STANDARD PHOTOGRAPHIC PRINTING 2019

Work with 32 oz. of solution in each tray depending upon tray size.
Agitate paper when in trays

DEKTOL: 1.5 minutes to 3 minutes

STOP: 30 seconds

USED FIXER: 3 minutes
FRESH FIXER: 3 minutes

WATER RINSE: 1 minute

HCA (hypoclearing agent / rapid washing agent): 10 minutes

FINAL WASH: 20 minutes at 65-80 degrees

Set up an equal amount of chemistry in each tray. The solutions will become exhausted around the same time. When working in a group, help others to set-up, monitor, and clean-up chemistry.

Avoid chemical contamination when returning solutions to containers. Rinse all trays after use. When printing always move prints and print tongs from the developer to the stop and fix, in one direction, to prevent contamination of chemicals. The developer is basic and the stop and fixer are acidic in terms of PH.

PHOTOGRAPHIC PAPER PROCESSING: chemical use time

Dektol paper developer 1.5 - 3 minutes
converts silver salts to silver time varies

Acetic Acid stops development 30 seconds
changes alkaline developer bath to a mildly acidic environment

Fixer fixes the image 6 minutes total
removes unexposed silver salts
(3 minutes for each tray of used and fresh fixer)

HCA hypo neutralizer 10 minutes
or RAPID WASHING AGENT
hypoclearing agent facilitates the removal of fixer or "hypo"

PRINT CHEMISTRY MONITORING:
During a busy lab session the chemicals in the trays last a maximum of
2 hours to 2 - 1/2 hours. All the chemicals tend to become exhausted at once.

Dektol (1:2) 30 prints / 32 oz. 120 prints / gallon
Acetic Acid: 18 prints / 32 oz. 75 prints / gallon
Fixer: 25 prints / 32 oz. 100 prints / gallon
HCA: 20 prints / 32 oz. 80 prints / gallon

DEVELOPER: DEKTOL concentrated stock solution stored in brown bottles

Mix a working solution of a 1:2 dilution in a tray.
For example, 10 oz Dektol to 20 oz. Water.
Exhaustion: Image should appear after the first 30 seconds. The developer may darken as it becomes weak. Out-of-date developer is dark brown in color and should not be used. Discard working solution after your printing session in designated container.

STOP BATH: ACETIC ACID working solution is ready-for-use and is reused.

This INDICATOR Stop Bath turns purple in color as the bath becomes neutralized, and exhausted. At that point the darkened solution in your tray can be discarded in the designated container. Solution is reused if not exhausted.

FIXER: working solutions, used fixer and fresh fixer, are ready for use.

USED FIXER: working solution is ready for use in FIXER TRAY 1
FRESH FIXER: working solution is ready for use in FIXER TRAY 2
We are using a two-bath fixing method with an ammonium thiosulfate liquid rapid fix. As the fixer becomes exhausted, the fresh fixer is rotated into the used position. This procedure ensures the maximum use of the solution as well as adequate fixing of prints.

Always monitor the USED FIXER IN TRAY Number 1.
Check FIXER with Hypocheck solution. Pull 2 oz from TRAY 1 and test fixer sample with 2 drops of the hypochek solution (verify testing procedure by following instructions on hypocheck bottle). If a white precipitate forms in the sample (known as the "white cloud") then the fixer is exhausted.

Pour the EXHAUSTED USED FIXER into the DISCARDED FIXER container. Rotate the

Fresh Fixer tray into the Used Fixer position. Pour a new solution of Fresh Fix into the Fresh Fixer tray. Never pour any fixer solution down the sink as the solution contains silver metal.
DISCARDED FIXER: Exhausted Fixer is poured into this marked container to facilitate proper disposal.

PRINT RINSING: Rinse your print in the running water trays at the end of the sink line. As you collect several prints, move them to the washing area for processing in hypoclearing agent, HCA or rapid washing agent.

HCA or HYPOCLEARING AGENT or RAPID WASHING AGENT:
Concentrated stock solution must be diluted to create a 1:5 working solution. Hypoclearing agent and similar washing aid solutions facilitate the removal of fixer from the fibers of the print paper. Failure to adequately remove the fix will ultimately cause the print to fade. Set up the chemistry near the printwasher.
Use a 1: 5 solution of Rapid Washing Agent and WATER. For example, use 5 oz. of Rapid Washing Agent with 25 oz. of water. This chemical is easily contaminated so a fresh solution is always made from the available stock solution. Discard dilute working solution after your printing session.

HCA becomes pink/purple in color as it approaches exhaustion.
Our current print rapid washing agent requires a 10 minute soaking time with intermittent agitation.
(Resin-coated or RC papers do not require processing in HCA)

FINAL WASH: at 65 - 80 degrees
20 minutes for double weight fiber base paper with rapid washing agent solution
You must wash prints for a minimum of 20 minutes as we are using a rapid washing agent. Fixer residue can contaminate print drying screens and other students' prints. Over time, residual fixer in prints will cause prints to fade.

PRINT WASHER: Close drainage clip to fill washer; be sure clip is open to drain upon completion. Do not remove Plexiglas separators in print washer as they are required to ensure adequate movement of water over the entire print. Avoid allowing prints to stick to one another in washer, which would prevent water from moving across print surface. Wash prints at temperatures between 65-80 degrees F. Colder water wash temperatures will not adequately wash prints and hot temperatures may damage emulsion. Be sure to leave time for the washing of prints. Coordinate supervision of print washing with your classmates. The print is removed from the wash water after 20 minutes and is squeegeed carefully.

Wet squeegee first. Place print on plexiglas sheet and squeegee back of print gently. Squeegee plexi and print repeatedly to remove excess water. Be careful not to crease or damage the print. Place prints gently face up on screens to dry. The prints usually will

be dry overnight depending upon humidity. Stop by the lab within the next day to pick up prints or use a blotter book. Never place damp prints in the drymount press. The heat from the press will damage the fragile, wet print emulsion.

CHEMICALS: There are only two necessary chemicals for both film and paper development: **DEVELOPER and FIXER.**
Different developers are used for film and for photographic paper. Although the same fixer is used for both film and paper, the dilution varies. Use only the chemicals that belong to your class. Do not bring chemicals into the lab. Confer with instructor if you have special needs that relate to access of chemicals.

PAPER DEVELOPERS:
Generally, there are two types of paper developers: cold-tone and warm-tone developers. The cold-tone developer, such as Dektol, is designed to be used with cold-tone papers, i.e. papers whose image tones are blue-black, or neutral-black. The warm-tone developers are to be used primarily with warm-tone papers, i.e. warm-black or brown -black. If an exact tone is not important, the developers may be freely substituted. Toners used after the printing process can also alter the image tone of the print.