

MAKING CYANOTYPES

This document contains information that will help in making successful Cyanotype prints.

ESSENTIAL MATERIALS

You will need the following materials to make Cyanotype prints:

- Digital Negatives printed on high-quality Clear Digital Film
- Cyanotype Sensitizer liquid 'New' Cyanotype Sensitizer
(Mike Ware formula) from Bostick & Sullivan
- Receiver Paper quality printmaking paper, torn down to final print size
mark the front side of the paper,
write your name on the back of each sheet
e.g. BFK Rives, Arches, Canson
- Foam Brush 1" wide will suffice,
although various 'alternative' applicators are okay
- 3" Pyrex Glass Dish to hold a small amount of Sensitizer
- Lemon Juice to control contrast
- Hydrogen Peroxide to quickly oxidize the prints to final saturation
- Nitrile Gloves always needed for any Darkroom work!
- Newspaper to cover the countertop when coating the paper
- Blotter Book to take home damp prints

COATING the RECEIVER MATERIAL

coat in subdued, diffused tungsten light

A 40-watt bulb in a clip-light across the room works well

make note of the area to be coated

the emulsion can be slightly larger than the size of the image

but the emulsion should not extend beyond the size of the film

small pencil marks can be made and erased later

put down a layer of newspaper down to protect the working surface

lay down a sheet of Plexiglas over the newspaper

pour a small amount of sensitizer into a very clean Pyrex glass dish

place the paper down **front side up!**

brush the Sensitizer onto paper or cloth with a small brush

use a small amount, just enough to apply a thin *even* coating

puddles will not expose properly, gaps will not render any image

the sensitizer should be a yellowish color when applied (*green = bad*)

apply 3 coats of Sensitizer

first in one direction, **dry** the layer

then in the other direction, **dry** the layer

a third coat in the first direction (or on a diagonal) can be applied

use acid-free paper, 100% cotton rag, archival paper

impurities in the paper or cloth can cause the emulsion to turn green or blue,

rendering it unusable. Avoid these papers.

consider the brushstrokes around the edge of the print

these serve as the black line that we are accustomed to when printing black &

white silver prints in the darkroom with a filed out negative carrier

the appearance of these brushstrokes is quite important

be aware of where you are applying (and not applying) the emulsion

note: this is where 'alternative' kinds of application can be used

allow the Sensitizer to **'cure' for at least 24 hours** before exposing

curing is complete when the emulsion is a more pure yellow

MAKING CYANOTYPES, cont'd.

STORING COATED UNEXPOSED SHEETS

The right side of the Process Darkroom is for coated unexposed sheets only.

The drying screens are under the counter top.

cover the screens with newspaper to prevent staining the screens

placed coated sheets as far back as possible

don't leave coated sheets for more than 1 day

there are many people using this darkroom

USING the EXPOSURE BOX

The Exposure Boxes have a series of Ultraviolet bulbs in the top that shine down onto a Vacuum

Table that holds the negative tightly against the coated Cyanotype paper.

When ready to make an exposure

pull out the tray of the Exposure Unit

open the top glass (carefully)

clean the glass inside and out

place the sensitized paper down (sensitizer facing up)

place the negative down (emulsion/ink facing down)

close the glass (carefully)

push the tray back into the Exposure Unit

turn on the power on the front right

this turns on the power for the lights

set the timer for the desired exposure time (in minutes)

turn on the timer

this will start the vacuum pump and also
begin the exposure by turning on the lights

EXPOSURE

expose the print until the highlights start to change color

start with an exposure of 7 min. in an Exposure Box in the Process Darkroom

for Hand-Applied Modern Cyanotype Sensitizer from Bostick & Sullivan

Visual inspection before finishing will show that the exposure is correct when the highlights are just turning a pale green color and the mid-tones are blue.

The shadows will be a pale blue, but are mostly hidden under the densest part of the negative. When first removed from the vacuum table and separated from the negative, the print will appear almost 'solarized' due to the lighter shadows.

Darker prints are better, especially if they will be bleached & toned later

SINK SETUP

While the exposure box is making an exposure, the trays can be set up in the sink. This can also be done before you even start exposing.

The trays are set up as follows:

DEVELOP tray filled with water

WASH tray filled with water

INTENSIFIER tray filled with water and lemon juice (1.5 oz : 1 quart)

OXIDIZER tray filled with water with Hydrogen Peroxide (1.5 oz : 1 quart)

HOLDING tray filled with water

FINAL WASH tray filled with water

MAKING CYANOTYPES, cont'd.

DEVELOPER/ WASH

develop prints _____ in running, room temperature water for 20 minutes
wash prints _____ for at least 20 minutes
to totally clear out all traces of unexposed emulsion.
the wash water should be room temperature, between 68 and 72° F.
hard water is not the best for this job due to the presence of calcium,
but we have no control at the University.

INTENSIFIER for CONTRAST CONTROL (optional)

Acid will intensify the density of the Prussian Blue. Citric or Acetic acids will work fine and are commonly available products, e.g. lemon juice, orange juice or vinegar (*stinky*).
add _____ 3 TB Lemon Juice or Vinegar (supermarket variety)
to 1 qt of water to make a small tray of Intensifier
vary the dilution _____ for more or less effect
bathe prints _____ for 30 seconds only
re-rinse _____ in plain running water
re-mix _____ this solution often as it is becomes exhausted quickly

OXIDIZER for FINAL TONALITY (optional)

Prints will not reach their full density until they are dry (usually overnight). This is because it takes time for the Sensitizer to oxidize in the air. It is possible to force an immediate oxidation of the prints by rinsing for about 30 seconds in a bath of dilute Hydrogen Peroxide. This brings prints to their full intensity. While not necessary, this will provide 'immediate gratification'.
add _____ 3 TB Hydrogen Peroxide (drugstore variety)
to 1 qt of water to make a small tray of 'Oxidizer'
bathe prints _____ for 30 seconds only
re-rinse _____ in plain running water

FINAL WASH

wash prints _____ for 20 minutes to totally clear any residual chemistry

DRYING

Prints can be left to dry on the Drying Screens on the left side of the Process Room. **Cover the screens with newspaper** to prevent any staining. Toned Cyanotype prints may be of questionable archival quality until they are completely dry, so be careful to consider the effect of your actions on other people.

Do not leave any prints on the drying screens for more than 1 day. Take home damp prints in a Blotter Book. Your prints will be safer and cleaner.

CLEAN-UP PROCEDURE

dump _____ all trays down the drain
wash _____ all tongs and brushes, and store away
wash _____ the Plexiglas
clear _____ all newspapers off the counter tops and discard
wipe down _____ the countertops under where the newspaper was, just to be sure
shut all water _____ ensuring that no water is running anywhere
including the jets at the bottom of the sink
discard _____ any empty chemical bottles
wash 3 times with water and remove the labels (EHRS Requirement)