

KODAK Q-LAB Process Monitoring Service

PROCESS CONTROL HANDBOOK • Z-6

Revised 2/92

Fixer

FUNCTION

The fixer converts silver bromide into soluble silver compounds.

Some aeration of the fixer is required to control the concentration of ferrous ammonium EDTA (iron [II]) carried in from the bleach. However, overaeration can cause fixer sulfurization or formation of silver sulfide. For best results, aerate the fixer **only** when film is in the solution.

COMPONENTS

Silver Halide Solvent:

Ammonium thiosulfate

The silver halide solvent reacts with silver bromide and converts it into soluble silver compounds, which are removed from the film in the final wash.

Preservative:

Sodium sulfite

Sodium sulfite acts as a preservative to protect the ammonium thiosulfate from oxidation.

PREPARING A FRESH TANK SOLUTION

Note: These instructions are for mixing solutions from KODAK Fixer 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	4 minutes	± 15 seconds	4 to 6 minutes
Temperature	92 to 103°F (33.3 to 39.4°C)	_	_
Replenishment Rate	100 mL/ft ^{2*} (1076 mL/m ²)*	± 15 mL/ft ² † (± 160 mL/m ²)†	_
Specific Gravity			
Seasoned Tank Solution	1.040 to1.090 at 80°F (27°C)	_	_
	1.037 to1.087 at 100.4°F (38°C)		
Fresh Tank Solution and Replenisher	1.041 at 80°F (27°C)	± 0.003	_
	1.038 at 100.4°F (38°C)		
Agitation	2-second air burst every 10 seconds (⁵ / ₈ -inch [17 mm] solution rise)‡	_	_

^{*}You may have to double your replenishment rate for machines with low utilization.

Note: Aerate *only* while film is in the solution; do *not* overaerate.



[†]For optimum performance, maintain your replenishment rate to within \pm 10% of the specified aim (\pm 15% tolerance allows for measurement "noise"). Overreplenishment has no adverse effect, but it is costly.

[‡]For rack-and-tank machines.