

# FILM PROCESSING

## Essential Equipment for BW Film Processing

- Developing Tank
- Measuring cylinders for concentrates 45ml and 300ml
- Mixing jug 1 Litre
- Thermometer
- Film Clips
- 1 Litre Storage Bottles for working solutions
- Stirring rod

## Developing a Film

### Loading Film in Tanks

In complete darkness either in a darkroom or a film changing bag, remove the film from the 35mm cassette using an Ilford cassette opener. Firstly remove the leader with a straight cut using scissors. Then make a small diagonal cut across the ends of this straight cut, to help the film enter the spiral. Load the film into the spiral. Place the spiral in the tank and ensure that the lid is firmly secured before taking the tank into the processing area

### Temperature Control

To achieve accurate temperature control a shallow basin can be filled with water at just above the required temperature. Storage bottles are placed in the basin to allow them to come to temperature. The tank is then placed in the basin for about 5 minutes to allow it to achieve working temperature. (If necessary put a weight on top of it to prevent the upthrust capsizing it before solutions are poured in the tank!)

### Development and Agitation

When solutions are at temperature ready pour working strength developer into the tank, tap the sides to dislodge air bubbles, and start the timer. Agitation can be either by full inversion or using the rotary twiddle stick method. The full inversion ensures a thorough change of solution at the interface with the film. Normally agitation is continuous for the first 10 secs, thence 3 complete inversions every 30 secs replacing the tank in the water bath each time. If using the twiddle stick method agitate 3-4 turns every 15 seconds. (Always stick to a routine sequence of agitation to ensure consistency) Approximately 10 seconds before the development time is complete pour out the solution

### Stop and Fix

When the development time is complete, pour in the stop bath and agitate for approximately 30 secs then return the solution to the storage bottle. Pour in the fixer solution, and agitate immediately. It is very important to agitate the fixer by inversion for at least 30 secs before resuming intermittent agitation this ensures that the fixing process acts quickly and evenly across the emulsion. Even when using rapid fixers it is a good idea to fix films for a full 5 minutes to ensure maximum clarity of the film base. Return the fixer to the storage bottle when complete

### Washing and Drying

When complete pour fixer into the storage bottle and commence washing either using a force film rapid washer or using jugs of water at the same temperature as the development process. Add a few drops of antistatic wetting agent to the last rinse of water, soak for a minute without agitation, thence remove the film from the spiral and hang up to dry using film clips in a dust free atmosphere

### **Chemicals required**

- Film Developer
- Stopbath
- Fixer
- Wetting Agent - Recommended

### **Useful Equipment**

- A Nova daylight film processor provides the best means of maintaining the solution temperatures at exactly the right temperature, and will ensure consistency of results.
  - For colour development the Nova processor is essential as the temperature tolerance required for the first development is +/- half degree C, at 38C
- Loading spirals can be made easier using a Nova Easiloader. The Easiloader is a holding device for the spiral and film whilst loading into the spiral takes place. It is suitable for both 35mm and 120 roll films
- Additional mixing jugs 2 Litres are useful for tempering solutions and washing of film
- Force film washer
- For drying of multiple films on a frequent basis a film drying cabinet will ensure quick and even drying in a dust free environment