

Make Your Own Photogram Cyanotype

March 15, 2012 by [Udi Tirosh 12 Comments](#)

If you are not familiar with photograms and cyanotypes, here are two new words for you: A [Photogram](#) is a photograph made without a camera by placing objects directly onto a photographic paper. A [Cyanotype](#) is the developing process used to make blue prints.

You can have lots of fun and interesting results by creating Cyanotype Photograms. Photographer [Paul Eliasberg](#) is going to show us how.



At college our last assignment was 'portraiture' and our piece had to be tied in with an art movement. I decided on Dada and [Man Ray](#) and of course using a photogram or "Rayograph" as Man Ray liked to call them.

When you do a bit of reading up and take a bit of care, making cyanotype prints is an extremely easy but incredibly rewarding process: you coat a piece of paper with a solution, expose it to UV light covered by either a negative or objects, wash it out and presto, you've got a print. Let's look at each step a bit closer.

Watercolor Paper

For the paper I used watercolor paper. It doesn't seem to matter what kind of watercolor paper it is, as long as it's uncoated: you don't want any chemicals in it to mix with the chemicals you're using for the cyanotype process.

My local craft shop had an offer on, which is basically how I decided on the paper: it was nearly half price. I did make sure however it was acid free. It's [Daler-Rowney "The Langton", rough surface watercolor paper](#). You can also use textiles, but they have to be natural, it doesn't work on synthetics I'm told.

The Chemicals

Cyanotype sounds terribly toxic, lethal even, with the cyanide bit. It isn't.

Well, it is toxic, but only mildly so. Having said that, one should always take full precautions and **wear goggles, mask and gloves**. If you are not sure about this, find a chemistry teacher to help you. There, consider yourself warned.

You can of course buy the solutions premixed, but they're charging you an arm and a leg for it so it's more economical to buy the raw chemicals and mix your own if you plan on doing quite a bit of printing.

It's also more fun and adds to the "LOOK! I made this!" feeling afterwards.

You need two chemicals:

- 25 grams of ferric ammonium citrate (green)
- 10 grams of potassium ferricyanide.

Dissolve the chemicals in 100ml of (preferably distilled) water each. You can store these separate solutions for quite a while. Make sure you slap a [skull label](#) on the bottles, mark them and store them up high.

To make the active solution simply mix equal quantities of both solutions. The shelf life of this solution is a lot shorter than that of the two separate ones. If you spill any of this, the stains won't go out so be really careful.

Coating

The beauty of this process is that it's sensitive to UV light only. So at night, after dark, it's perfectly safe to have the lights on and work away, no need for safe lights. Coat the paper evenly with the solution. Watch it your brush doesn't have a metal ferule, as it can react with the chemicals. After coating let the paper dry in a dark place. This has to be a really dark place as it takes a while for the paper to dry and it is now sensitive to day light.



Exposing

There are two ways to get the cyanotype “exposed”

- You can either sandwich the paper with a negative (I printed mine with an inkjet printer on a piece of A4 transparency) between two glass panes
- Or go for the photogram by placing objects directly on the sensitive paper. For the photogram I placed kitchen utensils used for baking on the paper, as baking is one of my wife’s hobbies and she’s featuring in the portrait.

Either way, It’s handiest to do this with an assistant, when you’re using a sheet of paper as large as mine. I didn’t have anybody available, so I used my car as a shutter. Here is how to

Use A Car As A Cyanotype Shutter

- If you are doing this in between showers (I live in Ireland...) so first drive the car off its spot to reveal the dry ground underneath
- Reposition the car so that it covered the dry spot with its shadow.
- Quickly set up everything in the shadow
- When ready, move the car to let the sunshine fall onto the paper.

