

Cat. no. 03-0010
Cat. no. 03-0020
Cat. no. 03-0040

PHOTOGRAPHERS' FORMULARY INC.

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PHOTOGRAPHERS' FORMULARY FIXER 24 FOR PRINTS

Directions for mixing and using Formulary Fixer 24, kit sizes 1 liter (Cat. No. 03-0010), 2 liters (Cat. no. 03-0020), and 4 liters (Cat. no. 03-0040).

Formulary Fixer 24 is a non-hardening sodium thiosulfate fixer which is recommended for prints. Hardening is neither necessary nor desirable when fixing prints. Without hardening, both hypo and the other developing by-products will wash out of the gelatin readily. In addition, a non-hardened print is easy to tone and spot. Fixer 24 is an excellent choice for archival processing.

While Fixer 24 will fix film, its non-hardening action may result in a negative whose wet emulsion is delicate and easily damaged. However, since most films contain a hardener in the emulsion, a hardening fixer is generally no longer required. Therefore, this fixer can be used for fixing most films.

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the chemical warning on each package of chemical

None of the chemicals in the Fixer 24 kit need a special safety discussion. However, 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 FOR A FULL REFUND.**

MIXING THE FIXER

You will need a bottle or other suitable container with a capacity of 1 (or 2 or 4) liter(s).

Chemical Kit Size	1 liter	2 liters	4 liters
Distilled water (52° C/125° F)	500 ml	1000 ml	2000 ml
Sodium thiosulfate, anhydrous*	152 g	305 g	611 g
Sodium sulfite	10 g	20 g	40 g
Sodium metabisulfite	25 g	50 g	100 g
Cold distilled water to make	1000 ml	2000 ml	4000 ml

*sodium thiosulfate, pentahydrate (standard prismatic hypo), can be substituted for the anhydrous form. Use 240 g for the 1 liter kit, 480 g for the 2-liter kit, or 960 g for the 4-liter kit.

Place the warm water in the storage container and add the sodium thiosulfate. The solid dissolves slowly. In addition, when the thiosulfate dissolves, it forms a dense saturated solution that surrounds and prevents the remaining solid from dissolving. The simplest procedure to use is to stir (or cap and shake the container), let the solution stand for about 5 minutes then either re-stir or re-shake. Merely letting the container stand will not work. The container must be shaken occasionally to mix the dense lower layer and the upper non-saturated layer.

After the sodium thiosulfate has gone into solution, add the sodium sulfite. Stir the solution to dissolve the solid. Repeat this procedure to dissolve the metabisulfite. After all of the solids have been dissolved, add sufficient cold water to bring the final volume up to the kit-size volume.

LIFE OF THE SOLUTION

The shelf-life of Fixer 24 is about 2-4 months in a full and stoppered bottle. The life of the fixer is limited by bath air oxidation and microorganism (thiobacteria) growth. The bacteria are ubiquitous and live on the sulfur in the thiosulfate causing the solution to turn turbid.

USING FIXER 24

Fixer 24 is used without dilution at 20°C/68°F.

Paper: Use the two bath-method; 5 minutes in each bath. **Film:** 5-6 minutes in fresh fixer. With paper, the two-bath method is recommended because it ensures proper fixing. The method consists of two separate fixing baths. The paper is placed in the first bath for 5 minutes then transferred to the second bath for an equal period of time. The first bath becomes contaminated with developer and its oxidation products. The second bath contains fresh developer and remains relatively free of contaminants. The fixing begins in the first bath and is completed in the second. When the first bath becomes exhausted, it is discarded. The second bath becomes the first and fresh fixer is used to make a new second bath. After three complete cycles, replace both baths.

CAPACITY

The capacity of Fixer 24 is 25 8-by-10 prints or 135 36-frame rolls (80 sq. inches per roll) per liter of fixer.



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