

# Learn to dye

rainbow one pot dyeing fibre



# Exploring colour with wool dyes

Dyeing your own fibre is fun and easy to do. Ashford wool dyes allow you to create every colour of the rainbow time after time using simple techniques.

## Exhaust Dyeing

Exhaust dyeing means the dye reacts with the fibre, water and additives until it is fully absorbed by the fibre.

To test whether your dye liquor has exhausted use a teaspoon to press into the fibre: when the liquid on the teaspoon appears clear then the dye has exhausted. Ashford wool dyes are acid exhaust dyes and require heat to set the dye into the fibre. Ashford dyes are for use only on protein fibre such as wool and silk.

## Terms used in exhaust dyeing:

Mordant (White Vinegar) – Assists the dye to fix to the fibre.

Wetting Agent (Liquid detergent) – This coats the fibre causing the dye molecules to move evenly around the fibre, to prevent patchy or uneven dyeing.

## To make a 1% solution:

10gms of dye makes 1 litre

5gms of dye makes 500ml

2gms of dye makes 200ml

## The easiest dye solution is:

In one 250ml jar (an old jam jar is good) use  $\frac{1}{4}$  cup of white vinegar to 1 teaspoon of dye powder. Then fill with water.

This solution is most commonly used in our instructions for rainbow dyeing and for teaching purposes.

This easy formulation is using Ashford wool dyes:

### Weight of Fibre

1 kilo

200gms

100gms

10gms

1gm

### White Vinegar

10 tablespoons

2 tablespoons

1 tablespoon

$\frac{1}{2}$  teaspoon

$\frac{1}{4}$  teaspoon

### Dye Powder

10gms/5 level teaspoons

2gms/1 level teaspoon

1gm/ $\frac{1}{2}$  level teaspoon

2 - 4 dessertspoons of 1% solution

2 - 4 teaspoons of 1% solution

Remember that the stronger the dye powder, the more vinegar to be used

# Dyeing with Ashford dyes

## Safety Guidelines

It is important to follow these guidelines as dyeing can be hazardous.

Safety first. Always...

- Wear rubber or plastic gloves, when mixing and dyeing.
- Wear a face-mask when handling any powders or if you are in an enclosed area with the dye fumes.
- Cover all surfaces.
- Use dye equipment for dyeing only .
- Label and date all dyes and solutions.
- Lock away if possible.
- Neutralize all dye baths at the completion of dyeing and before disposal. Use baking soda to neutralize the acid in the water.

## Handy Hints

- Avoid temperature shocks between soaking, dyeing or rinsing stages as this can damage or shrink the fibre. Handle fibres gently to prevent felting.
- Never put animal fibres into the tumble dryer, as this causes felting.
- The amount of dye used is always in ratio to the dry weight of fibre to be dyed. If the weight of fibre increases, the weight of dye increases proportionally to achieve the same dye shade. Always weigh the fibre first. If you have too much dye to the weight of the fibre, it will not exhaust.
- Always mix dye with hot water, as this dissolves the fine granules/powder.

## Materials and equipment required

- Dyepot – needs to be large enough to hold fibre and sufficient water for dyeing. A lid is required to reduce condensation and exclude light. Stainless steel is ideal, because it does not react with the dye. Copper, brass and iron react with metal salts and “saddens” the dye.
- Stainless steel or plastic spoons to be used when stirring dye or mordant (wooden spoons or dowel stain and can transfer dye when wet).
- Rubber gloves protect hands from dyes.
- Face-masks are required for handling dry dye powder and avoiding breathing fumes.
- Cream cleanser neutralizes the dye and is excellent for removing stains from surfaces.
- Baking soda should always be used when discarding dye liquor down household systems as this neutralizes the solutions.
- Levellers or wetting agents are added to the dye bath to prevent patchy or uneven dyeing. Use a neutral liquid detergent as a leveller. To each litre of water add 1 ml of liquid detergent.

# RAINBOW ONE POT DYEING FIBRE

This technique of dyeing produces all the colours in the rainbow, starting from the three primary colours – Red, Blue and Yellow.

