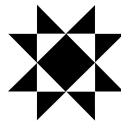


# Natural Patterns

## Cyanotyping, Quilting, and the Preservation of Land and Memory

### Appendix B: Cyanotype Process



Riley Ramsay

Department of Art and Art History

University of Colorado, Boulder

Honors Thesis

March 31st, 2025

Honors Committee:

Alex Sweetman, Department of Art and Art History, Thesis Advisor

Marina Kassianidou, Department of Art and Art History, Honors Council Representative

Kerry Reilly, Program for Writing and Rhetoric, Outside Reader

## Materials

- ❖ Chemical A (Ferric Ammonium Citrate)
- ❖ Chemical B (Potassium Ferricyanide)
- ❖ Beaker or other measuring device
- ❖ Brush
- ❖ Paper or fabric
- ❖ Water
- ❖ Gloves
- ❖ Apron (optional)



Figure 1: Materials needed for making cyanotypes

## **Before you begin**

Cyanotype chemicals are sensitive to ultraviolet light and sunlight. Before using your chemicals, make sure you are in a bathroom or darkroom. Ordinary light bulbs or tungsten lights should be safe to use. This process can be messy, and so it is best to take precautions and make sure you wear an apron and gloves. Also, make sure to cover your floors, carpets, walls, work surfaces, clothes, and skin as they can all be stained by the chemicals.

## Step by Step

### 1. Precoat with water

Take your brush and get it slightly wet. Apply the wet brush to your paper and let it dry. By applying water to the paper first, it softens the fibers and relaxes the paper, making it easier for the chemicals to adhere in an even layer. Set this to dry slightly before mixing your chemicals, you want the paper to be damp and not wet. I use watercolor paper as it holds onto the chemicals and is the best in the water bath. Do your own research on what paper will work best for you.

- For fabric, use 100% cotton or fabric with natural fibers. Run underwater and squeeze out any excess, leaving the fabric damp and not wet.

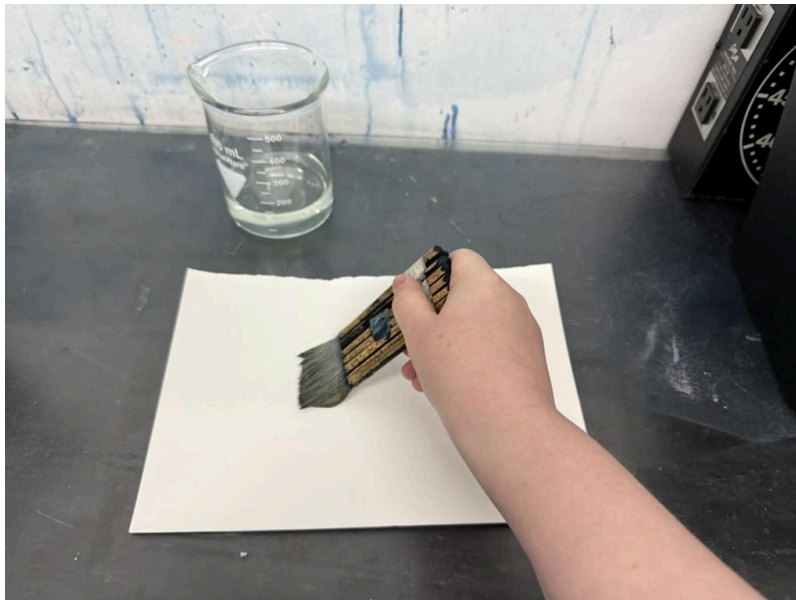


Figure 2: Coating the paper with a damp brush

## 2. Combine the chemicals

The ratio of chemicals A and B is 1:1 by volume. Measure that in your beaker or use preferred measuring instruments like a scale, tablespoons, etc. For this example, I did a ratio of 1 tablespoon of chemical A and 1 tablespoon of chemical B.



Figure 3: chemicals A and B both measured to 1 tablespoon

### 3. Mix thoroughly

Carefully swirl or stir the chemicals together to create a homogenized mixture. Do this for about 30 seconds to 1 minute.

