

TECHNICAL INFORMATION

**WASHING PHOTOGRAPHIC
FILM & PAPERS**

INSTRUCTIONS FOR MINIMUM WATER USAGE

A SHORT DOCUMENT COVERING SOME METHODS FOR REDUCING WATER CONSUMPTION WHEN WASHING PHOTOGRAPHIC FILMS AND PRINTS.

Film developing and darkroom printing both require that the negatives or prints be adequately washed to ensure longevity of the images. Many wash systems consume fresh water in a total loss situation. Whilst this is normally fine in small-scale operations, it may be desirable to reduce water consumption for larger operations or where a water meter is used, or where water usage is restricted through drought policies or for other reasons.

Purpose of washing

Washing photographic films or prints removes residual chemicals from the photographic process; in particular thiosulphate from the fix process can cause long-term image degradation if not effectively removed.

Notes

The following instructions are suitable for use with ILFORD Films, Papers and Chemistry (non hardening fixers either ILFORD HYPAM or RAPID). This guidance may be adapted for other systems but e.g. using hardening fixers can significantly increase the required wash time. Some other manufacturers films and papers and processing solutions may require longer wash times.

Films**Spiral tank processing method**

For minimal water usage the following method is well tested;

- After fixing, fill the spiral tank with water at the same temperature, +/- 5°C (9°F), as the processing solutions. Invert the tank 5 times.
- Drain the water away and refill. Invert the tank 10 times.
- Once more, drain the water. Invert the tank twenty times and drain the water away.
- Finally rinse with a few drops of ILFORD ILFOTOL Wetting Agent (1:200) added to the rinse water

Machine processors

Due to the variety of film processing equipment and performance it is recommended to follow the manufacturers guidelines with regard to the wash sequence.

Paper

Resin coated papers are the easiest photographic papers to wash as their polythene coating over the paper waterproofs the paper substrate. Fibre based papers on the other hand absorb processing solutions more readily

into the paper base and therefore need longer washing times.

RC Papers

When dish processing a minimum of 30sec in vigorous fresh running water is required. It is also possible to use a sequence of three trays with still water in. Wash for 15 sec in each, with agitation. Change the water in the trays after each session.

Machine processors

A minimum of 15 sec in fresh running water is required.

Use of Stabiliser Baths

For RC Papers it is possible to use a replenished stabiliser bath system in place of fresh running water. Please follow the replenishment guidelines for the manufacturers solution.

Note: Do not over-wash RC papers. Water ingress into the edge of the paper can eventually cause swelling and damage the prints.

FB Papers

Fibre based papers require significantly more washing than RC papers. In this case it is possible to use ILFORD WASHAID to more effectively remove residual fixer. The sequence below will ensure optimum permanence of dish/tray processed FB prints.

- Fixation ILFORD RAPID FIXER (1+4) or HYPAM (1+4) 1min
- First wash Fresh, running water 5min
- ILFORD WASHAID (1+4) intermittent agitation 10min
- Final wash Fresh, running water 5min

For other situations such as machine processing of Fibre prints it may also be possible to incorporate a Wash aid step and reduced wash time, depending on your particular configuration.

Note: Use of an Archival print washer containing discrete slots for the paper will increase wash efficiency further and will allow a reduced flow rate than for example in a sink or tray.

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