

CYANOTYPES ON FABRIC

This is a process I've only just played with a little bit. But it was So. Much. Fun. It gave me a million ideas because it's so simple and adaptable. Anyone can do this regardless of age or ability.

First I'll explain what a cyanotype is and give you just a little bit of history.

WHAT IS A CYANOTYPE

This technology was developed in the mid-19C, only about 20 years after what is considered the first "photograph".

CYANOTYPES ARE PHOTOGRAMS

A cyanotype is a type of photogram, which is a photograph made without a camera. Objects are placed directly on a photosensitive surface.

After exposure, the background of the surface gets dark, while the shadows cast by the objects remain light - it's a negative image. It's also unique.

However people have used drawings and photo negatives to create reproducible photograms, such as...

BLUEPRINTS

Cyanotypes were adopted by architects as a way to reproduce plans quickly and accurately. We know these as "blueprints."

Cyanotype methods were also used by scientists studying plants and animals.

BOTANICAL SPECIMENS

Cyanotypes were also a great way to document botanical specimens. This image was made by Anna Atkins, my new favorite person.

Anna Atkins is considered to be the first female photographer, and the first person to publish a book illustrated with photographs. She made cyanotypes from her extensive collection of algae, ferns, and other plants.

CYANOTYPE CHEMISTRY

The process uses two chemical compounds: ferric ammonium citrate and potassium ferricyanide. And that was as technical as I'm going to get because I don't know enough about chemistry to explain how they work together. Apologies to Mrs. Wiest, my high school chem teacher.

You can buy and mix your own chemicals if you're looking for that more handmade effect. But there is lots of fun to be had with pre-treated fabric and paper.

CYANOTYPE PRODUCTS

Before we get into the printing process, I'm going to show you a few products I've tried that are readily available.

JACQUARD PRODUCTS

The Jacquard company makes some great products that are easy to use. If you're making cyanotypes for the first time, I highly recommend getting a kit or some type of pretreated material.

This pack contains 10 sheets, 8.5 x 11 inches (like normal paper), and costs \$18. That works out to about 19 cents per square inch. So it's a bit pricey, but the results are very predictable.

JACQUARD MURAL FABRIC

I bought the mural fabric, because it's 5 x 7 feet for only \$40, which comes out to less than a penny per square inch oh my gosh.

You can use the whole piece all at once, like these people did here. It's people-sized, which is cool.

I cut it down into twelve pieces that are about 20 x 21 inches each, so about the size of a fat quarter.

SUNPRINTS.ORG

If you want to make paper cyanotypes, Sunprint kits are the way to go. Again, no mixing chemicals, just place your objects on the paper, put it in the sun, and go.

You can purchase these through Sunprints.org, or lots of other places.

THE PROCESS

Keep in mind that you're collaborating with the sun. Sometimes there are clouds, or rain, or you run out of daylight. Roll with it and remember that tomorrow is another day.

GATHER YOUR TOOLS 1

Since there's no guarantee that you'll have uninterrupted sunlight, gather your materials ahead of time. If you're doing this with friends or family, you might want to have a rain date just in case.

You can make cyanotypes completely outdoors, or completely indoors if you have good windows. It's nice to have both indoor and outdoor space. Gather the objects you want to print with (we'll talk more about what objects work well).

Outside, there's this thing called wind. A sheet of glass or heavy plastic will weigh down your objects so they don't blow away. It's also nice to have a board or a tray to carry your fabric and things from place to place.

GATHER YOUR TOOLS 2

The process stops when you get the fabric or paper wet. So when your exposure is done, be ready to get it wet immediately. Put it in a bucket of water, then take the bucket inside to rinse it in a utility sink (not the sink you use for food!).

After you expose your fabric and rinse it out, you'll want to hang it up to dry. It's not messy, it's won't drip dye onto your floor or anything like that. When it's dry or almost dry you can iron it just like you would any other cotton. I've run these fabrics through my washer and dryer too.

Exposure time is important, so have a timer handy.

PREP IN INDOOR LIGHT

You remember that 5 x 7 foot fabric I was talking about, that I cut up into 12 pieces? I did that cutting at night, in the back of Journey Quilts, with all the overhead lights turned off and most of the track lighting unplugged. When I got to my residency in Michigan, I would get up before the sun and get my cyanotype fabric prepped under a black garbage bag, then go eat breakfast, then come back after the sun was up. THIS WAS ALL OVERKILL.

You don't have to be that careful. Just don't put your fabric under sunlight until you're ready for the chemical process to begin. That's all.

THE BASIC PROCESS

These are the basic steps of the process.

You place objects on the paper or fabric that has been treated with the chemicals. You take out into the sun for 5-20 minutes (more on that in a minute).

Put it in water, rinse it out, hang it up to dry.

That's really all there is to it. The rest is experimenting to your heart's content.

EXPOSURE TIMES

For fabric, exposing it under full sun for 15-20 minutes will give you the darkest blue. After that amount of time, they will look weirdly grey until you rinse them out. Then they'll turn blue. (It's really cool, it's like magic.)

For paper, you only need to expose it for 5 minutes. The papers can be funny because after exposure AND rinsing, they may look washed out, like there's no image there. But they will darken as they dry.

