



# Using KODAK Chemicals with KONICA 8xx series and R1 & R2 Minilabs

The processing chemicals that you use in a particular minilab system depend on the type of processor the system incorporates and its process cycle. This publication describes the use of KODAK EKTACOLOR PRIME LORR Chemicals to process KODAK EKTACOLOR EDGE and ROYAL Digital Color Papers in the **KONICA 8xx series and R1 & R2 Minilabs that are compatible with the Konica CPK-2-22 LR (SQA) process designation.**

Other publications are available on the Kodak website at [www.Kodak.com/go/photochemicals](http://www.Kodak.com/go/photochemicals); select the link for "Processing Manuals." Current versions of Current Information Summaries are available at the link for "Technical Information."

## RECOMMENDED KODAK CHEMICALS

You may use KODAK Chemicals for the KONICA 8xx series and related Minilabs, using these instructions. They offer convenience, cost savings, and a minimum of solution waste. KODAK EKTACOLOR PRIME SP Developer Replenisher LORR offers the advantages of a single-part concentrate for convenient handling and a low replenishment rate. In addition to the developer, you will need KODAK EKTACOLOR PRIME SP Bleach-Fix Replenisher LORR. You will also need KODAK EKTACOLOR PRIME Stabilizer and Replenisher LORR.

## ORDERING KODAK EKTACOLOR PRIME LORR CHEMICALS

KODAK EKTACOLOR PRIME LORR Chemicals are available in convenient mix sizes. The catalog numbers in the following Table 1 are for Europe and the Middle East Region. The table shows the product details and the number of 10.2 x 15.2 cm (4 x 6-inch) prints that can be processed per unit (to-make 10 litres).

**Table 1 Processing Capacities**

KODAK Chemical & make size	CAT No.	10x15cm Prints per 10L
KODAK EKTACOLOR PRIME SP Developer Replenisher LORR 4x 10L	527 0996	5446
KODAK EKTACOLOR PRIME SP Bleach-Fix Replenisher LORR 2x 10L	528 8105	8714
KODAK EKTACOLOR PRIME Stabilizer and Replenisher LORR 10x 10L	527 0863	1662*

\* This is the capacity for processors with three stabilizer tanks. If the processor has four stabilizer tanks, the capacity is approximately 3324.

You will need to mix developer, bleach-fix and stabilizer replenisher solutions for these chemicals. The processor automatically determines the amount of paper processed and delivers the necessary amounts of the replenishers to the processor tanks.

## PROCESS SPECIFICATIONS

The specifications and replenishment rates for using KODAK EKTACOLOR PRIME SP LORR Chemicals in the KONICA 8xx series & R1 & R2 Minilabs (process specification CPK-2-22 LR) are given in Table 2.

Table 2.

### Processing Steps and Conditions for KONICA 8-Series & R1 & R2 Minilabs (specification CPK-2-22 LR) Using KODAK EKTACOLOR PRIME LORR Chemicals

Solution/ Step	Time (sec)	Temperature °C (°F)	Starting-Point Replenishment Rates (mL/m <sup>2</sup> )
Developer	22	40.0 ± 0.3 (104.0 ± 0.5)	120
Bleach-Fix	22	35 to 40 (95 to 104)	75
Stabilizer	44	34 to 40 (93 to 104)	4-tanks: 194 3-tanks: 388
Dry	As needed	Not over 96 (205)	—

## REPLENISHMENT RATES

The replenishment rates in Table 2 are starting-point recommendations. The actual rates will depend on specific processing conditions such as the amount of paper processed and the proportion of high- or low-density prints.

The bleach-fix replenishment rates assume minimum developer carryover. If carryover is greater than normal, increase the bleach-fix replenishment rate to maintain the bleach-fix chemical balance and pH level. Otherwise, problems such as retained silver may occur. Retained silver will cause print colors to look desaturated. See the equipment manual for specifications and adjustments for squeegees or squeegee rollers.

## Agitation

Good agitation is important during the first few seconds of the developer and bleach-fix steps. If initial agitation is poor in the developer, development may be uneven. Poor initial agitation in the bleach-fix may not stop development uniformly, which can cause magenta streaks and non-uniformity.

## Filtration

Processing solutions and wash water may contain insoluble materials. If you don't filter out these materials, they may stick to the paper, tank walls, rollers, and lines, and can damage the paper. It is also important to replace solution filters periodically so that a blocked filter does not reduce solution flow. Use the filters designed for the processor and recommended in the equipment manual.

## DRYING

The maximum drying temperature for KODAK EKTACOLOR EDGE and ROYAL Digital Color Papers is 96°C (205°F).

## LOW UTILIZATION

The number of prints that you produce each week determines the processor utilization. If your processor utilization is low, oxidation and evaporation will affect the activity of your processing solutions and may increase the D-min of the paper. During periods of low utilization, be sure to turn off the processor when it's not in use to avoid oxidation and evaporation. In extreme cases of low utilization, you may need to discard the chemicals in the processor and replace them with fresh tank solutions. You can often reduce high D-min in prints by replacing the stabilizer with fresh solution.

