

How to Extract Indigo from the Woad Plant

Sarah's method

Method of Extracting Indigo from *Isatis tinctoria* leaves

Materials needed-

- A vat to do the extraction in, (only use a pot that will **not** be used for food)
- Citric acid
- Sodium carbonate/soda ash
- A hand blender to oxidize the extraction vat
- Measuring spoons
- Parchment paper, for drying the pigment on
- Thiourea Dioxide, if you are going to do direct dyeing
- pH paper
- Woad leaves

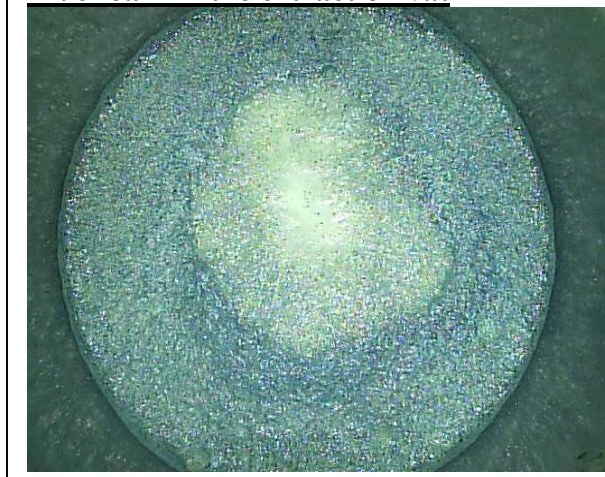
Instructions – (Time 90 min.)

- ❖ Fill the vat with water to within four inches of the top.
- ❖ Change the pH to 3 using the citric acid and heat the vat to boiling.
- ❖ Harvest the woad leaves and rinse them in cold water to remove soil and impurities.
- ❖ When the vat boils, tear a handful of leaves and put them in the vat. Repeat until all the leaves are in the vat or the vat cannot hold any more leaves. Then boil the vat for one minute.
- ❖ Immediately place the vat in cold water and stir until the vat is cool to the touch. Leave the leaves in the vat for 20 minutes, no longer.
- ❖ Remove leaves and squeeze out the liquid, the leaves can be used for a 'regular' dye vat for yellows or pinks. The colour depends on the strain of woad used.



- ❖ Change the pH of the vat to 10 using the Sodium Carbonate (approx. 1 tsp. per litre of water) Vat colour should change to green. Use the stick blender oxidize the vat.
- ❖ The foam on the vat will start out yellow after a few minutes the foam will change to green then in a few more minutes the foam will start to oxidize blue. Continue oxidizing the vat until the foam is again yellow. The foam will still turn blue when exposed to air. The oxidization will take about ten minutes.

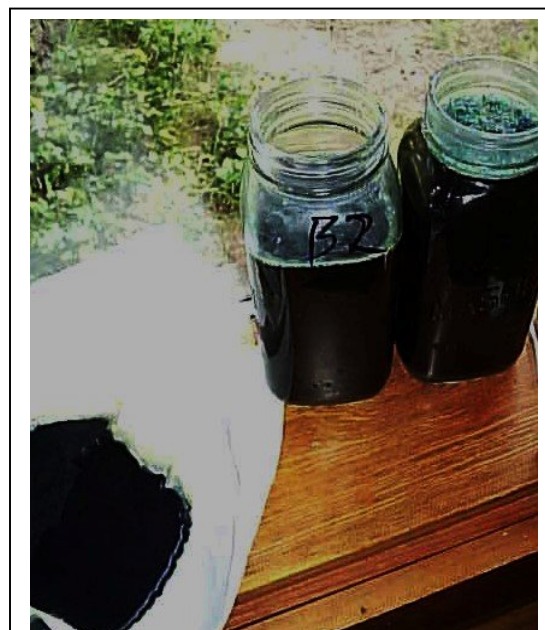
Blue foam in the extraction vat



At this time you can either reduce the vat so as to dye with it immediately or you can precipitate out the indigo and dry it for later use.

To dry the indigo:

- ❖ pour the liquid from the vat into wide mouth glass jars
- ❖ let the liquid settle for 24 hours
- ❖ Suction off the top liquid and refill the jars with fresh water. Continue doing this until the liquid is clear above the sedimented indigo pigment
- ❖ Make a box out of parchment paper and pour the sediment into the box. Let dry in a warm environment with lots of air movement.
- ❖ After the pigment is dry you can scrape it off of the parchment paper with a blunt knife and



Woad pigment drying and precipitating

store it in a plastic bag or small glass jar until you are ready to use it. You will need to grind the pigment to a fine powder before you can use it.

