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Bromoil Bleach Kit Instructions

Functions of Bleach/Tanning
The bleaching /tanning solution has two separate functions:

1. It must remove the metallic silver embedded in the gelatin.
2. It must cause a tanning of the gelatin corresponding to the silver that it bleaches away.

In the place of the silver image there will exist a slightly visible tanned, latent image in the gelatin.

An entire book could be written on all the bromoil bleach and tanning formulas that are floating around from the past. It seems that back when bromoil was in its heyday, almost every worker had a different, favorite bleaching and tanning formula that was touted to be "the best." For our purposes, and to keep things simple, we'll just deal with one bromoil bleaching formula and one bleaching method.

The first and foremost thing to remember regarding the bleach/tanning operation is to use *distilled water* for both the stock solution and for the working solution. Do not use tap water. It contains many impurities and contaminants. The bleach/ tanning operation can be done with the lights on and does not require safelight conditions.

Your Bleach Kit Contains

Copper Sulfate 1,000ml 10% solution
Potassium Bromide 1,000ml 10% solution
Potassium Dichromate 1,000ml 1% solution

Your kit is sent as a dry pack. Add distilled water up to the neck of the bottle and shake to bring it into solution.

Mixing your bleach solution

Pour 830ml of 70◦F distilled water into a clean, dedicated bromoil bleaching tray (do not use this tray for any other purpose). Add 70ml copper sulfate 10% solution, 70ml potassium bromide 10% solution, and 30ml potassium dichromate 1% solution. This makes up to 1000ml bleach. This will bleach approximately ten 6x8 images on 8x10 paper.

For more bleach solution, pour 83ml of 70◦F distilled water into the tray for each print that you are bleaching. For each matrix add 7ml copper sulfate and potassium bromide solutions, and 3ml potassium dichromate solution. For example, if you wish to bleach/tan six matrices, to 498ml distilled water, add 42 ml copper sulfate, 42ml potassium bromide and 18ml potassium dichromate.

Bleaching/Tanning

The prints for bleaching/tanning should have completely dried following the fix and wash. Soak the prints for five minutes + in 70◦F water prior to immersing them (no more than two at a time) into the bleach/tanning tray. *Wear rubber gloves or use tongs for the bleach/tan procedure.*

Set your timer for eight to ten minutes, depending on how dark the prints were printed (the darker the print, the more time in the bath). Do not bleach/tan any print for less than eight minutes, or more than ten minutes, as you will run the risk of overall tanning of the matrix. Slide no more than two prints, one at a time, smoothly into the bleach tray and continuously agitate, gently flipping and turning the prints for the duration of the bleach operation. Constantly shuffle the two prints to insure that they do not stick together. At the conclusion of the bleach bath, move the prints to a 70◦F wash for fifteen minutes. Resume bleaching the other prints, again no more than two at a time, and go through the cycle until all the prints in this batch are bleached and tanned. Once bleached and tanned, the prints are now called "matrices."

After the bleach/tanning bath the matrices will retain a straw colored ghost image which will change to a faint grey/green image after the post-bleaching fix.

Post-Bleach Fix

Prepare a tray of fresh 10% hypo and fix the matrices for 5 minutes after they have washed for at least fifteen minutes. Use continuous agitation for the fix. Constantly shuffle the matrices and do not allow them to stick together. The fixing is followed by a 70◦F wash for 30-45 minutes, or less if you use a wash aid. Again, do not allow the matrices to stick together in the wash! After the wash is complete, gently blot all the droplets of water from the surface of the matrices with a paper towel and air dry overnight.

Super drying

G.E. Whalley ARPS found that "superdrying" of the matrix after any drying stages in the bromoil process, prior to inking, facilitates the acceptance of the ink. He found that before the bleach and prior to inking, the already dry matrix be exposed to heat for a short period of time in order to completely remove all traces of moisture in the paper and the emulsion. One writer recommends holding the matrix twelve inches over a stove burner, emulsion side down, for thirty seconds.

Whalley further advises that the more wet-dry cycles super-coated paper is subjected to, prior to inking, the softer the gelatin becomes and the easier the process of inking.

Another method is to place the dry matrix (between two mat boards) in a pre-heated dry mount press set at 250◦F for two to three minutes, allow to cool down then go straight to the pre-bleach or pre-ink soak.