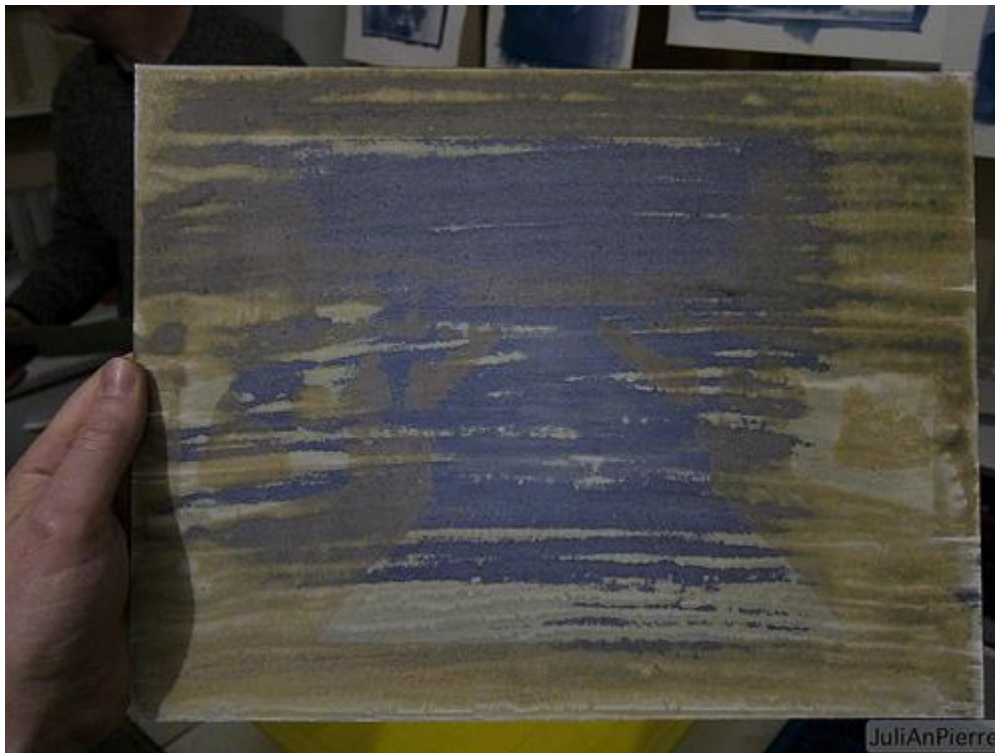
One thing that you need to consider is that the shadows may overlap. That’s something to look out for when you make your composition. Better to use an uncoated piece of paper first to get an idea of where the shadows are going.

Although this is a pretty slow process, don’t make the mistake of taking your time too much: when you’re doing something like this it’s surprising how fast shadows move. When the sun hits the coated paper, the chemicals will turn from a yellow-greenish color into a dark blue and finally to a sort of slate grey.



I haven't found a scientific approach to it yet and go more by gut feeling, but if you want to you can use a test strip first. Where I live that really doesn't make a lot of sense as the weather and light conditions change every five seconds...

When the color was a nice even slate grey quickly place a big black piece of card between the objects and the paper and quickly take the sheets inside.



Rinse

Basically, the next step is simply to rinse the paper with water. Either in the sink or in the shower (for bigger papers) – wash this really well.

The washing serves a double purpose: you're removing the chemicals that have not been exposed and you're starting the oxidizing process of the ones that have been exposed, bringing out the blue color.

Be sure to keep washing until the white is completely white; if it is still a bit yellow that means there still are some chemicals left and they can make the print fade in the long run. Longer washing also helps to oxidize and bring out the colour. If you want to speed up the oxidizing process you can add a solution of peroxide at the end of the washing. Don't wash for too long, as that may lighten the image.

Drying

Hang it out to dry, out of the sunlight, or lay it flat to dry. It's during and after the drying that the print will fully oxidize, which brings out the characteristic deep Prussian blue.



That's basically it! I'm pretty new to this myself and I'm amazed about the detail you can get in a print like this. When you choose your objects carefully and make sure they've got interesting shapes you can come up with amazing results. I'll certainly be doing a lot more of these cyanotypes and photograms. Now I've got my darkroom sorted I'll also see if I can do some experiments with photograms using photographic paper.

More Info

More information on cyanotypes can be found in the excellent book "[Blueprint to cyanotypes: exploring a historical alternative photographic process](#)" by Malin and Gary Fabbri and using the several online resources such as the Facebook and Flickr groups and several forums. Just Google for "cyanotype" and photograms.

Images by [JuliAn](#), [E.Briel](#) and [paul.eliasberg](#)