

PHOTOGRAPHERS' FORMULARY INC.

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FORMULARY HYPO CLEAR AGENT

To make 1 liter of Stock Solution

Removing fixer from film and paper is the most important step in archival processing. Formulary Hypo Clear Agent aids in the removal of the thiosulfate ions which are found in all photo-graphic fixers. Thiosulfate ions are very difficult to remove from either paper or film by a simple wash. However, when paper or film is soaked in Hypo Clear Agent, the thiosulfate ions are replaced by sulfite ions by a process called ion exchange. The sulfite ions are easily removed by a water wash. Washing after the use of Hypo Clear is imperative.

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the warning on each package. None of the chemicals used in mixing Formulary Hypo Clear Agent need special attention. 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 SOLUTION

A stock solution is first prepared for convenience of storage. The working solution is prepared by dilution of the stock solution as needed.

STOCK SOLUTION

FOR BEST RESULTS USE DISTILLED WATER

To mix and store the stock solution, you will need a 1-liter mixing bowl and container. You will also need a graduated cylinder or other volume-measuring device.

CHEMICAL	AMOUNT
Warm Water (125°F/52°C)	750 ml
Sodium Sulfite	200 g
Sodium Bisulfite	2 g
Cold Water To Make	1000 ml

Place the warm water in the mixing container and add sodium sulfite. Stir or swirl the solution to dissolve the sulfite. Next, add the sodium bisulfite to the container and again stir or swirl the solution until the solid has dissolved. Finally, add cold water to bring the total volume in the container up to 1000 ml.

WORKING SOLUTION

Dilute 1 part of the stock solution with 9 parts of water to make the working solution. For example to prepare 1 liter of working solution add 100 ml of the stock solution to 900 ml of water. Be sure to stir the final solution after mixing.

CAPACITY OF THE WORKING SOLUTION

The capacity of the Hypo Clear Agent (with pre-wash) is 50 8x10 sheets of paper, or 30 to 40 rolls of film (80 Square inches) per liter of working solution.

USING HYPO CLEAR AGENT

The following chart shows the recommended times for the pre-wash*, Hypo Clear, and the final wash for paper and films at 18.5-21°C/65-70°F.

Paper or Film	Pre-Wash with Water	Hypo-Clear with Water	Final wash with Running Water
Single Weight Paper	1 min	2 min	10 min
Double Weight Paper	1 min	3 min	20 min
Film	30 sec	1-2 min	5 min

The pre-wash is not mandatory but with its use the capacity of the Hypo Clear Agent will increase by 2-5 times.



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