DYEING WITH WOAD POWDER

Woad was well known and extensively used before East Indian Indigo was introduced by the Dutch into Europe in the late 16th century. Woad was the first blue dyestuff to be used but by 1700 AD Indigo had become more and more popular. Indigo and Woad both contain blue colouring. In Indigo its known as Indigotin or Indican. In Woad its known as Isatan. Indigo has a higher concentration of Indigotin and is stronger and less temperamental. Woad continued to be used with Indigo to promote better fermentation and brighter blues.

The Woad vat is essentially the same as an Indigo vat using a fermentation process to extract the dye which is then reduced to its soluble form. Great skill was needed to control the degree of fermentation as Woad varies according to the quality differences of the plant used. Master dyers even used their sense of smell to detect changes in the fermentation. So expect to have unexpected results with some trial and error. The recipe outlined here uses powdered Woad leaves and is based on a chemical vat method. There are several other types of Woad Vats such as Urine, Lime Zinc, Fructose and Bran /Madder Fermentation. The recipe outlined here is one we've perfected at Kraftkolour and like us, you should have excellent results.

PREPARING THE WOAD

The Woad used for this recipe is simply dried, powdered leaves. There is some information in our readings which suggest that once dried the Indigotin in Woad becomes unavailable but we have found that by allowing the Woad to ferment you can still extract the dye – which will just take some time, patience and the instincts of a dyer.

TO START

Using **50gms Woad Powder** in a large plastic or stainless steel bowl, pour over **1 litre** of boiling water. Stir well.

Allow this to sit uncovered for 3 days in a warm place, stirring 2 – 3 times a day to oxygenate the water. You should be able to smell the Indigotin as it is released into the solution. You are becoming a Woad dyer!!! After 3 days, using a very fine fabric supported by a sieve [Habotai silk works well], strain the liquid into another bowl to separate the plant matter from the Indigotin. Set the strained Woad sludge aside – this can be dried and you will be able to repeat this process to extract more Indigotin.

NEXT

Set aside the strained liquid for another 3 - 5 days during which it will change from a murky brown/green to blue, develop more strength and continue to ferment. [Fig 1] This will become your Woad Vat. You should see a thin layer of bronzy 'flower' on the surface much the same as an Indigo Vat . Stir 1 – 2 times a day to introduce fresh oxygen into the vat [this aids fermentation]

Fig 1. Fermented Woad Vat

USING THE WOAD VAT

To use it you will need to warm the dyebath and add some chemicals to reduce the Indigotin to its soluble form.

Raise the temperature of the dyebath with 1 litre of boiling water or add 1ltr water and heat it up. Do not go over 50C. Stir in 20 - 40gms Soda Ash [Sodium Carbonate], make sure its dissolved then sprinkle 40 -

80gms Hydros ST [Sodium Hydrosulphite 25%] onto the surface. Stir well and allow it to sit for 5 – 10 minutes

Fig 2. Vatted Woad vat

The dye will gradually 'vat out' and it will become a clear, yellowy green. [Fig 2] The flower can sometimes increase but not always. There may still be some undissolved plant matter in the vat but this will not affect your dyeing.
Once the Indigotin is vatted out and the dyebath is a clear yellowy green its ready to use.
Submerge clean, washed fabric/fibre into the vat then stir well for even dyeings. At this stage avoid excessive stirring – this will affect the solubility of the Indigotin. The longer it remains in the vat, the heavier the shades. For pale blues dye for 5 mins, medium blues 10 – 15 mins and dark blues dye longer. By doing multiple dippings the colour will build to stronger and stronger shades. When you are satisfied with the depth of colour, remove from the dyebath, squeeze out excess dye and expose it to the air to oxidise. In the dyebath the fabric will be a clear green but once removed from the vat it will oxidise and give you Indigo blue [Fig 3]. If you are doing multiple dippings, squeeze out excess dye solution and oxidise before returning it to the dyebath.

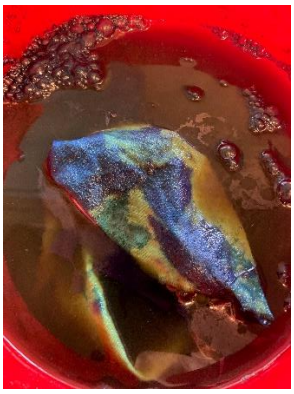

Fig 3. Fabric exposed to air oxidising to blue

TO FINISH

Once the fabric has thoroughly oxidised, wash in warm water using a mild washing powder and rinse until water runs clear. Woad dyeings don't tend to lose a lot of colour in the rinse.
Continue to use the Woad Vat until the Indigotin is exhausted.

Fig 4.Woad blue dyeing on cotton

Other resources – 'A Weavers Garden' "A Dyers Garden' : Rita Buchanan; A Dyers Manual : Jill Goodwin

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