Dyeing

Animal fibres, such as wool need to be dyed using ‘acid dyes’. The acid is the fixative needed to make the fibres colour fast. Citric acid (lemon juice) or Acetic acid (vinegar) are the most commonly used fixatives. Silk can also be dyed using acid dyes in the exact same way as wool.

For this tutorial, I have used Ashford dyes and Eurolana dyes from World of Wool. I have used silk throwster’s waste, but this method can also be used for any other type of silk as well as wool. This is a simple method of directly applying the dyes to the fibres and then steaming to fix.

Using the instructions that came with my Ashford dyes for dyeing 1 kilo of wool in 3 colours, I have compiled a guide for how much dye, water and vinegar to use to get rich colours and roughly how much wool or silk this will dye. The amount of fibre this dyes is just a guide and will depend on how the different breeds of wool and types of silk absorb dye and also how much dye is applied.

The dyes can be mixed up and stored in the fridge for future use. They are supposed to have a ‘shelf life’ but I have used dyes which I left in bottles on my counter for months, and they worked fine.

<table>
<thead>
<tr>
<th>Dye</th>
<th>Water</th>
<th>Vinegar</th>
<th>Wool/Silk</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 teaspoons/15 ml</td>
<td>2250 ml</td>
<td>1 cup/250 ml</td>
<td>1kg</td>
</tr>
<tr>
<td>1½ teaspoons/7.5 ml</td>
<td>1125 ml</td>
<td>½ cup/125 ml</td>
<td>500g</td>
</tr>
<tr>
<td>1.5 ml</td>
<td>225 ml</td>
<td>25 ml</td>
<td>100g</td>
</tr>
<tr>
<td>1 ml</td>
<td>150 ml</td>
<td>16.5 ml</td>
<td>67g</td>
</tr>
<tr>
<td>0.5 ml</td>
<td>75 ml</td>
<td>8.5 ml</td>
<td>33g</td>
</tr>
<tr>
<td>0.33 ml</td>
<td>50 ml</td>
<td>5.5 ml</td>
<td>22g</td>
</tr>
</tbody>
</table>

For lighter colours, add a little more water. For darker colours, use less water or a little more dye powder.

**Equipment**

You will need:

Acid dyes (Dust masks are recommended if large amounts of dye are used)

Hot water

Jars or tubs for mixing

Something to stir the dyes-the ends of old paintbrushes are fine or coffee stirrers

Vinegar-distilled white

Something to apply the dyes, like syringes, pipettes or eye droppers

Gloves

Cling Film/Plastic Wrap/Saran Wrap (the plastic from sandwich bags/ziplock baggies tend to stick to the steamer)
Steamer

Protection for work surfaces

*** It’s best to have a set of utensils and equipment that are used only for dyeing or fibre preparation. Don’t use utensils or pots and pans that you use for food preparation.
Method

Silk or wool needs to be soaked before dyeing. This raises the pH level of the fibre and also opens up the scales of wool.

Add approximately 2 tablespoons of vinegar to a 2 litre tub of warm water, then add the silk and leave to soak for at least 15 minutes.

If you have fibres that you want to keep separate, use a few different tubs.

If you have just degummed some silk, and soaked it in vinegar, you can start the dyeing process from this stage, there’s no need to leave it to dry.
1. Measure out the correct amount of hot water for the amount of dye you plan to use. I used 0.5ml of dye powder and 75 ml of water.

2. From this, draw up some water into a syringe or pipette for mixing the dye. Some instructions recommend mixing with cold water first to form a paste, check yours for that.

3. Measure out the dye into your measuring spoon
4. Tip the dye into a jar or tub, then add the water to mix, stirring until dissolved

5. Add the remaining water and the correct amount of vinegar
6. Lay some cling film out onto your work surface. How big will depend on how much fibre you intend to dye. Lay your fibre out on top.

7. Draw up some dye into a syringe or pipette, then slowly drip it onto the fibre. Use your fingers to push the dye into the fibre.
Turn the fibre over to make sure it all gets dyed.

More than one colour of dye can be used at the same time. Leave a small space between the colours, and using your fingers, push each colour into the fibre so that they merge.

You can use as many colours as you like, just bear in mind that some colours won’t mix well together; try them out on a paper towel or scrap of silk fabric first.
8. Once the fibre is covered in dye, fold over the cling film and wrap up the fibre into a little ‘parcel’. Repeat with other colours.

9. Place the wrapped up fibres into the steamer
You will probably make a bit of a mess when dyeing, especially if you’re using lots of colours. I used my draining board for the dyeing, so didn’t need to cover it to protect it, but it’s a good idea to cover any non-metallic surfaces that you use.

10. When you have added the dye to all your fibre and it is all wrapped and placed in the steamer, add hot water to the steamer pan and simmer the fibre for 30 minutes. If you are using a two tier steamer, swap the steamer tiers around after 15 minutes.
11. When the steaming is complete, carefully tip the packages into a sink or bowl of warm water, add some cold water and leave them to cool down. Carefully unwrap each package, keep a bowl of cold water nearby just in case there are any pockets of hot water left. Give each package of fibre a quick rinse in warm water, then lay out to dry. Some people report that red dyes always have some colour run, I’ve never found this to be the case with Ashford dyes, but other brands could be different.

Here is a selection of fibres just after they have been rinsed after dyeing, and when they are dry.
After rinsing:

Dried:
After rinsing:

Dried:
Experiment with the dyes to get different colours. Start with one main colour and add small amounts of other colours to change the shade. If you want to reproduce colours in future, it’s a good idea to measure the amounts carefully and keep notes.

This is a selection of silk throwster’s waste dyed with various shades using yellow as a base colour. For each shade, one syringe full of yellow was squirted into a mixing tub, then a drop or two of other colours were added.

A variety of blue and green shades:
Some shades of reds, oranges and browns gave lovely coppery and gold metallic colours:

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When dyeing wool it’s important not to agitate the fibres too much or they will matt and start to felt. After steaming, leave the packages of wool to cool down and rinse in lukewarm water carefully.