

PHOTOGRAPHERS' FORMULARY

FORMULARY TONER-FIXER FOR POP

1-liter kit

These directions assume the user is familiar with the Formulary instruction for Printing-Out-Paper (POP) (Catalog number 07-0110). The chemicals in this kit are intended to replace both the toner and the fixer of the standard POP process. Care must be used with this combined treatment to ensure complete fixing has taken place.

CHEMICALS CONTAINED IN THIS KIT

Your kit contains the following chemicals:

Chemical	Amount
Sodium thiosulfate, pentahydrate	120 grams
Gold chloride, 1% solution	30 ml

CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the chemical warnings on each package. This kit contains one chemical that needs special attention: gold chloride. **Consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area**

Gold chloride is a caustic and can cause skin burns. In dilute solution, gold chloride will stain the skin purple. The stain is due to gold metal banded to the protein of the skin and cannot be chemically removed. The only procedure for removing these spots is to let them wear off. If you are concerned with finger stains, we strongly urge you to use rubber gloves, such as Playtex gloves, when working with this toner.

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.

MIXING THE WORKING SOLUTION

You will need a 1-liter storage container and a mixing bowl.

Chemical	Amount
Distilled water (52°C/125°F)	900 ml
Sodium thiosulfate, pentahydrate	120 grams
Gold chloride, 1% solution	30 ml
Distilled water to make	1000 ml

Place the warm water in a mixing bowl and add the thiosulfate. Stir the mixture to dissolve the solid. The large crystals of the thiosulfate dissolve slowly. Stir the solution for about 5 minutes; let it stand for about 10 minutes, then stir again. Sodium thiosulfate will not dissolve unless the solution is stirred. After all the solid has dissolved, add all of the contents of the gold chloride-solution bottle (30 ml), then add sufficient water to bring the final volume up to 1000 ml. Stir the final solution to ensure it is homogeneous, then transfer it to the storage container.

Let the solution stand for at least one day before use.

CAPACITY OF THE TONER-FIXER

The capacity of the toner-fixer is 30 8x10 prints (or 120 4x5) prints per liter of working solution.

USING THE TONER-FIXER

When fresh toner-fixer is first used, the first few prints will not be toned satisfactorily. Therefore, plan to mellow the bath with scrap prints.

Tone for 5-10 minutes at 20°C (68°F). Should the print be toned to a satisfactory level before 5 minutes, the print will probably not be completely fixed. To be on the safe side, continue fixing the print in a fixing bath containing 50 g of sodium thiosulfate, pentahydrate (not contained in this kit) in 500 ml of water.

After using toner-fixer (or the continuation fixer), wash the print for at least 1 hour in running water. At this stage of process, the POP-print paper is quite fragile and can be easily abraded.

REPLENISHMENT

We no longer recommend that this toner-fixer be used with replenishment. Problems have arisen from excess sulfide developing in the bath causing precipitation of the fresh gold chloride as a black precipitate.

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