

## Part 1: The Starter

### Materials Needed:

- Mortar and Pestle (optional but must be dedicated to dye use)  
(using a small bowl and spatula will work if mortar and pestle is not accessible)
- 1 glass measuring cup
- 2 Medium Bowls
- 1 Small Bowl
- Blender Bottle with mixer spring (OR plastic jar with marbles inside)
- Tablespoon
- Medium Fine Mesh Strainer
- Rubber Spatula
- Whisk
- 1 Medium Sauce Pan
- pH strips
- 1 or 2 old towels

1. Bring 6 cups of water to boil.
2. Once boiling, set aside 4 cups.
3. Add indigo to mortar and pestle or small bowl and spatula, to create a lump free paste with a tablespoon of hot water. Mix until smooth and add water as needed.
4. Once smoothed, 1 cup of hot water to help dilute and transfer to the blender bottle with marbles. Add lid and shake vigorously wrapped in a towel (to avoid burning hands) for up to 5 minutes. The indigo will not fully dissolve but the goal is to get as much as we can activated. The best indicator that it's activating is when there's a frothy film on top when you open the container. Make sure to open the container slowly and away from you to avoid getting burned by any hot water and compressed air.
5. Pour shaken indigo over the strainer into 1 medium bowl. Try not to add any additional air bubbles during this process—usually this is best achieved by pouring against the side of the bowl. Add another cup of boiling water to the shaker to be sure to dissolve as much indigo as possible. If there's some pigment left over you can add a little bit of the hot water and swish out what's left at the bottom of the shaker. Make sure to strain every time you add more water. Clean the mesh strainer for the following steps after straining the indigo completely.
6. Add henna to 2 cups of boiling water in a saucepan and simmer for 20 min, being sure to whisk while boiling occasionally to make the mixture smooth and without lumps. Henna will have a thick and creamy consistency. If the henna gets too hot it will expand and can easily overflow, here you can turn the heat down to avoid the boiling-over.

7. After 20 minutes the consistency should be smooth. Pour a small amount of the mixture into the cleaned mesh strainer over another medium sized bowl. With a rubber spatula push the henna around to help with the straining process. Put the undissolved henna (which will give a mud-like consistency) aside in a small container and repeat until you've made it through the batch.
8. Add the last 2 cups of boiling water to the saucepan, bring it to a boil and add the undissolved henna. Boiled again for another 20 minutes. Repeat the process of straining and set aside any henna that did not get dissolved. We will toss out any undissolved henna after this round, either by recycling in a compost or diluting with water and pouring down the sink.
9. Add strained henna to indigo in the medium bowl, avoid any additional air bubbles by pouring henna against the side of the bowl. Stir gently for 1 minute and let it sit for 30 min.
10. Dissolve 10g or roughly 1 tablespoon of Lime in 3 tablespoons of warm water to make a paste. CAUTION: wear gloves when handling lime and do not inhale.
11. Add dissolved Lime to indigo and henna mixture, gently stir. You may check the pH level of the starter if you want. The pH level of the vat should be between 10-12. Make sure to test with pH strips and add more as needed. (We have included an additional 30g of lime to the kit to add to the vat as needed, it is normal for the pH to drop in the next step of creating the vat)
12. Let the starter sit for 24 hours at room temperature, uncovered. You'll see this separation of matter and water, this is normal. You may even see the indigo color on the rim of the bowl!!
13. Clean up! We recommend you clean your tools and dishes in a slop sink in your basement or somewhere that these items won't get confused with your kitchenware ware.

## Part 2: The Vat

### Materials Needed:

- Indigo Starter (refer to Part 1)
- Cooking Thermometer
- 4qt. Cooking Pot Dedicated to Dye
- Wooden Spoon
- Circular Wire Baking Rack

1. Begin by looking at the starter, it'll show separation between the liquid of the water and matter. In the water you'll see what looks like strands of indigo floating upwards in some areas. That is an indicator that the chemical interaction is happening. You can stir the starter once more before setting up the water to boil.
2. Heat 2 gallons of water to 140\* - be sure to not overheat
3. Add Starter to heated water gently. Pour at an angle to reduce the amount of air bubbles entering the vat.
4. Water will appear murky. Stir gently and thoroughly. Keep an eye on the temperature: it should remain a consistent 140\*. You can take the pot off the burner at this point.
5. Wait for dye matter to settle and a blue skin or shine to form on the surface. This can take anywhere from 30 minutes to 24 hours. Once skin has formed, you are ready to dye. If the blue skin or sheen does not appear, test the pH level, if it's low add 10g more of the dissolved lime and stir gently. Note that the vat does not need to be heated for the full 24 hours but will need to be consistently at 140\* to dye.

## **Dyeing Instructions**

Indigo is technically a stain, therefore it will stain the surface of almost any material. Natural materials (cotton, wool, silk, wood, etc) tend to dye best. Items should be free of any soaps or fragrances.

1. Lower a wire rack into your pot if you have one. This will keep your items from sitting in dye sediment at the bottom of the pot. You can also use an upside down strainer.
2. Heat your vat to 140\*. This will need to be consistently at 140\* to achieve best dye results. Do not overheat or you can burn off the dye matter. It's best to not stir the vat to avoid the kick up of indigo dye matter. We want to use the extracted indigo in the water above.
3. OPTIONAL: weigh your DRY dye materials before beginning. This step is for your own sake; we recommend keeping detailed notes and records when dyeing. This will allow you to keep track of how much your vat dyes, how many times you have to dip, what shades can be achieved, etc.
4. Soak fiber in room temperature water until fully saturated. This will help your items to accept dye evenly and flush out any extra air bubbles.
5. Carefully lower fiber into vat, avoiding air bubbles and splashing. Let sit submerged for a minimum of 2-5 min. Metal tongs are useful when sending items into the vat.
6. Make sure not to drip back into the vat, remove fiber and let oxide for a minimum of 2-5 min. You will notice the dye changing before your eyes as it mixes with the air. A good rule of thumb is to oxidize your items for as long as they have been submerged. You can place the dyed material in a plastic container to oxidize and catch any additional liquid.
7. Repeat this process as necessary to achieve darker shades. Experiment with the length and timing of your dips to see what kind of effects are possible. Once desired shade is reached (remember items will appear darker when wet), rinse with mild detergent until water runs clear. If dyeing clothing, rinsing in the washing machine alone for the first time is recommended to avoid bleeding.

**Please reach out to us at [contact@praxisfiberworkshop.org](mailto:contact@praxisfiberworkshop.org)**

**if you have any questions or troubles!**