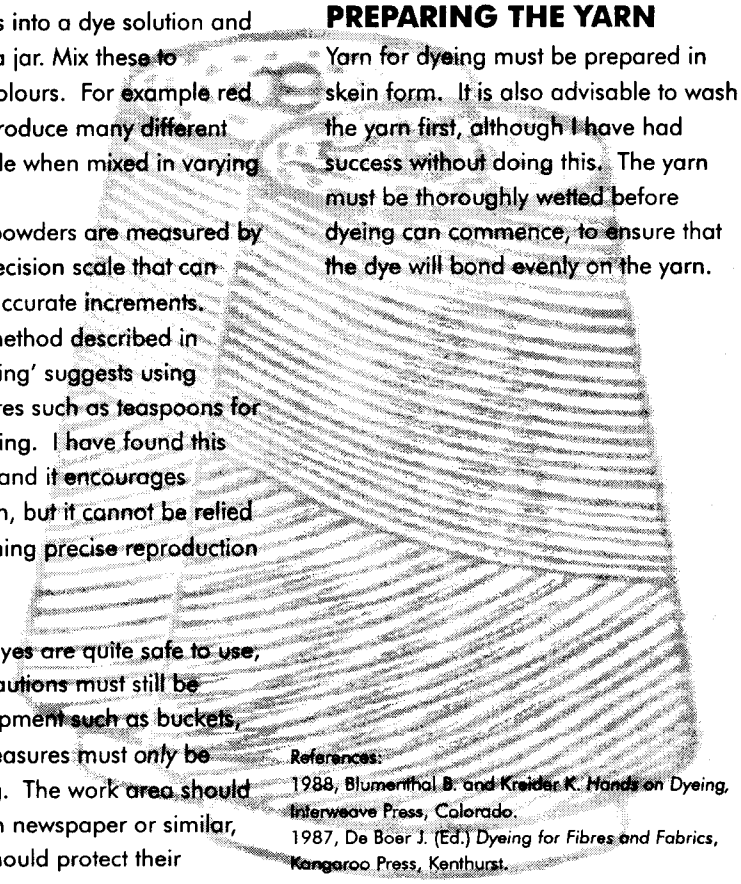
Normally dye powders are measured by weight on a precision scale that can measure very accurate increments. However, the method described in 'Hands on Dyeing' suggests using volume measures such as teaspoons for easy home dyeing. I have found this method easier and it encourages experimentation, but it cannot be relied upon for obtaining precise reproduction of colours.

SAFETY

Fibre reactive dyes are quite safe to use, but safety precautions must still be taken. All equipment such as buckets, spoons and measures must *only* be used for dyeing. The work area should be covered with newspaper or similar, and the dyer should protect their clothing with an overshirt. Use rubber gloves to protect your hands from staining. When mixing the dye solution it is essential to wear a dust mask as the dye powder is very fine and could be inhaled. However, once the solution is made up the dyes are stable and easier to handle in the liquid form.

PREPARING THE YARN

Yarn for dyeing must be prepared in skein form. It is also advisable to wash the yarn first, although I have had success without doing this. The yarn must be thoroughly wetted before dyeing can commence, to ensure that the dye will bond evenly on the yarn.



References:
1988, Blumenthal B. and Kreider K. *Hands on Dyeing*, Interweave Press, Colorado.
1987, De Boer J. (Ed.) *Dyeing for Fibres and Fabrics*, Kangaroo Press, Kenthurst.

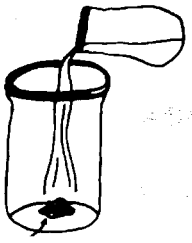
THE DYEING PROCESS

MIXING THE DYE SOLUTION

✓ Place 1 teaspoon of dye powder into a measuring cup.

✓ Measure 100 ml of hot water in another measuring cup and add a little to the dye powder. When the dye powder is pasted and dissolved, continue stirring and slowly adding the remaining water. Store this dye solution in a labelled glass jar.

✓ Make up a dye solution for each of the basic primary colours.



STEP-BY-STEP DYEING

- ✓ Place yarn in warm water to wet the fibre thoroughly.
- ✓ Weigh the yarn.
- ✓ Fill the container with the required amount of warm water. (See table 2)
- ✓ Add the required amount of SODA ASH and SALT. (See table 2)
- ✓ Add the required amount of dye solution, and stir well. (See table 1)
- ✓ Place the wet skein of yarn in the dye bath and stir well for 15 minutes to ensure an even distributionof dye on the yarn.
- ✓ Leave the dye bath for another 45 minutes, stirring frequently.
- ✓ Remove the skein of yarn from the dye bath and rinse thoroughly in warm water until the water runs clear. Gently wash with a mild detergent and rinse thoroughly.
- ✓ Leave to dry in a place out of the sun.
- ✓ Admire the results and start spinning or weaving.

TABLE 1: AMOUNT OF DYE SOLUTION TO ADD

WEIGHT OF YARN	DARK	MEDIUM	LIGHT	PALE
200grams	200ml	100ml	20ml	4ml
100grams	200ml	50ml	10ml	2ml
50grams	100ml	25ml	5ml	1ml
10grams	20ml	5ml	1ml	0.2ml
5grams	10ml	2.5ml	0.5ml	0.1ml

TABLE 2: AMOUNT OF ADDITIONS TO ADD

Weight of yarn	Amount of SALT	Amt of SODA ASH	Amt of WATER
200grams	20 teaspoons	8 teaspoons	6 litres
100grams	10 teaspoons	4 teaspoons	3 litres
50grams	5 teaspoons	2 teaspoons	1.5 litres
10grams	1 teaspoon	1/2 teaspoon	300 ml
5grams	1/2 teaspoon	1/4 teaspoon	150 ml