## SAFE HANDLING OF PHOTOGRAPHIC CHEMICALS

Handle all chemicals carefully. When you mix solutions, wear goggles or a face shield, a protective apron, and protective gloves made from neoprene or nitrile rubber. Clean protective clothing after use to remove any chemical residue that can cause contamination. For more information about potential health hazards and safe handling of specific KODAK Chemicals, see the chemical labels and the Material Safety Data Sheets (MSDSs) for the chemicals. MSDSs also provide regional contact information. MSDSs are available on the Kodak website at [www.Kodak.com/go/photochemicals](http://www.Kodak.com/go/photochemicals).

## PREPARING FRESH TANK SOLUTIONS

Follow these instructions to prepare working tank solutions for the KONICA 8xx series & R1 & R2 Minilabs from KODAK Chemical mixed replenisher solution. Observe all safe-handling precautions on the chemical labels and in the MSDS for each product.

**Note:** Working tank solutions only need to be prepared if a new machine is being installed or if, for some reason, a working tank in an existing machine has had to be dumped.

Remove the racks from the processor tanks and rinse the racks and tanks with water. Be sure to drain all rinse water from the tanks and to close the drain valve before adding the solutions.

## Developer Fresh Tank Solution

To ensure good performance, take special care in mixing the developer tank solution. You should mix the developer replenisher in a separate mixing vessel from the one used for bleach-fix.

### Preparing Developer Tank Solution from KODAK EKTACOLOR PRIME SP Developer Replenisher LORR, To prepare 1L.

Table 3

	Volume
EKTACOLOR PRIME SP Developer LORR, mixed Replenisher*	670ml
EKTACOLOR RA Developer Starter (CAT No 5278957),	24mL
Water	306mL
Total volume	1.0 L

\* Mixed as directed on the product label

## Bleach-Fix Fresh Tank Solution

Be very careful to avoid contamination of the developer with bleach-fix.

### Preparing Bleach-Fix Tank Solution from KODAK EKTACOLOR PRIME SP Bleach-Fix Replenisher LORR

Table 4

	Volume
EKTACOLOR PRIME SP Bleach-Fix LORR, mixed Replenisher*	950ml
EKTACOLOR PRIME SP Bleach-Fix Starter (CAT No. 5288139)	50mL
Total volume	1.0 L

\* Mixed as directed on the product label

## Stabilizer Fresh Tank Solution

Mix the working tank solution in *each* of the stabilizer tanks.

To prepare one litre of stabilizer tank solution, mix EKTACOLOR PRIME Stabilizer and Replenisher LORR (as directed on the product label), no further dilution is required.

## Reinstalling the Racks and Bringing the Tank Solutions to Temperature

You should allow some space when filling the tanks, to allow for the volume of the racks. When you reinstall the racks in the tanks, the racks will displace more solution volume to fill the tanks.

Install the racks by slowly lowering them into the

tanks. When you have reinstalled all the racks and have verified that all the tanks are filled with solution, turn on the recirculation and heater system and bring the solutions up to operating temperature.

## USING CONTROL STRIPS TO MONITOR THE PROCESS

Use KODAK Control Strips, Process RA-4 (box of 50, CAT No. 8282170), to monitor process performance. For instructions on processing control strips, see the operator's manual for the KONICA Minilab. For information on the use and diagnostic features of the control strips, see KODAK Publication No. Z-130, *Using KODAK EKTACOLOR Chemicals*, Section 7, "Process Monitoring and Troubleshooting with KODAK Control Strips, Process RA-4." KODAK Publications are described and available on the Kodak website at

[www.Kodak.com/go/photochemicals](http://www.Kodak.com/go/photochemicals).

To calculate control-strip aim values for process monitoring, you will need to apply process adjustment factors. Use the adjustment factors in addition to the correction factors that are supplied with the control strips.

After reading the densities of the supplied reference strip on your densitometer, first apply the "Prime" correction factors packaged with the reference strip. Then add the values from the following table. The corrected density values are the aim values for your batch of control strips. You will need to apply the adjustment factors each time you switch to a new batch of control strips.

Table 5. Process Adjustment Factors

Measurement	R	G	B
Black (BP)	+0.07	+0.01	-0.05
High (HD)	+0.01	+0.07	-0.06
Low (LD)	-0.04	+0.05	-0.07
D-min	+0.01	+0.01	+0.01

## SILVER RECOVERY

When an effluent tank is full, the processor alerts you to drain the tank.

Typically, silver concentration in the bleach-fix effluent tank will be 4 to 8 g/L; silver concentration in the stabilizer effluent tank will be 0.2 to 0.6 g/L.

You can effectively use common silver-recovery methods with the combined effluents from both effluent tanks. If your lab has other processors, you can combine the effluent from the KONICA Minilab with the other effluent solutions and use your current silver-recovery methods.

Publications on silver management that include recommendations and descriptions of silver-recovery options are available in the Silver Management section of the KODAK Product Safety, Recycling & Disposal Center, under "Chemicals" at [www.Kodak.com/go/KES](http://www.Kodak.com/go/KES).

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