

CYANOTYPE TONING

Theory : There are three types of chemicals that affect Cyanotype prints. These chemicals can be used singly. One approach is the **bleach** the color out of a dark print. Another is to **intensify** the color of a normal print. A third is to alter the **tone** of a print. And then there are a slew of combinations.

- Reducers – act as bleaches, degrading the blue color in the print
Sodium Carbonate, Borax Ammonia, TSP Clorox, Developer...
- Intensifiers – deepen the color of the print
Hydrogen Peroxide, Lemon Juice, Citric Acid, Vinegar...
- Toners – change the color of the iron in the print
Tannic Acid, Oolong Tea, Wine, Cat Urine, Pyrogallic Acid...

With Silver prints a common practice is to bleach the color out of the silver and then re-develop the print in either Sepia or another Developer. This same technique can be done by combining a bleaching step with a toner step. The most common combo for Cyanotype is Sodium Carbonate and Tannic Acid.

Many of these recipes can be used in either direction, or repeatedly back and forth, each time producing a different tone. And each time you print, different tones may result.

Practice :

General Considerations:

- Overexpose prints to be toned by at least one stop (until the highlights are gray).
- Prints should cure at least one day after printing.
- Soak the prints in distilled water before you start toning.
- Do a final wash for 10 ~ 15 minutes in running water at the end.
- Replace the chemicals as soon as they start to get dark (10 ~ 15 prints per tray).
- Always rinse between chemicals to increase toner life by about 5 prints per tray.
- Always add chemicals to water, never the other way around.

Recipes :

Yellow – Blue Split Toner Sodium Carbonate Household Bleach or TSP [reduction]
tray 1 – distilled water
 soak for 5 minutes until thoroughly soaked
tray 2 – 1 pinch of Sodium Carbonate in 1 quart distilled water [alkaline]
 immerse for **less** than a minute
 the print will begin to degrade if left too long
tray 3 - distilled water
 pull the print quickly from the Sodium Carbonate and watch the split
final wash – 10 ~ 15 minutes in running water
note: TSP (Tri sodium Phosphate) commercial cleaner can make a yellow & white print
note: Clorox household bleach can remove Cyanotype completely from parts of a print.

Deep Blue Toner Hydrogen Peroxide [intensification]
tray 1 – distilled water
 soak for 5 minutes until thoroughly soaked
tray 2 – 5 tsp. Hydrogen Peroxide (or vinegar, lemon juice [acidic])
 in 1 quart. of distilled water
 agitate the print until darkening stops (several minutes)
final wash – 10 ~ 15 minutes in running water
note: this chemical simply accelerates the oxidation process that will occur anyway as the print dries.

CYANOTYPE TONING – redevelopment

Red–Brown Toner

Tannic Acid > Sodium Carbonate

tray 1 – distilled water

soak for 5 minutes until thoroughly soaked

tray 2 – 9 grams Tannic Acid in 1 quart of distilled water [or strong Oolong Cha (tea)*]

agitate the print 30 seconds to 5 minutes

you will not see a color change until

you put the print into the Sodium Carbonate!

tray 3 – distilled water

wash for 5 minutes

tray 4 – 1.5 tsp. (4.5 grams) Sodium Carbonate (Washing Soda)

in 1 quart. of distilled water

agitate the print until the desired color is reached

optional – 5 tsp. Hydrogen Peroxide in 1 quart of distilled water

agitate the print to intensify the color

final wash – 10 ~ 15 minutes in running water

tea tip: brew a very strong batch of Oolong tea, purchased in Chinatown

use FRESH TEA for each print

use just enough to cover the print, then discard after 1 use

see the «*Tea Toning*» document

You can go back-and-forth with this, each time getting a different tone!

Eggplant–Black Toner

Sodium Carbonate > Tannic Acid > (Sodium Carbonate)

note: you can do the above in reverse order for a different effect,

Soak the print, put it Sodium Carbonate very briefly until it starts to bleach

then transfer to the wash tray and watch it bleach (note: Sodium Carbonate will

continue to bleach even after it is put in to a wash tray!), put it in Tannic Acid

until you get the desired tone, (optional) return the print to the Sodium

Carbonate for a few seconds, final wash for 10 minutes.

You can go back-and-forth here also, getting a different tone each time!

Purple–Brown Toner

Ammonia > Tannic Acid > (Sodium Carbonate)

tray 1 – distilled water

soak for 5 minutes until thoroughly soaked

tray 2 – 21 ml Ammonia in 1 quart of distilled water (acts as a bleach)

agitate the print until highlights bleach and shadows turn purple

tray 3 – distilled water

wash for 10 - 15 minutes

tray 4 – 3 grams Tannic Acid in 1 quart of distilled water [(or Oolong Cha (tea))]

agitate the print until the desired color is reached

optional – 1.5 tsp. Sodium Carbonate in 1 quart of distilled water

until reaching a red-brown tone

final wash – 10 ~ 15 minutes in running water

You can also do the back-and-forth processing with this recipe.

CYANOTYPE TONING – color change

Violet Toner Pyrogallic Acid > Hydrogen Peroxide

- tray 1 – distilled water
soak for 5 minutes until thoroughly soaked
- tray 2 – 5 tsp. (10 g.) Pyrogallic Acid in 1 quart of distilled water
agitate the print until the desired color is reached
- tray 3 – distilled water
wash for 30 seconds
- tray 4 – 4 tsp. Hydrogen Peroxide in 1 quart of distilled water
agitate the print to intensify the color
- final wash – 10 ~ 15 minutes in running water

You can also do the back-and-forth processing with this recipe.

- note: this toner is greatly affected by water quality, humidity and type of paper used. It does not always work!
- note: Tannic Acid and Gallic Acid have a similar effect, because Gallic Acid is anhydrous Tannic Acid (without water).

Eggplant–Red–Black Toner Developer > Tannic Acid > (Developer)

- tray 1 – distilled water
soak for 5 minutes until thoroughly soaked
- tray 2 – Developer mixed straight from the Vat (or other hard developer)
agitate until a goldenrod color is reached
- tray 3 – distilled water
wash for several minutes
- tray 4 – Tannic Acid or hot Oolong Tea
agitate until a smokey black color is reached
- final wash – 10 ~ 15 minutes in running water
- optional - Developer or Ammonia solution, followed by another 15 minutes final wash

Brown–Green Toner Developer > Selenium

- tray 1 – distilled water
soak for 5 minutes until thoroughly soaked
- tray 2 – Developer mixed straight from the Vat (or other hard developer)
agitate until a goldenrod color is reached
- tray 3 – distilled water
wash for at least 1 minute
- tray 4 – Selenium diluted 1 : 3 or more from the Vat
agitate until the desired color is reached, but not too long
be careful because Selenium contains Potassium Fericyanide, a bleach
- final wash – 10 ~ 15 minutes in running water

You can also do the back-and-forth processing with this recipe.

Speckle Toning

- Splash water across the surface of the print
before immersing in water developing bath
- Splash Developer across the surface of the print
while toning to make dark speckles
- Splash Bleach across the surface of the print
to make yellow dots

CYANOTYPE TONING – resources

This information is garnered from several sources:

Photo-Imaging: A Complete Guide to Alternative Processes

by Jill Enfield

Amphoto Books (October 2002)

ISBN: 0817453997

The Book of Alternative Photographic Processes

by Christopher James

Publisher: Thomson Delmar Learning; 1st Edition (June 2001)

ISBN: 0766820777

The Photographer's Toning Book: The Definitive Guide

by Tim Rudman

Amphoto Books (April 2003)

ISBN: 0817454659

and lots of studio experiments...