

## TECHNICAL INFORMATION

**ILFORD SIMPLICITY  
FILM SACHETS**

FILM DEVELOPING SOLUTIONS IN SACHETS FOR CONVENIENCE AND EASE OF USE IN SPIRAL TANK PROCESSING APPLICATIONS.

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**ILFORD SIMPLICITY** film sachets provide a complete set of processing solutions specifically aimed at spiral tank processing. When diluted each sachet will make up 600ml\* of working strength solution, ideal for spiral tanks made by Paterson and other manufacturers.

\*Except for the wetting agent, each of the sachets are diluted to make a solution volume of 600ml. For the wetting agent, two capfuls are used per 600ml - added direct to the water in the processing tank.

**Health & Safety**

Note: Photographic chemicals are not hazardous when used correctly. It is recommended that gloves, eye protection and an apron or overall are worn when handling and mixing all chemicals. Always follow the specific health and safety recommendations on the packaging. Photochemical material safety data sheets containing full details for the safe handling, disposal and transportation of ILFORD PHOTO chemicals are available directly from our web site at [www.ilfordphoto.com](http://www.ilfordphoto.com)

**Preparation**

The instructions assume a working solution volume of 600ml. This is enough for a Paterson two spiral tank system and will process 2x135 films or 2x120 film in this tank\* (See later note on page 4 for processing 2x120 films). Other tanks with similar volumes may be used. In this case check the manufacturers recommended volume and decant the required amount from the 600ml you have made up, discarding any remainder.

A developer temperature of 20°C is assumed, however in warmer climates 24°C may be easier to achieve. Developing times for both scenarios are included.

Except for the wetting agent, you should make up all solutions in advance of processing. This means you will need three suitable jugs or containers to hold the Developer, Stop and Fixer solutions. Temperature of the developer is critical, if the room is significantly warmer or cooler than your chosen temperature, then you may wish to hold the solution in a water bath at the correct temperature. Other solutions should be within +/- 5°C of the developer temperature.

A 1 litre measuring cylinder and suitable stirrer are required. When making up the solutions, mix the entire sachet contents with the required volume of water to make up to 600ml and stir thoroughly (see table page 2). To minimise problems with cross contamination, make the solutions in order Developer > Stop > Fixer. Wash any measuring cylinders / stirrers in-between each make and after use.

Once all three solutions are made up, load the processing tank with your film(s) according to the manufacturer's instructions and process according to the instructions on page 2. The processing sequence will be; Develop > Stop > Fix > Wash x3 > Rinse > Dry

**Processing Summary**

| Sequence      | Qty              | Water | Agitation  | Time    |
|---------------|------------------|-------|--|---------|
| Develop       | 1 Sachet (60ml)  | 540ml | 4 inversions at start and each minute thereafter | Page 3  |
| Stop          | 1 Sachet (30ml)  | 570ml | 4 inversions                                     | 10sec   |
| Fix           | 1 Sachet (100ml) | 500ml | 4 inversions at start and each minute thereafter | 3-5 Min |
| Wash 1        | N/A              | 600ml | 5 inversions                                     | 15 sec  |
| Wash 2        | N/A              | 600ml | 10 inversions                                    | 30 sec  |
| Wash 3        | N/A              | 600ml | 20 inversions                                    | 60 sec  |
| Wetting Agent | 2 Capfuls        | 600ml | 5 inversions                                     | 10 sec  |

**Developing**

Choose the processing time from the table on page 3 for your film type, speed rating and temperature. Pour the prepared developer solution into the tank, immediately starting the timer, then seal the lid.

Agitate the tank as follows; Invert the tank four times during the first 10 seconds. Repeat these four inversions during the first 10 seconds of each subsequent minute of development. At the end of each agitation sequence, tap the tank firmly on the work bench to dislodge any air bubbles which may be trapped in the processing spiral.

Drain off the developer 10 seconds before the end of the development time and then immediately fill the tank with the next process solution.

**Stop Bath**

Stop bath allows you to accurately stop the development.

Add the diluted stop bath to the tank and seal the lid. Invert the tank 4 times. Pour away the stop bath ready for the fixer solution.

**Fixing**

The recommended fixing time is 4 minutes. Add the diluted fixer to the processing tank and seal the lid. Use the same agitation method as for the developer. At the end of the time pour away the fixer and prepare for the wash sequence.

**Washing**

The following sequence will wash your film adequately and use very little water:

Fill the tank with fresh water at approx. 20°C/68°F and seal the lid. Invert the tank 5 times, pour away the water. Fill the tank again with fresh water, seal the lid and invert the tank 10 times, pour away the water. Fill the tank a final time with fresh water, seal the lid and invert the tank 20 times, pour away the water.

**Wetting Agent**

Fill the tank with fresh water at approx. 20°C/68°F. Add two capfuls of wetting agent and seal the lid. Invert the tank 5 times. Pour away the solution.

