

PHOTOGRAPHERS' FORMULARY

FORMULARY FILM DEVELOPER 23

CATALOG NUMBER 01-0040 TO MAKE 1 LITER
CATALOG NUMBER 01-0050 TO MAKE 2 LITERS
CATALOG NUMBER 01-0051 TO MAKE 4 LITERS

Formulary Film Developer 23 is a metol-based semi-compensating film developer similar to Kodak D-23. The developer produces negatives with low to medium contrast. Developer 23 is a favorite of Zone System users.

Four rolls of film can be processed in 1 liter of Formulary 23 without replenishment. With replenisher (Formulary DK-25R, cat. No. 01-0057) a total of 20 to 25 rolls of film per liter can be developed.

The chemicals in this kit are used to make a working solution with a shelf life of 6 months.

CHEMICALS CONTAINED IN THIS KIT

Chemical	1 Liter	2 Liters	4 Liters
Metol	7.5 g	15 g	30 g
Sodium Sulfite	100 g	200 g	400 g

FOR YOUR CHEMICAL SAFETY

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

Only one chemical used in the kit, metol, 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 DEVELOPER WORKING SOLUTION

You will need a brown bottle with a capacity of one, two or four liters, and a mixing container.

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

KIT SIZE

Chemical	1 Liter	2 Liters	4 Liters
Distilled Water (48° C/120° F)	750 ml	1500 ml	3000 ml
Metol	7.5 g	15 g	30 g
Sodium Sulfite	100 g	200 g	400 g
Cold water to make	1000 ml	2000 ml	4000 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 metal. If more of the sulfite is added at this point the metal will not dissolve. Next add the metal and stir until dissolved. It is important to dissolve all the metal before the bulk of the sodium sulfite is added. Add the sodium sulfite and stir to dissolve. Add sufficient cold water to bring the solution up to volume. Stir the solution to ensure it is homogenous and transfer it to its storage container.

SHELF LIFE

The working solution has a shelf life of about six months in a full and tightly capped bottle.

CAPACITY AND REPLENISHMENT

The capacity of Developer 23 is 4 rolls of 35 mm, 36-exposure film (80 square inches per roll) per liter of working solution. The capacity of the working solution can be extended to 25 rolls per liter by replenishment with Formulary DK-25 Replenisher (catalog number 01-0057). Add replenisher at the rate of 23 ml per roll of film developed.

USING THE DEVELOPER

Standard Development:

We recommend using the working solution at 68°F, full strength, using your normal development sequence.

Some suggested starting development times follow:

Film	Time
Ilford HP5+	6-7 minutes
Kodak TRI-X	8-10 minutes
Most other films	8 minutes

Compensating Development: In his book, *The Negative*, Ansel Adams recommends that Developer 23 be used as the first bath of a two bath compensating developer. The second bath is a 1%-solution of Kodalk (sodium metaborate, cat. no. 10-1285). The film is first moderately developed in D-23 then transferred (without washing) to the second bath. The developer that is absorbed onto the film is activated by the alkaline Kodalk bath. Development continues building density in the shadow areas but with less increase in the highlights. The end result is a negative with lower contrast. With this two-bath system, a compaction to 5 zones is possible. A complete explanation can be found in Adams' book.

Develop in Film Developer 23 for 2-8 minutes

Develop in the 1% Kodalk bath for 3 minutes

Repeat the process as many times as necessary to obtain satisfactory development. Continue with fix and wash as you normally do.

F PHOTOGRAPHERS'
FORMULARY INC.

P.O. Box 950 • Condon MT 59826 • FAX 406-754-2896