

VERY HIGH CONTRAST SCENES:

Use TFX-2 with only half the amount of Solution A but the regular amount of Solution B. You will have to extend developing time by about 20%. Agitate once every minute. For more compensation with this dilution, use the technique of agitating only on every third minute, and increase developing times by about 70%.

DEVELOPING TIMES:

Developing times with most films are between 10 and 14 minutes. In order to keep grain down and sharpness high, don't overexpose and don't overdevelop. The best negatives will be those that are as thin as possible while still maintaining printable shadow detail. If a negative looks too thin, don't consign it to the junk heap without making a careful trial print. It is possible to print shadow detail that is actually not visible when you examine the negative.

Special note on stop baths with TFX-2:

TFX-2, like many high definition developers, contains a carbonate alkali system. This kind of alkali may, under certain conditions, cause pinholes and reticulation if the film is placed into a fresh acetic acid stop bath (about pH 2.8). Therefore it is necessary to use a slightly more alkaline stop bath. A regular 1-2% acetic acid stop bath can be brought to the correct pH (about 4.5) by adding 2 or 3 level tablespoons of borax. This will obviously reduce the capacity of the stop bath. However, as long as only TFX-2 is used with the stop bath, it will be good for at least 3 rolls of film (it will be under pH 5.5).

The other alternative, if you do not wish to use Formulary TS-4, which has the correct pH, is to dispense with the stop bath altogether, and rinse the film in a plain water wash for 60 seconds with constant agitation. However, you must keep in mind that a water bath does not stop development instantly, so this has to be taken into account when you determine your developing times. While the film is in the water rinse, a small amount of very compensated development can still take place, which may increase edge effects, and this can be desirable. But it is particularly important not to overdevelop T-grain films.

Special note on fixers with TFX-2:

Our TF-4 Rapid Fix (cat. no. 03-0141) is an excellent choice for use with this developer. This is an alkaline fixer that is not used with any stop bath - only a water stop is required. As a result, an alkaline process is used throughout.

PHOTOGRAPHERS' FORMULARY

TFX-2 HIGH DEFINITION DEVELOPER

Makes 10 liters of working solution

TFX-2 is an updated proprietary modification of the popular FX-2 developer originally formulated by Geoffrey Crawley in 1960. FX-2, based on the excellent metol-glycin combination, is still an excellent developer nearly thirty years later, but a number of small modifications have been made to gain better performance with the most modern films, and TFX-2 should perform better with T-grain films. It will show slightly finer grain and better midtone gradation than the old FX-2.

TFX-2 offers an extremely high degree of sharpness. Sharpness is at least as great as with the Beutler developer, although somewhat less than FX-1, which is the developer Crawley designed for absolute maximum sharpness. However, gradation with TFX-2 is much more pleasing than with either Beutler or FX-1. FX-1 has a tendency to produce an "engraving-like" effect with somewhat harsh gradation, which many photographers do not like. TFX-2 is balanced to have much smoother "pictorial" gradation, especially in small areas of fine highlight detail. In this respect, it produces much more beautiful negatives than most other high sharpness developers, including Edwal FG-7 and Kodak HC-110.

TFX-2 has three particular features that make it more valuable to use than similar developers:

1. It offers a speed increase of between one half and one stop.
2. Because it has exceptional resistance to streaking (to a much greater degree than any other developer formula), it can be used with a variety of minimal agitation patterns, without causing streaking. The advantage of these minimal agitation patterns is that you gain a tremendous increase in edge effects, which increase apparent sharpness and you gain what Crawley refers to as "interesting internal contrast" effects, particularly in the gradation of very small highlight detail. As an example, TFX-2 can be used with agitation only on every third minute, or it can be used as a stand developer without any agitation at all.

This also makes it valuable for processing with some automatic tanks which, even though they agitate continuously, tend to produce streaking with normal developers. TFX-2 should be immune from this problem.

- TFX-2 is extremely versatile. By varying dilution, agitation and development time, an extremely wide variety of contrast effects can easily be obtained.

Because of the tremendously different variety of effects you can get from TFX-2 by varying time, dilution and agitation patterns, it is possible to use it to tame the excessive highlight contrast of T-Max films, which with normal developers make it very difficult to get adequate detail in the very high, white zones. In the past FX-2 performed best with slow and medium speed films. However, we find that TFX-2 can be used with faster films today, particularly the T-Max films, with excellent results.

CHEMICAL SAFETY:

All chemicals are dangerous and must be treated with respect. Please read the chemical warnings on each package. Please exercise extreme care when handling, and avoid skin or eye contact.

Solution A of this proprietary formula contains metol, which some people become sensitized to (develop allergic symptoms or rashes). If this should occur, discontinue use and consult a physician. Solution B contains an alkali.

The user assumes all risk upon accepting these chemicals. If for any reason you do not wish to assume all risks, please return the chemicals for a full refund, **WITHIN THIRTY DAYS**.

LIFE OF THE SOLUTIONS:

The shelf life of both stock solutions is about 1 year in full, tightly capped bottles, but considerably less in partially filled bottles. If the color of Solution A changes to deep yellow with age, it must be discarded. If you will be using little of this developer over a long period of time, then keep both stock solutions in several smaller bottles, filled to the top and tightly capped.

The life of the working solutions is very limited. It should not be kept for more than a few hours after mixing. It is a one shot solution, that must be discarded after each use.

CAPACITY:

The stock solution will make 10 liters of working solution. However, no more than two rolls of film per liter of working solution should ever be processed under any circumstances. This advice applies to all one shot developers, such as Rodinal, HC-110, D-76, or D-23 when diluted 1:1 or 1:3. If more than two rolls per liter (or 1 roll per 500 ml.) are developed, there will be a loss of speed and contrast, and it will be impossible to obtain consistent results.

FILM SPEED:

TFX-2 will give a true 1/2 to one stop speed increase compared to D-76 on most films. Test the developer with the film you will be using to find the exposure index that is correct for you.

USING THE DEVELOPER:

- All solutions should be at 68° F. The wash water must be near this temperature (five degrees on either side of 68°F).
- Mix the working solution. To make one liter, measure out 50 ml of Solution A and 50 ml of Solution B. Add water to make one liter. To make 500 ml, use half these amounts. **FOR BEST RESULTS USE DISTILLED WATER.**
- Develop, stop and fix. We strongly recommend the use of our TS-4 odorless stop bath (cat. no. 03-0189). We **do not** recommend using a normal acetic acid stop bath with this developer. If you do not wish to use TS-4 or don't have it handy, use a plain water rinse. Fill the tank with plain water at 68°F, and agitate constantly for exactly one minute. We recommend using TF-4 rapid fix (cat. no. 03-0141) with this procedure. See note at the end of these instructions on stop baths and fixers.

AGITATION:

As soon as the developer is in the tank, rap it sharply two or three times to dislodge air bubbles and agitate for thirty seconds.

For results that are most nearly like those of other developers, after the first minute agitate with 4 inversions each minute. To get more interesting edge effects and more highlight compensation, agitate for 20 seconds only on each third minute of the development time. This will require about a 50% increase in developing time.