Red, Blue and Yellow are called primary colours because they can not be mixed from any other colour and yet from these primaries, all other colours can be mixed including black.

A secondary colour is mixed from equal amounts of two primary colours.

Blue + Yellow = Green  
Blue + Red = Violet (Purple)  
Red + Yellow = Orange

## You will need:

Dyepot  
Measuring spoons  
Dye powder – Blue, Scarlet & Yellow  
Stirrers  
300gms of washed fleece or yarn (hanked)  
Measuring 1/4 cup  
3 jars (250ml)  
White vinegar  
Heating element  
Dishwashing liquid  
Bucket  
Hot water



The colour wheel has three primary colours - yellow, scarlet and blue - from which all other colours are mixed.

## Secondary Colours:

Yellow + Blue = Green  
Blue + Red = Violet  
Red + Yellow = Orange

## Tertiary Colours:

Blue + Violet = Blue-Violet  
Blue + Green = Blue-Green  
Yellow + Green = Yellow-Green  
Yellow + Orange = Yellow-Orange  
Red + Orange = Red-Orange  
Red + Violet = Red Violet

The samples have been made using the 3 primary colours - yellow, scarlet and blue.

Green = 1/4 tsp yellow  
1/4 tsp blue

Blueberry = 1/4 tsp blue  
1/8 tsp scarlet

Peach = 1/4 tsp scarlet  
1/8 tsp green  
drop of blue

Violet = 1/4 tsp scarlet  
1/4 tsp blue

Orange = 1/4 tsp yellow  
1/4 tsp scarlet



Soak the fibre in a bucket for 30 minutes with  $\frac{1}{2}$  teaspoon of dishwashing liquid.



Take the fibre out of the bucket, squeeze out excess water and place into the dyepot.



Mix the dyes (blue, scarlet and yellow) into three separate jars with white vinegar in these quantities:  
a.  $\frac{1}{2}$  teaspoon of dye powder per jar  
b.  $\frac{1}{4}$  cup of white vinegar



Add hot water. Stir with stirrers to dissolve the dye.

05



Fill jars to  $\frac{3}{4}$  full with warm water and stir.

06



Pour each colour onto  $\frac{1}{3}$ rd of the fibre.

07



Press down each colour area until there is no white fibre.  
The fibre will soak up the dye – DO NOT STIR.

08



Place the lid onto the pot.



Bring to boil slowly and then simmer for 20 – 30 mins or until dye has exhausted.



Allow the fibre to cool and then rinse in water. Place in the shade to dry.

# Books available from Ashford



The Ashford Book of Weaving for the Four Shaft Loom  
By Anne Field



The Ashford Book of Rigid Heddle Weaving  
By Rowena Hart



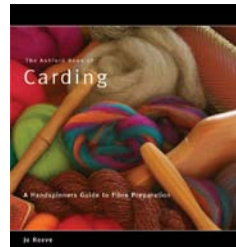
The Ashford Book of Weaving for Knitters  
By Rowena Hart



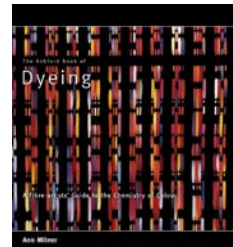
The Ashford Book of Projects



The Ashford Book of Projects for the Eight Shaft Loom  
By Elsa Krogh



The Ashford Book of Carding  
By Jo Reeve



The Ashford Book of Dyeing  
By Ann Milner



The Ashford Book of Hand Spinning  
By Jo Reeve



Weaving on the Ashford Knitters Loom DVD



Learn to Spin Booklet



Learn to Weave on the Rigid Heddle Booklet



Learn to Weave on the Knitters Loom Booklet



Learn to Weave on the Table Loom



**ashford**  
WHEELS & LOOMS

**Ashford Handicrafts Limited**  
Factory and Showroom: 415 West Street  
P O Box 474, Ashburton, New Zealand  
Telephone: +64 3 308 9087  
Facsimile: +64 3 308 8664  
Email: [sales@ashford.co.nz](mailto:sales@ashford.co.nz)  
Internet: [www.ashford.co.nz](http://www.ashford.co.nz)