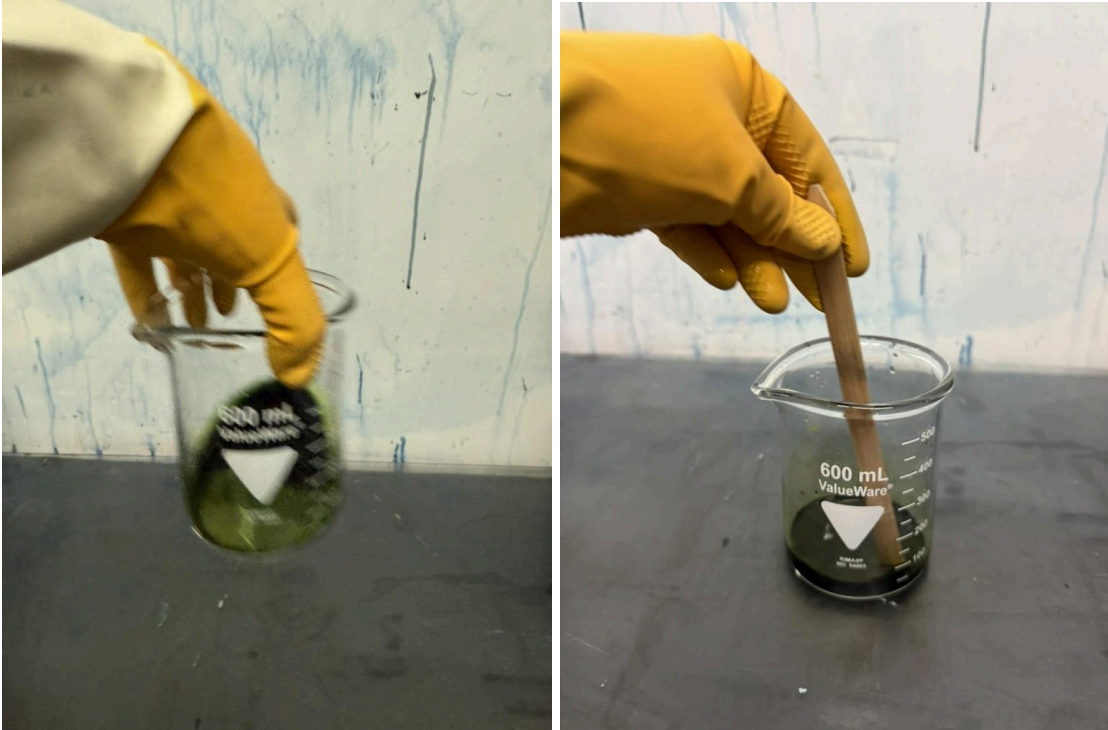


Figure 4: Swirling or stirring the chemicals together

## 4. Apply to paper

Take the brush you used to apply water to the paper and evenly apply the combined chemical mixture to your paper. Let the first coat dry slightly before applying the second coat.

- For fabric, you can use a brush or dunk it in the chemical mixture and squeeze any excess.



Figure 5: Coat the paper in an even layer

## 5. Let dry

Before exposing your cyanotype to sunlight or UV light, let it dry completely.

Depending on your climate, this can take up to 24 hours. Dry in a dark and cool space away from any sunlight or UV light.



Figure 6: An example of a dried piece of paper with chemicals applied

## 6. Creating a composition

At this step, it is time to decide what you want to place on your paper to make your cyanotype composition. Experiment with different silhouettes, shapes, plants, and negatives. Here I use a contact frame to keep my layers together, you can use what you have or nothing at all.



Figure 7: An example of a cyanotype composition with a negative and botanical leaves

## 7. Time to expose

Now it's time to expose your paper to sunlight or UV light. The time will vary depending on what source you use. For example, using sunlight can take anywhere between 5 to 15 minutes in direct sunlight. A good indicator is that you will see the paper change colors and go from greenish yellow to a brownish yellow.



Figure 8: The cyanotypes exposing out in the sun



Figure 9: Here are the cyanotypes after they have been outside in the sunlight for 7 minutes; you can see how the color has changed to be more brown

## 8. Wash in water

To stop the exposure and fix your image on the paper, you will need to wash it in water. Take off any object, negative, or botanical before placing it in the water. First, place the paper in shallow water and agitate to rinse off the chemicals. You might see some residual chemicals come off and make the water yellow. Do this for 1 minute. Dump the water and replace it with clean, cold, running water, and let the paper rinse for around 10 minutes. You will see that now you have your blueprint!



Figure 10: Placing the cyanotype in its first water bath of shallow water

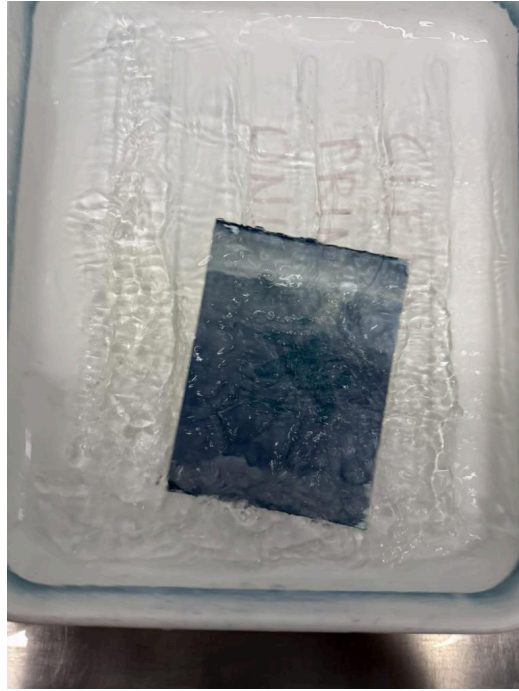


Figure 11: Cyanotype in first water bath beginning to turn blue



Figure 12: Cyanotypes in second running water bath

## 9. Let dry for the final time

After the image has rinsed in water for around 10 minutes, place your cyanotype somewhere safe to air dry. This can take up to 24 hours before your print is completely dry.

## 10. Display your work

Now that your piece is dry, you have completed the cyanotype process. Be proud of yourself and display your work!



Figure 13: A pair of finished cyanotypes