**Drying**

Remove the film from the spiral and attach a clip to the top, hang over a drip tray to dry. Attach a clip to the bottom to keep the film straight whilst drying. You may wish to remove excess solution from the film by running it carefully between a squeegee or your fingers.

Once dry your film should be cut into strips and stored in suitable negative sleeves.

**Recommended Development Times**

| Film Type | Speed (EI)<br>ISO/DIN° | Processing time<br>@ 20°C<br>MM:SS | Processing time<br>@ 24°C<br>MM:SS |
|-----------|------------------------|------------------------------------|------------------------------------|
|-----------|------------------------|------------------------------------|------------------------------------|

**ILFORD & Kentmere Films**

|                   |          |       |       |
|-------------------|----------|-------|-------|
| ILFORD PANF+      | 50/18°   | 4:00  | N/A   |
| ILFORD FP4+       | 125/22°  | 4:15  | 4:00  |
| ILFORD HP5+       | 200/24°  | 5:00  | 4:00  |
|                   | 400/27°  | 6:30  | 5:30  |
|                   | 800/30°  | 13:30 | 10:00 |
| ILFORD DELTA 100  | 100/21°  | 5:00  | 4:00  |
| ILFORD DELTA 400  | 200/24°  | 5:30  | 4:30  |
|                   | 400/27°  | 7:00  | 6:00  |
|                   | 800/30°  | 14:00 | 10:30 |
| ILFORD DELTA 3200 | 400/27°  | 6:00  | 5:30  |
|                   | 800/30°  | 7:30  | 7:00  |
|                   | 1600/33° | 10:00 | 8:00  |
|                   | 3200/36° | 11:00 | 9:00  |
|                   | 6400/39° | 18:00 | 15:30 |
| ILFORD SFX 200    | 200/24°  | 6:00  | 5:00  |
|                   | 400/27°  | 8:30  | 5:30  |
| KENTMERE PAN100   | 100/21°  | 5:00  | 4:00  |
| KENTMERE PAN 400  | 400/27°  | 6:30  | 5:30  |

**Other Manufacturer's Films**

|                 |          |       |       |
|-----------------|----------|-------|-------|
| KODAK 100 TMAX  | 80/20°   | 5:30  | 4:30  |
| KODAK 400 TMAX  | 200/24°  | 5:30  | 4:00  |
|                 | 400/27°  | 6:00  | 5:00  |
|                 | 800/30°  | 8:30  | 6:30  |
| KODAK 3200 TMAX | 800/30°  | 6:30  | 5:00  |
|                 | 1600/33° | 8:00  | 6:00  |
|                 | 3200/36° | 10:00 | 7:00  |
|                 | 6400/39° | 13:00 | 10:00 |
| KODAK 400 TX    | 200/24°  | 5:30  | 4:30  |
|                 | 400/27°  | 7:30  | 6:30  |
|                 | 800/30°  | 10:30 | 8:30  |

**Note:** The times quoted for non-ILFORD or Kentmere films are a guide only. Other manufacturers may change their products without us knowing.

### Notes:

The ILFORD SIMPLICITY System is designed for one shot processing (use once then discard) and will give best results when used in this way. It is possible to re-use the stop bath and fixer solutions once made up, but we would recommend only doing this in the same session and discarding the solutions at the end of the session.

### \*Processing 2x120 roll films, use one of the two methods below;

**1. Load two 120 films on the same spiral:** After loading the first film, push the film around the spiral to the middle, make sure it is all the way in, then load another film. There should be enough space to fit the two films on the same spiral without overlapping. Process as normal.

**2. Process one at a time and re-use the developer:** Another method is to use only approx. 500ml of the developer solution and retain the remainder. Process the first film as normal. Remix the used developer with the remainder of the unused. Use this solution for the next film and increase the processing time by 10%.

### Film Developer

The film developer sachet contains ILFORD Ifosol 3 developer and is ideal for low volume, one shot use. Particularly suited to films up to ISO 400/27° this developer will produce negatives with fine grain and excellent sharpness. Use once then discard.

### Stop Bath

The stop bath contains an indicating dye to tell you when it is exhausted, and the solution will turn from straw coloured to magenta. Re-use only in same session. Max capacity 8 films

### Fixer

The fixer is ILFORD Rapid fixer, a dilution of 1+5 has been chosen and is well suited to single use application. Re-use only in the same session. Max capacity 8 films

### Wetting Agent

The sachet contains enough for 8 x 600ml rinse applications. Replace the cap tightly after each use.

### Storage & Shelf Life

New sachets can be kept for up to 2 years, once opened they should be used immediately, if opened accidentally and resealed then use within 6 months.

### Disposal

Regulations vary between countries and regions. Treat as household chemicals, small quantities can often be safely disposed of in domestic drains, but contact your local authority or recycling centre for disposal advice.