

# PHOTOGRAPHERS' FORMULARY

## FORMULARY FX-2 HIGH ACUTANCE FILM DEVELOPER

Formulary FX-2 produces negatives with a high degree of sharpness and normal grain with the capability of interesting internal effects.

Due to the greater definition obtainable with FX-2, grain is less apparent than with D-76. Compared with FX-1, FX-2 produces negatives with finer grain and less acutance, but both have distinctly different pleasing effects. FX-2 used as a stand developer for one hour produces the most interesting internal contrast effects of the FX developers.

### CHEMICAL SAFETY

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

Metol: Some individuals become sensitized (develop allergic symptoms or rashes) when using metol. If this should happen, discontinue use and see a physician.

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 THIRTY DAYS FOR A FULL REFUND.

### CHEMICALS CONTAINED IN THIS KIT

| CHEMICAL                             | AMOUNT |
|--------------------------------------|--------|
| Metol                                | 5 g    |
| Sodium Sulfite                       | 70 g   |
| Glycin                               | 15 g   |
| Potassium Carbonate, Anhydrous       | 123 g  |
| Pinacryptol Yellow (1:2000 dilution) | 100 ml |

### MIXING THE STOCK SOLUTIONS

FOR BEST RESULTS USE DISTILLED WATER.

You will need two 1 liter bottles, one of which should be brown. To mix the stock solution you will need 2000 ml (2 liters) of water that has been boiled for 3 minutes then cooled to about 32° C/90° F, or distilled water heated to approximately 32° C/90° F. The boiling degasses the water and minimizes the initial oxidation of the metol and glycin.

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

### STOCK SOLUTION A

| Chemical                                    | Amount  |
|---|---------|
| Distilled Water (32° C/90° F)               | 900 ml  |
| Sodium sulfite, anhydrous                   | 70 g    |
| Metol                                       | 5 g     |
| Glycin                                      | 15 g    |
| Distilled Water (32° C/90° F) water to make | 1000 ml |

Place 900 ml of water in the brown storage container, or in a mixing container. Add a pinch of the sodium sulfite. This small amount of sulfite minimizes the initial oxidation of the metal. If more sulfite is added at this time the metal will not dissolve. Add the metal to the solution and stir until dissolved. Add each chemical in the order given, being sure each one is completely dissolved before adding the next. Glycin sometimes goes into solution rather slowly, so be sure it is mixed thoroughly before adding the rest of the water. Finally, add water to bring the total volume in the container up to 1000 ml and stir to ensure the solution is mixed thoroughly.

### STOCK SOLUTION B

| Chemical                       | Amount  |
|--------------------------------|---------|
| Distilled Water (32° C/90° F)  | 800 ml  |
| Potassium Carbonate, anhydrous | 123 g   |
| Distilled water to make        | 1000 ml |

Add the water to the storage container followed by the carbonate. Cap and shake the container to dissolve the solid. Add water to bring the final volume up to 1000 ml. Cap and invert the container several times to ensure the final solution is mixed thoroughly.

### LIFE OF THE SOLUTION

The shelf life of both stock solutions is one year in a full and tightly capped bottles, but considerably less in partially filled bottles. When the color of stock solution A changes from its initial golden tint to that of a deep yellow, it must be discarded.

### USING THE DEVELOPER

Developer FX-2 will give an exposure index (E.I.) of 1/2 to 1 stop greater than the manufacturers recommended ASA. You should conduct careful tests to determine your exact E.I. FX-2 can be used with agitation or as a stand developer - instructions for both follow.

### DEVELOPMENT WITH AGITATION

Prepare fresh working solution for each roll of film developed. We recommend you test your film for development times, which will be between 11-18 minutes depending on the film you are using. Recommended time for Plus-X is 18 minutes. Develop using your normal development procedure.

### WORKING SOLUTION

| Solution                    | To Make   |         |
|-----------------------------|-----------|---------|
|                             | 1/2 liter | 1 liter |
| Distilled Water (20°C/68°F) | 400 ml    | 800 ml  |
| Stock Solution A            | 25 ml     | 50 ml   |
| Stock Solution B            | 25 ml     | 50 ml   |
| Pinacryptol Yellow          | 1.75 ml   | 3.5 ml  |
| Distilled Water (20°C/68°F) | 500 ml    | 1000 ml |

## STAND DEVELOPMENT

Developer FX-2 can be used as a stand developer (no agitation). The following working solution should be used.

### WORKING SOLUTION

| Solution                    | To Make   |         |
|-----------------------------|-----------|---------|
|                             | 1/2 liter | 1 liter |
| Distilled Water (20°C/68°F) | 400 ml    | 800 ml  |
| Stock Solution A            | 12 ml     | 25 ml   |
| Stock Solution B            | 12 ml     | 25 ml   |
| Pinacryptol Yellow          | .9 ml     | 1.75 ml |
| Distilled Water (20°C/68°F) | 500 ml    | 1000 ml |

The film should be presoaked in water (20°C/68°F) for one minute to prevent air bubbles from forming on the surface. Development time will be about one hour. If a scum forms on the film, it can be removed with an acetic acid stop bath.



## PHOTOGRAPHERS' FORMULARY INC.

PO Box 950 • Condon MT 59826 • 406-754-2891 • FAX 406-754-2896  
E-MAIL [formulary@montana.com](mailto:formulary@montana.com)