

## NEW CYANOTYPE – ADDITIONS

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

### PREPARING the SENSITIZER (EMULSION)

Follow the instructions provided by Photographer's Formulary with the New Cyanotype kit, or download the copy of that same document from the Instructor's site. The emulsion should be prepared in subdued tungsten light; never under florescent bulbs or in daylight. It is a somewhat involved process, requiring some special tools, namely:

- a way to crush the crystallized chemicals into a fine powder  
(mortar & pestal)
- a coffee filter to separate the final liquid emulsion
- a way to heat the solutions to 120°F / 50°C  
(hotplate or bowl of water)
- a 'beaker' in which to heat the chemicals
- a dark brown glass container to hold 3 oz. / 100 ml.
- protection against toxic materials  
(gloves and a dust mask)

The emulsion should be left to 'cure' for at least 2 to 3 days before used to coat the paper. Curing is complete when the emulsion is a more pure yellow.

### COATING the RECEIVER MATERIAL

Emulsion can be brushed onto paper or cloth with a small brush. This should also be done in subdued tungsten light. The paper should be acid-free, 100% cotton rag, archival paper. The emulsion should be a yellowish color when applied. Impurities in the paper or cloth can cause the emulsion to turn green or blue, rendering it unusable. Avoid these papers, however the Ammonium Dichromate supplied in the kit helps combat this degradation.

Brushstrokes around the edge of the print 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.

Coating the paper should happen in reduced tungsten light. Exposure should happen a few hours after coating.

### EXPOSURE

Visual inspection 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.

expose the print until the highlights start to change color

for Pre-Coated Cyanotype Paper from Freestyle

tests indicate an exposure of 1500 – 2000 units

in the Nu-Arc exposure unit in the Print Studio.

for Hand-Applied New Cyanotype Emulsion from Photo Formulary

tests indicate an exposure of ??? - ??? units

in the Nu-Arc exposure unit in the Print Studio.

## NEW CYANOTYPE – ADDITIONS, cont'd

### DEVELOPER WASH

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.

develop prints \_\_\_\_\_ in running, room temperature water for 20 minutes

### 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, i.e. orange juice or vinegar.

add \_\_\_\_\_ 1.5 oz. Orange 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 becomes exhausted quickly

### FINAL TONALITY (very optional)

Prints will not reach their full density until they are dry. It is possible to rinse prints for about 30 seconds in a bath of dilute Hydrogen Peroxide to bring prints to their full intensity before the final wash. While not necessary, this will provide 'immediate gratification'.

add \_\_\_\_\_ 1.5 oz. Hydrogen Peroxide (drugstore variety)

to 1 qt of water to make a small tray of Finalizer

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.