ANGLES MATTER

The angle at which the sun hits your fabric makes a difference. Exposure at high noon under a cloudless sky will give you a high contrast print with dark blue. If it's 2 hours before sunset, and your surface is parallel to the ground, you'll get lower contrast and maybe less specific outlines from your objects. Neither of these is better or worse, it's just something to keep in mind.

In this picture, it's about 10 in the morning. I'm exposing this fabric indoors, in front of a window. I've pinned the fabric to a board and I've propped the board up on one side so more of the sun will hit it (but it's still angled enough so those folds will cast shadows). You can work this any way you like.

WHAT PRINTS WELL 1

You can make cyanotypes with so many different things. Really the only limit is your imagination. They need to be opaque so that they cast a shadow. They need to be dry because water stops the exposure process. (So if you're using leaves, or sand, things like that, let them dry out a couple days first)

Seriously, just look around your house, and you'll get ideas for what you can print.

Flat things print better than dimensional things. A leaf prints better than a pinecone. A necklace will print better than a basket. The more contact the object has with your fabric surface, the more specific shape you'll end up with.

WHAT PRINTS WELL 2

A couple things that surprised me - I was at a residency in Michigan, where I was doing all these cyanotype experiments, and I'd also been making quilts. Well, I decided to dump out my thread catcher onto sun print paper and expose that. I discovered that some striped fabric that was in that pile of stuff actually made a print where you could see the stripes. I tried that again with another fabric but it didn't work as well because that second fabric was very thin, and had a very low-contrast stripe. The first fabric was white cotton with black and dark green stripes on it.

Another surprise - using my transparent rulers! I brought these prints with me so you can see how that turned out.

WHAT DOESN'T PRINT WELL

Spheres, cubes, etc (non-flat things)

Wet things

Things that blow away, roll away, crawl away
(Use that glass or heavy plastic sheet!)

Objects with amorphous edges
(Think oysters versus cockle shells)

PRINTING WITH NO THING

My favorite print out of all the ones I brought is a piece of fabric that I put on a table in front of a window and just let it be. There were creases in the fabric from it being folded up, and the creases cast their own shadows onto the fabric. It gave me lots of ideas on how else I might fold the material before exposing it.

EXPERIMENT

I promise that if you start playing with this medium, you'll get a million ideas. The things I brought to show you tonight are just what I had time to do during a three week residency. (And since it was on the shores of Lake Michigan, not many of those days were sunny.)

Here are a few more options to get you started...

OTHER PRODUCTS

There are some other sun printing products available on Dharma Trading. You can get the chemicals, like we mentioned before, if you want to try brushing them onto fabric or paper. (If you get comfortable using them, this is a very economical way to make prints). The Blueprints and Solarfast products come in colors other than blue and white.

And remember, if you're ever unsure of how to use these materials, YouTube is your best friend.

TRANSPARENCIES

If you want to make cyanotypes that have the detail of a traditional photograph, transparencies are the way to go. You can also go low tech and draw with black marker on a plastic sheet and print from that. Or if you already have photo negatives or old film, try printing with that!

There are transparency sheets available that work either in a laser printer or an inkjet printer. If your local copy shop will let you put transparencies in the copy machine, those work too.

Remember that a cyanotype is a negative print - whatever is dark on your transparency will end up light on your paper or fabric.

OBJECTS V TRANSPARENCIES

Printing from an object placed directly on your paper or fabric will give you a silhouette. That means there will be no detail inside the shape unless there are holes in the object that let that light through. The image on the left was made from a hand placed directly on the paper.

On the right, you can see lines in the hand, light and shadows, and a ring on the finger, so you know that cyanotype was made from a photo negative. Does that make sense?

SOLARFAST

Again, something I have not played with. But if you want to do sun printing with all different colors, Solarfast is one of your options. Solarfast has an online tool that will help you print your own transparencies - follow this link for more information.

On the Dharma Trading Company website, there is even a handy chart explaining the differences between a cyanotype and a SolarFast sun print.

DYE NA FLOW

I have played a little with dye-na-flow acrylics, which strictly speaking are not fabric dyes. However I do love them. Get yourself a sampler pack and try them out because they are really fun.

Now I understand that you can do sun printing with these, but I've never done it. And I'm not quite sure why it works. There are some good video demonstrations on YouTube - again, if you're not sure how to do something, YouTube is your best friend.

PINTEREST

If you're looking for more ideas, guess what! I made a Pinterest board just for you! Here's the address:

[Pinterest.com/sarahmakespics/cyanotypes-on-fabric](https://www.pinterest.com/sarahmakespics/cyanotypes-on-fabric)

I have also written several blog posts on Patreon about my cyanotype experiments. You can find those at [Patreon.com/sarahatlee](https://www.patreon.com/sarahatlee).

CONTEMPORARY CYANOTYPES

Now, for your viewing pleasure, here are a few contemporary artists who are using cyanotype techniques.

ANNIE LOPEZ
SHEILA FROM LINCOLN MQG
CHRISTIAN MARCLAY
CATHERINE JANSEN
ELIZABETH RICHARDS
JARICA WALSH

OH AND ME

We talked about how a cyanotype is a monoprint, in that each one is unique. Well, I found a way to keep using this print over and over again by making it available as a Spoonflower fabric. You can get it there, too!