

# KODAK Q-LAB Process Monitoring Service

# PROCESS CONTROL HANDBOOK • Z-6

Revised 10/96

# Pre-Bleach

This step prepares the film for the bleach step. In the pre-bleach, a conditioning agent is absorbed into the emulsion. The pre-bleach also contains a patented stabilizing agent that provides dye stability.

#### **FUNCTIONS**

- The conditioning agent prepares the metallic silver for the bleach step.
- The stabilizing agent provides dye stability.
- The pre-bleach also supplies EDTA for the bleach and helps maintain the pH of the bleach. (Do not use a wash, rollers, or squeegees between the pre-bleach and the bleach.)

#### COMPONENTS

### **Conditioning Agent:**

KODAK Conditioning Agent, CA-2

The conditioning agent displaces sensitizing dyes and other chemicals that may be adsorbed on the silver halide grains so that the bleach can oxidize the silver. For optimum bleaching, the film emulsion must contain the conditioning agent when the film enters the bleach tank.

#### **Stabilizing Agent:**

Patented stabilizing agent

The stabilizing agent reacts with unused magenta dye couplers in the film to prevent the couplers from later reacting with the magenta dye and destroying it.

## Preservative/Buffer:

Sodium sulfite

Sodium sulfite acts as a preservative to protect the conditioning agents from oxidation. It also acts as a buffer to maintain the acidity of the pre-bleach.

#### **Sequestering Agent:**

EDTA (Ethylenediaminetetraacetic acid)

The sequestering agent provides the bleach with extra EDTA to help prevent yellow (iron) stains.

# PREPARING A FRESH TANK SOLUTION

**Note:** These instructions are for mixing solutions from KODAK Pre-Bleach and Replenisher, Process E-6AR (5-gallon flexible container).

For each litre of tank solution, mix 100 mL of concentrate with 900 mL of water.

# **SPECIFICATIONS**

Parameter	Aim	Tolerance	Acceptable Range
Time	2 minutes	± 15 seconds	2 to 4 minutes
Temperature	75 to 103°F (24 to 39.4°C)	_	_
Replenishment Rate*	100 mL/ft <sup>2</sup> (1076 mL/m <sup>2</sup> )	± 15 mL/ft <sup>2</sup> † (± 160 mL/m <sup>2</sup> )†	_
Specific Gravity Fresh Tank Solution and Replenisher Seasoned Tank Solution	1.019 at 80°F (27°C) 1.016 at 100.4°F (38°C) 1.021 at 80°F (27°C) 1.018 at 100.4°F (38°C)	± 0.003	_

<sup>\*</sup>You may have to double your replenishment rate for machines with low utilization.



<sup>†</sup> Overreplenishment has no adverse effect, but it is costly.