

by Connie J. Magoffin

Welcome to another year of "From Woods and Fields." Would you believe we have been around for nearly 7 years, since November 1974? Even I didn't realize that I had been chatting with you about natural dyes for that long! The most often asked question in all those years is about dying with Because indigo is not a water soluble natural dye, the dying technique is different and is, at first, a bit intimidating. It is not, however, any more difficult than brewing a cup of tea...well, maybe a bit.... There are numerous indigo dye recipes and I've tried at least 4 or 5, but my favorite is still the one from The Dye-Pot by Mary Frances Davidson. It is fast, easy, and consistentaly works. First, let me give you her recipe, and then I will elaborate a bit.

Indigo Vat: "Into one-half gallon of warm water in a granite pan, stir two tablespoonfulls of powdered sodium carbonate (sal soda) until dissolved. Add one teaspoonful of powdered indigo. Slowly stir into this two tablespoonfuls hydrosulphite, add more if a coppery scum has not formed on top in five minutes. Let stand in a warm place for one-half hour to allow acids to dissolve Use as much of the mixture as needed indigo. to produce the desired color. Enter the wet wool and stir constantly, taking care to keep the wool under the dye-bath so as not to dye unevenly. Lift and air for fifteen minutes, if not dark enough re-dip the yarn. If the dye-bath has turned blue, the color may be brought back to its correct yellow green by the addition of more hudrosulphite. ... Try to get as little air into the dyebath as possible for oxygen oxidizes the indigo, burning it blue. Hold heat of dyebath at 150° F. Too much hydrosulphite will cause the dye not to take and the color will not develop quickly as it should on exposure to air."

1. Sal soda can be purchased as washing soda in the detergent section of the supermarket. Hydrosulphite may also be seen listed as sodium hydrosulfite or sodium dithionite (Straw Into Gold is one source).

This discussion concerns only the use of natural, not synthetic, indigo. If you have lump indigo, it must be pulverized before using it.

- 2. Be sure to stir all ingredients in slowly or you may add oxygen, and that is what you are trying to take out. The sodium hydrosulfite functions to reduce the indigo and to convert it to indigo white, which is then dissolved by an alkali such as washing soda. It is important to use no more of these chemicals than necessary to reduce and dissolve your indigo (since quality in indigo may vary, these quantities may also vary).
- 3. I find the most convenient way to prepare the dyebath is to use a wide-mouth glass jar with a cover, just large enough to hold ½ gallon of water (or a 1-quart jar for half a recipe). This makes storage of the unused dye convenient. It prevents having to transfer the dye to a storage container and by using a jar that holds the exact quantity of liquid, it prevents excess air from oxidizing the indigo during storage.
- 4. I prepare the recipe as above, but put the cover on <u>loosely</u> while it is resting. If I am in a hurry, I put the jar in a pan of water and place it on a very <u>low</u> heat. When reduced and dissolved, I turn off the heat and dye with a warm or a cold dyebath. While the heat is not necessary, it seems to speed up the process. If the dyebath has turned blue, try reheating it slightly before adding the extra hydrosulfite.
- 5. When the dye is ready, the liquid will turn from a blue to a yellow or yellow-green (the glass jar makes it easy to judge the color). The top surface exposed to the air will be a coppery blue color. If the jar has been covered and heated, this scum will not usually appear until the cover is removed.
- 6. What you have made is a stock solution, and it can be mixed with a water bath to which a small amount of sodium hydrosulfite has been added to remove the oxygen. You will have to experiment to see how much stock to add to achieve the color you desire. I have also dyed directly from the stock solution.
- 7. When dyeing with indigo the process involves dipping the fiber into the bath (slowly, to avoid air bubbles) for a few minutes. Sometimes massaging the fiber under water helps. Carefully bring out the fiber and air. If the color is not dark enough, redip the yarn as many times as necessary to