



# Medieval Textiles

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## Woad Dyeing

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### The Variables of Woad Dyeing

Now, I know why the Medieval Woad Dyers were known as the "elite" of the dyers. There are so many variables when dyeing with both woad leaves and woad pigment. For these samples, woad pigment was used.

Water is one of the variables. I was unable to get good depth of color and the yarn had a greenish cast with water-softener water. Therefore, I used the water from the reverse osmosis unit, which removes the salt from the water. All three of our sources of water: city, water-softener, and reverse-osmosis water tests ph 7.

The Method of preparing the yarn for dyeing is the second variable I discovered. As many of us who dye with cotton, bast, and Tencel™ fibers, I usually use cotton scour and soda ash to thoroughly clean the fibers. I discovered this method was not advisable when dyeing with woad, because the scour and soda ash method produced a yarn with a very greenish cast. Consequently, I found washing all yarns: cotton, bast, wool, linen, and silk in Joy™ liquid, produced the truest blues.

The basic recipe is from Ancienne Tannerie-Pont de Pile. It was translated from the French by Gayle Bingham who also added notes based upon her dyeing experiences.

### Cuve Mère ("Mother Tub" = Stock Solution)

15 grams of dry powdered woad (1 soup spoon)  
125 ml of water (1/8 L)  
- mix with whip  
Add 12 grams hydrosulfite of sodium (1/3 less spectralite or thiox may be substituted)  
add 1 oz soda ash

During 10 minutes, heat this solution to 120 degrees, do not heat over 120 degrees. Put the solution in an opaque container, close lid firmly and leave this container for at least 24 hours.

The original recipe calls for 15 cm cubed of a solution of caustic soda (washing soda). In France, washing soda is in liquid form. The measurement translates out 1 cubic inch or 1 oz in weight. Do not use the washing soda sold in the grocery store, it may contain additives! Purchase soda ash from a chemical supplier or a dye supplier.

During 10 minutes, heat this solution to 120 degrees.  
*Do not heat over 120 degrees.*

Put the solution in an opaque container; close lid firmly, and leave in this container for at least 24 hours before using.

### Dye Solution:

Dark Blue:

Put three liters of water in a stainless or enamel pan;  
Heat to 120 degrees  
Add 10 grams of hydrosulfite (1 teaspoon). Use a little less of Spectralite.  
Add 25 cc of ammonia  
Pour 30 cc of stock solution into the water. Pour this very gently.

Do not stir; this will prevent as little oxygen as possible from entering the bath.

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Very gently, lower the fiber or textile to be dyed into the dye bath. Leave in the dyebath for 15 minutes. Remove the textile and air for 15 minutes. Repeat this process until desired shade is reached.

### **Medium Blue:**

Put three liters of water in a stainless or enamel pan; heat to 120 degrees.

Add 5 grams of hydrosulfite (1/2 teaspoon). Use a little less of Spectrolite.

Add 13 cc of ammonia

Add 10 to 15 cc of the stock solution.

Do not stir; this will prevent as little oxygen as possible from entering the bath.

Very gently, lower the fiber to be dyed into the dye bath. Leave in the dyebath for 15 minutes. Remove the textile and air for 15 minutes. Repeat this process until desired shade is reached.

### **Light blue:**

Put three liters of water in a stainless or enamel pan; heat to 120 degrees.

Add 5 grams of hydrosulfite (1/2 teaspoon) Use a little less Spectralite.

Add 13 cc of ammonia

Add 5 cc of the stock solution

Do not stir; this will prevent as little oxygen as possible from entering the bath.

Very gently, lower the fiber to be dyed into the dye bath. Leave in the dyebath for 15 minutes. Remove the textile and air for 15 minutes. Repeat this process until desired shade is reached.

### **Remarks:**

Two defects may occur:

The solution is opaque, thick and milky. This is caused by too much hydrosulfite or Spectralite. Add more soda ash, a little at a time, just until the liquid becomes yellow and clear.

If you are getting little dark particles on the textile, this shows that the woad is not yet dissolved completely and needs more hydrosulfite or Spectralite; add a little at a time until the liquid turns yellow at last.

After dyeing, rinse the textile in water until the water runs clear.

### **Reduced version of dyeing with woad leaves:**

Based on the instructions found in Jill Goodwin's book.

12oz. of woad will dye 1 1/2 oz. of fiber

Tear woad leaves into small pieces and scald with 1-1/4 gal. of NEARLY boiling soft water.

Infuse for 30 minutes

Strain off liquid and squeeze juice from leaves, adding this juice to the liquid.

Add soda ash, gradually, to liquid, until the liquid turns a dark green and whisk well with egg beater until the froth is **no longer blue** (about 5 to 10 minutes)

**Heat liquid slowly to 120 degrees.**

**USE A THERMOMETER!**

Add up to 1/2 oz. Thiox ( this is the same as Spectralite). Set off stove. Leave for 40 minutes, until liquid clears to yellow-green.

Enter wet fiber, very gently. Soak 30 minutes. Lift out and air repeatedly until color is as dark as desired; or until it will get no darker.

Revive the dye bath with soda ash and Spectralite until color is exhausted.

Rinse fiber in soft water with 1 Tablespoon of salt; wash ( I usually use ph neutral—Joy detergent) and rinse; dry in the shade.

The temperature is very important with woad leaf dyeing—NEVER go over 120 degrees. This is true with woad pigment, too.

This is my "down and dirty" recipe. You will be amazed how many woad leaves it takes to make up 12 oz.