



Madder Root Recipe

by Madeleine McGarrity, Artisan and
Founder of Cold and Deadly Studio

Red

Prepping Your Fabric

We recommend using soft water throughout this process. Soft water includes rainwater, distilled water, and some tap water. Many cities actually have excellent tap water for dyeing!

SCOUR your fabric.

Fibers need to be thoroughly scoured to assure good, even uptake of dye. Sourcing is not done to remove dirt, but to strip the fibers of natural oils and waxes. Even clean-looking textiles need to be scoured. We recommend washing with a neutral detergent.

TANNIN and MORDANT your fabric.

Dyes rich in tannin bond particularly well with cellulose-based fibers, like cotton and linen, allowing for saturated and long-lasting colors. Pre-mordanting assures strong, even tone, for a better control of your results! It's also more sustainable, as mordants are the hardest ingredients in the whole process to dispose of responsibly and the most environmentally costly. Adding mordants now, instead of directly into your dyebath, means you can use less.





■ Time to Tannin!

Fill a large container of hot water (150 degrees F), with plenty of water. Tannin with 10% WOF Myrobalan for a yellow/beige hue or gallo nut as a clear tannin. Rinse gently.

Tip! You can use the same container and solution in several rounds to achieve this for a bigger amount of textile—just strengthen the tannin solution again each time. There is no need to heat constantly, just allow the liquid to cool with the textile in it, stirring intermittently.

■ Pre-Mordanting

Measure out 12% WOF of alum and 2% WOF soda ash.

Dissolve both separately small amounts of boiling water, then combine in large container (will BUBBLE also). Add warm-hot water at about 140F. Allow textile to soak—no need to heat—for several hours or overnight.

Stir intermittently. Rinse well, then let the textile air dry (or “cure”).

 **Tip! For the deepest reds, repeat mordanting again—without tanning again—and allow to cure for several days.**

■ Extract Your Madder Root

Measure out madder root powder at 150-200% WOF. If you are using Madder Root Paste, we recommend using 100-150% WOF. Skip this step, and simply mix the pre-measured paste with hot water for several minutes or until it's completely dissolved.


Fill the pot you intend to use for dyeing about half way full and add your measured amount of madder root powder needed for your dye project. Allow to soak for at least one hour—Heat mixture to 180F slowly over the course of 1 - 2 hours. DO NOT leave overnight or long enough to ferment! Turn off the heat and it allow to cool.



■ Creating Your Dye Bath

-- Fill a pot with cool water. There is no need to filter anything out.

-- Remove a generous cup of the dye liquid. Add chalk (calcium carbonate) and your selected tannin extract to this and mix well. These quantities of chalk and tannin are mostly dependent on the amount of madder used, but are also influenced by the size of the bath itself.

 **Tip! While adding too much tannin will affect the tonality of the red, but not the depth, you can absolutely add too much calcium carbonate, so tread lightly.**

Here are three size measurements for reference:

for 15-30 g madder in a 1 gal pot:

1/4tsp calc carb

1/4tsp tannin

for 150-200g madder in a 5 gal pot:

1tsp calc carb

2tsp tannin

for 1lb of madder in a 20-25gal pot:

1.5-2tsp calc carb

3-4 tsp tannin

For example, if you dyed a t-shirt that weighed 100g and used 150 WOF of madder powder, you used 150g of madder powder to prepare your extract. We recommend creating your dyebath in a 5 gallon pot or bucket and adding 1 tsp of chalk and 2 tsp of your chosen tannin.



■ Time to Dye!

-- Wet your dry, mordanted fiber in a bath of clean, room temperature water to wet in preparation for dyeing. Never add dry textile to a dyebath.

-- Add your fiber and soak. Squeeze out your fiber and add to dye pot—the temperature of the bath should be room temperature.

-- Wearing gloves, work under the surface of the water for a minute or two. Leave and allow to sit for at least an hour. Look at the fiber: it should be a light yellow/orange to orange/red tone. This is an indication that the process is going well.

-- Start to Heat your madder bath. From room-temperature, slowly raise to a simmer (about 180F) over the course of at least an hour. Make sure to keep the temperature steady and below a simmer. Do not allow the temperature to drop once you begin to raise it. Stir gently and not very often. Once 175F - 180F is reached hold for 2-3 hours.

-- Monitor the fiber carefully: the timing is not always the same. You will not have deep red on dry fiber until the wet fiber looks red/black in the pot. Some people describe this as “black cherry red” but the desired look is closer to what a deep, rich navy would be if it were red, rather than blue. Then it’s done.

-- Allow to cool in the pot—overnight is fine.



NOTE: It is tempting to say ‘good enough’ when you see a bright red in the pot, but once finished and dry it will be significantly lighter. It is best to wait!





■ Finish Your Textile

- Rinse cooled textile well in warm water, then transfer to a second bath of warm water with some neutral detergent.
- Without rinsing, transfer to a pot the same size as your dye pot, full of warm water.
- Add 1cup wheat bran per gallon and boil for at least an hour. This stage removes excess dye and brightens your red tone.
- Rinse well in warm-hot water (do not shock your textile by going hot-to-cold or cold-to-hot) and hang to dry.

Thank you to artisan and founder of Cold and Deadly Studio, Madeleine McGarrity, for sharing their recipe using our Madder Root products. We hope fellow dyers can reach the same vibrant reds and soft pinks that are often so challenging to achieve with madder.

View her incredible pieces and workshops at coldanddeadly.com or [@coldndeadly](https://www.instagram.com/coldndeadly) on Instagram.

