

Using KODAK Color Developer Replenisher LORR, Process E-6AR



KODAK Color Developer Replenisher LORR, Process E-6AR, is an alternative formulation of KODAK Color Developer Replenisher, Process E-6AR. It features a replenishment rate that is one-half the rate of KODAK Color Developer Replenisher, Process E-6AR.

No equipment changes are required for machines that currently use KODAK Color Developer Replenisher, Process E-6AR.

Note: After conversion, you must complete one color-developer tank turnover every 5 weeks or compensate for low utilization by following the procedure described under "Compensating for Low Utilization," below.

PREPARING A FRESH TANK SOLUTION

To prepare a fresh tank solution that will give results similar to those produced by a seasoned tank solution, follow the mixing instructions given below. Following either procedure will help you obtain results similar to those produced at seasoned process levels.

From Mixed Replenisher Solution

1. For each litre of tank solution, mix 750 mL of replenisher with 250 mL of water.
2. Add 9 mL of KODAK Color Developer Starter, Process E-6, per litre of tank solution.

From Concentrate

1. For each litre of tank solution, mix 150 mL of Part A with 700 mL of water. Stir the solution thoroughly, then add 150 mL of Part B per litre of tank solution.
2. Add 9 mL of KODAK Color Developer Starter, Process E-6, per litre of tank solution.

Note: When you prepare the solution from mixed replenisher solution or concentrate, the specific gravity will be within the tolerances for a fresh tank solution.

SPECIFICATIONS

Process Variable	Aim	Tolerance	Acceptable Range
Time	6 minutes	± 15 seconds	5 to 7 minutes
Temperature	100.4°F (38°C)	±0.5°F (± 0.3°C)	98 to 103°F (36.7 to 39.4°C)
Replenishment Rate	100 mL/ft ² * (1076 mL/m ²)	± 10 mL/ft ² (± 107 mL/m ²)	—
Specific Gravity			
Fresh Tank Solution†	1.034 at 80°F (27°C)	± 0.003	1.031 to 1.037 at 80°F (27°C)
Seasoned Tank Solution	1.035 at 100.4°F (38°C)	± 0.003	1.029 to 1.046 at 100.4°F (38°C)
Replenisher	1.043 at 80°F (27°C)	± 0.003	1.032 to 1.046 at 80°F (27°C)
Agitation	2-second nitrogen burst every 10 seconds (5/8-in. [17 mm] solution rise)‡	—	—

* This is one-half the rate of KODAK Color Developer Replenisher, Process E-6AR.

† See the mixing instructions provided in this publication.

‡ For rack-and-tank processors.

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COMPENSATING FOR LOW UTILIZATION

For efficient process operation with KODAK Color Developer Replenisher LORR, Process E-6AR, you must compensate for low utilization if you *do not* complete one color-developer tank turnover every five weeks.

This procedure establishes a *minimum daily square footage requirement* for the amount of film processed.

1. To determine the minimum daily square footage requirement, multiply your color-developer tank volume (in litres) by 10; then divide by the number of days the processor is operated during a five-week period.
For example, a processor with a color-developer tank volume of 70 litres operated for 25 days over a five-week period would have a minimum daily square footage requirement of 28 ($[70 \times 10] \div 25 = 28$).
2. Throughout the day, record the amount of film you process.
3. At the end of each day, compare the amount of film processed (in square feet) to the minimum daily square footage requirement.
 - If the amount of film processed meets or exceeds your minimum daily square footage requirement, no additional replenishment is required.
 - If the amount of film processed is less than your minimum requirement, replenish all of your tank solutions for the difference in square footage (multiply your replenishment rate [or cycle rate] by the difference to determine the amount of replenisher to add). You will also need to add 1 mL of first developer starter to your first-developer tank solution for every square foot of film processed below your minimum daily requirement. **Do not** add color developer starter to the color-developer tank.

The first time you use this procedure, you may have to re-optimize your process by following the procedure for "Optimizing Your Process" in section 4 of KODAK Publication No. Z-119 (fifth edition), *Using KODAK Chemicals, Process E-6*, or section 6 of KODAK Publication No. Z-6, *KODAK Q-LAB Process Monitoring Service—Process Control Handbook*.

Example—Your minimum daily square footage requirement is 28 ft², but you have only processed 23 ft² of film. The difference between the minimum requirement and the amount of film processed is 5 ft² ($28 - 23 = 5$). Replenish all solutions for the difference between the minimum requirement and the amount of film processed. You also need to add 1 mL/ft² or 5 mL of first developer starter to the first-developer tank solution.

Note: If your processor has very low utilization, you may want to divide your minimum daily square footage requirement in half, and compare the amount of film processed with the minimum requirement twice during the day (i.e., at midday and at shutdown), and make any adjustments required.

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