

# Dyeing Wool with Pre-Reduced Indigo

Please read the directions carefully before starting.

These directions make a 3 gallon indigo vat.

*This specially formulated indigo is already 60% reduced, therefore, it allows you to use soda ash instead of lye in the dye vat. Extremely easy to use, pre-reduced indigo makes setting up an indigo vat almost effortless. There is no need to paste up the indigo granules because they dissolve easily in water.*

✱ While Indigo and the chemicals used are comparatively safe and non-toxic, it is best to treat them all with caution. Wear rubber gloves to minimize contact with hands. Always work in a well ventilated area. Good house-keeping is essential to good results. Utensils used for dyeing should never be used for food preparation.

Supplies needed:

Pre-reduced Indigo  
Thiox  
Soda ash  
Synthrapol

Additional Supplies:

Unflavored Gelatin powder  
Clear Household Ammonia  
White distilled vinegar  
5 gallon plastic bucket  
3 foot wooden dowel  
Rubber gloves  
Bar of Ivory soap

**Directions for making the vat:**

1. Measure 3 gallons (12 liters) of warm tap water, 120° F (49C) into a stainless steel or enamel pot, you will need to place the pot on a burner to maintain the dyebath temperature of 120° F.

2. Add the following ingredients in the order listed, making certain that each item is mixed before adding the next.

Unflavored Gelatin powder	1 tsp (2 gm)
Synthrapol	1 tsp (5 ml)
Clear Household Ammonia	2 Tbl (30 ml)
Thiox	1 tsp (4 gm)

3. Add 2 tablespoons (24 grams) of Thiox and 2 tablespoons (15 grams) of Pre-reduced indigo to the water and stir gently. This indigo dissolves very easily.

4. Dissolve 4 tablespoons (75 grams) of soda ash in two cups of hot water. Add this dissolved soda ash to the vat. With a dowel or stirring stick, stir in a circle, going in one direction. Slow down and reverse the direction of the stirring, dragging your stir stick along the outer edge of the vat before removing your stir stick. This will bring the small bubbles that have formed, which is called the "flower", to the center. Cover your vat and let the mixture settle for a few hours. The liquid should be a clear yellowish-green color. A white plastic spoon dipped in the vat will give you a good idea if it is ready to use.

#### **Using your indigo vat:**

1. Skim the "flower" and crust off the top of the vat and set aside on a foam plate. It is important to maintain this flower, because it has concentrated indigo in it.
2. Maintain a 120F(49C) temperature throughout the dye process. Thoroughly wet out your fibers before dipping in the vat. A warm water soak for at least 15 to 30 minutes is recommended. Wearing gloves, squeeze out excess water evenly. Add the thoroughly wet-out wool. Wool that has not been wet-out will carry large quantities of air which will quickly oxidize the reduced Indigo and destroy the vat.
3. Soak the wool in the dye vat, up to 3 minutes with gentle, intermittent stirring, making sure all the wool remains below the surface of the vat.
4. After 3 minutes, remove the wool, squeeze excess liquid back into the vat while holding the wool close to the surface to avoid introducing air into the vat. NOTE: Cover the vat when not in use!!!
5. Let wool oxidize (turn blue) for approximately 15 minutes.
6. Repeat dipping and oxidizing until the desired depth of blue is obtained. When you are finished dyeing, put back the "flower" and stir the vat in the same circular manner as described above. Put a lid on the vat and it will be ready for another dye session when all the sediment has settled back to the bottom. The indigo vat can last for several weeks or months if properly tended.

#### **Washing the fiber:**

After the final dip and the fiber is fully oxidized, gently wash wool in a warm bath of Ivory flakes or Ivory bar soap and rinse until water is clear. Soak for 10 minutes in room temperature water to which 2 Tbl (30 ml) white distilled vinegar per gallon (4 liters) has been added. Extract water and hang to dry.

#### **Troubleshooting the dye vat:**

\* If the vat has been left for a few days, it may need to be "Sharpened" with a small amount ( $\frac{1}{2}$  tsp or 2 gm) Thiox, dissolved in water, and VERY rarely with Soda Ash.

\* If the vat changes from yellow-green to blue, or if blue specks appear, more Thiox is needed. Add a small amount ( $\frac{1}{2}$  tsp or 2 gm) of Thiox, dissolved in water. Stir gently. Wait 15 minutes and check vat again before dyeing.

\* If white specks appear or the vat appears "milky" add small amount (1 tsp for full size vat) of Soda Ash, dissolved in  $\frac{1}{2}$  cup water. Stir gently. Wait 15 minutes and check vat again before dyeing.

\* Occasionally, more than one addition is required to revive a vat. Use small amounts, and wait 15 to 20 minutes between additions, testing each time. Excess alkali or reducing agent can unbalance the vat, making it impossible to build up deep shades. Be patient, and the vat will have a long life.

\* Always dissolve Thiox and Soda Ash in water BEFORE adding to the dye vat. DO NOT add dry flakes.

\* Cover with a tight fitting lid when not in use.

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