

PHOTOGRAPHERS' FORMULARY

FORMULARY REPLENISHER D-50R

TO MAKE 1 LITER

Formulary Replenisher D-50R is used to extend the capacity of D-50. As a developer is used, its action is weakened by both the chemical reduction of the exposed silver halides in the emulsion and by the release of bromide ions into the solution. The net results of reduced developer activity are reduction in the effective film speed and lower contrast. Adding replenisher ensures normal developer activity and partially counteracts the effects of the increased bromide concentration. The shelf life of the replenisher solution is six months.

FOR YOUR CHEMICAL SAFETY

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

Only one chemical, metol, used in the D-50R kit needs special attention. Some individuals become sensitized to metol. If this should occur, discontinue use and see a physician.

The user assumes all risks upon accepting these chemicals. IF FOR ANY REASON YOU DO NOT WANT TO ASSUME ALL RISKS, PLEASE RETURN THE CHEMICALS WITHIN 30 DAYS FOR A FULL REFUND.

Please consult with local sewer and water authorities regarding the proper disposal of darkroom chemicals in your area.

MIXING THE REPLENISHER

You will need a 1 liter brown bottle or other suitable container.

We recommend you wear rubber gloves, splash goggles, dust mask and a rubber apron whenever mixing dry chemicals.

Chemical	Amount
Distilled Water (48° C/120° F)	750 ml
Metol	5 Grams
Sodium Sulfite	30 Grams
Hydroquinone	10 Grams
Sodium Metaborate	40 Grams
Cold water to make	1000 ml

Place the warm water in the storage container, add a pinch of sodium sulfite and stir the solution. This small amount of sodium sulfite minimizes the initial oxidation of the metol. If more of the sulfite is added at this point the metol will not dissolve. Next add the metol and stir until dissolved. It is important to dissolve all the metol before proceeding. After the metol has dissolved, add each chemical in order; making sure each has dissolved completely before adding the next. Finally add cold water to bring the total volume up to 1000 ml.

USING THE SOLUTION

The amount of replenisher that should be added to the working solution of D-50 is proportional to the number of square inches of film that has been developed.

For D-50: add 30 ml of replenisher solution for every 5 – 10 sheets of film that have been developed in one liter of working solution. Discard D-50 after 25 sheets have been developed, or after one month from first mixing the developer, whichever comes first.

Shelf Life

Stock solution full strength is good for 6 months. Partially filled bottles are stable for 2 months,