If developing by inspection be sure to use the proper safelight recommended by the film manufacturer. Most line films can be used under a red safe light.

Carry out the development at 20°C/68°F.

A typical developing sequence is:

Develop: 2-3 minutes or by inspection

Stop: 30 seconds in 1% acetic acid. [You may wish to rinse the film in water prior to the stop bath. Otherwise, the heat generated in the neutralization may cause the film to reticulate.]

Fix: 1-2 minutes using Formulary The Photographer's Formulary TF-4 Rapid Fix (Cat. no. 03-0142) or using Formulary Fixer 7 (Catalog number 03-0110). Use 2-4 minutes with Formulary Fixer 6 (Catalog number 03-0070)

Wash: 5-10 minutes

PHOTOGRAPHERS' FORMULARY INC.

PO Box 950 • Condon MT 59826 • 406-754-2891 • FAX 406-754-2896
E-MAIL formulary @montana.com

Catalog number 01-1300 - 1 liter
01-1330 - 2 liters
01-1350 - 4 liters

PHOTOGRAPHERS' FORMULARY INC.

FORMULARY DEVELOPER 70
For high-contrast film

Formulary Developer 70 -- similar to Ansco 70 -- is a high-contrast, hydroquinone-based film developer intended for developing copying films such as Kodalith. Developer 70 produces dense blacks with clear highlights and sharp edge separation.

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the chemical warning on each package. There is one chemical in this kit that needs special attention: sodium hydroxide.

Sodium hydroxide, as a solid or in solution, is a dangerous chemical. It is a corrosive and, if spilled on the skin, will cause a chemical burn. Its action is insidious because the burn occurs without pain. When working with sodium hydroxide wash your hands frequently and without soap. If you detect a soapy feeling while washing, sodium hydroxide is present. In such a case wash your hands thoroughly with soap and water.

Beads or pellets of solid sodium hydroxide are easily spilled during solution preparation. If spillage occurs outside of a sink, all of the spilled solid must be cleaned up. Use a damp disposable towel. If the solid is not cleaned up, it will absorb the moisture from the air and form a puddle of very caustic hydroxide, which will not evaporate. The proper technique for preparing sodium hydroxide solutions is described in the mixing section. We strongly urge you to wear both safety glasses and rubber gloves when working with solid sodium hydroxide and it solutions.

The user assumes all risks upon accepting these chemicals. IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISKS, PLEASE RETURN THE CHEMICALS WITHIN 30 DAYS FOR A FULL REFUND. Please consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area.

MIXING THE SOLUTIONS

To prepare Stock Solution A, you will need a dark brown bottle or other suitable storage container with a capacity of 1 (2 or 4) liter. For the Stock Solution B (concentrated sodium hydroxide), you will need a plastic storage container with a capacity of 1/2 (1 or 2) liter depending upon the size of the kit. In addition to the storage container, you will need a temporary plastic, wide-mouth, mixing container of an adequate size. You will also find a plastic funnel to be very useful.

STOCK SOLUTION A

Kit Size

Chemical	1 liter	2 liter	4 liter
Distilled water (52°C/125°F)	750ml	1500ml	3000ml
Hydroquinone	25g	50g	100g
potassium metabisulfite	25g	50g	100g
potassium bromide	25g	50g	100g
cold distilled water to make	1000ml	2000ml	4000ml

Place the warm water in the brown storage container and add the hydroquinone. Stir or swirl the container until the solid has dissolved. Next, add the potassium metabisulfite and, again, stir or swirl the container until the solid has dissolved. Finally, add the potassium bromide and, as before, stir or swirl the container to dissolve the solid. Add cold water to the storage container to bring its final volume up to 1 liter (or 2 or 4 liters).

STOCK SOLUTION B

Kit Size

Chemical	1 liter	2 liter	4 Liter
Cold distilled water	350ml	750ml	1500ml
sodium hydroxide	25g	50g	100g
(20°C/68°F) water to make	500ml	1000ml	2000ml

There are two packets containing solid sodium hydroxide in your kit. Only one of these bottles is used at a time to make Solution B. The second packet is to make a second portion of Stock Solution B after the first has been depleted. The total amount of Stock B will equal Stock A.

Stock Solution B must be prepared in a sink and in a well-ventilated area. Place a dry, wide mouth, plastic mixing container of the appropriate size in a sink and place the solid sodium hydroxide in the container.

Measure 350 ml (or 750 ml or 1500 ml) of cold water and carefully add the water to the plastic container. Stir the mixture with a large plastic spoon until the solid has gone into solution. Stir gently and avoid splashing the solution. After the solid has dissolved, let the solution sit in the sink until it reaches room temperature then proceed.

When sodium hydroxide dissolves in water, considerable heat is generated. If your water was not cold enough, the solution may start to steam. If this should occur, add some ice to cool the solution. If the solution starts to steam and if you cannot cool it leave the room and let it cool off by itself. DO NOT BREATHE THE VAPOR -- it contains entrapped sodium hydroxide.

While still in the sink and, with the aid a plastic funnel, transfer the sodium hydroxide solution into its plastic storage container. Use a little cold water to wash the residual sodium hydroxide solution remaining in the mixing container into the storage container.

Add sufficient cold water to bring the final volume in the storage container up to 500 ml (1000 or 2000 ml). Cap the storage container and wash the outside of the container before removing it from the sink.

Working Solution

Mix equal volumes of Stock Solution A and B to obtain the working solution. Do not dilute with water. Mix the working solution just prior to use because it has a very short life (2-3 hr.).

LIFE OF THE SOLUTIONS

Stock Solution A has a shelf life of up to 6 months in a full tightly capped bottle.

In a filled plastic container, Stock Solution B will have an indefinite life. When opened, the sodium hydroxide will absorb atmospheric carbon dioxide and lose its potency. In practice, the shelf life can be expected to be about 6 months.

The working solution has a very short life (2-3 hours).

USING THE DEVELOPER

Developer 70 is a very caustic developer. Do not put your fingers in this developer. Use rubber gloves or print tongs.