

# Introduction

Les produits chimiques KODAK FLEXICOLOR, traitement C-41, sont destinés au traitement des films négatifs couleur Kodak tels que les films KODAK PROFESSIONAL PORTRA et ceux d'autres fabricants. Ils sont fournis sous forme de concentré liquide pour faciliter le mélange et sont conçus pour donner des résultats optimum avec tous les types de développeuses.

## Développeuses de mini-laboratoire

- Le cycle des films **C-41B** est plus court que le cycle de traitement C-41 standard. Ce cycle élimine les deux lavages et utilise un temps de fixation plus court.
- Le cycle de traitement des films **C-41RA** est le plus court des cycles de traitement C-41. Il s'agit du cycle le plus fréquemment utilisé dans les mini-laboratoires. Dans ce cycle, utilisez le régénérateur de blanchiment NR KODAK FLEXICOLOR RA et le fixateur et régénérateur FLEXICOLOR RA. Il nécessite un équipement spécial, avec agitation plus forte. Il est conçu comme un cycle sans lavage.

Kodak propose un large choix de conditionnements, pour produire de 3,8 litres à 283,5 litres de traitement C-41B et C-41RA. Pour des formats et des références spécifiques, consultez votre catalogue KODAK ou contactez votre distributeur habituel de produits KODAK.

### Produits chimiques KODAK SM en mini-laboratoire SM

Système faible volume exclusif pour régénération directe des produits chimiques pour films sans mélange. Les produits SM reflètent la simplicité caractéristique du système. (L'utilisation des produits chimiques SM est réservée aux mini-laboratoires SM.)

## Avantages de ces produits :

- Réduction de la variabilité des traitements de faible volume
- Pas de mélange de produits chimiques, chargement sans risque de salissure
- Temps d'accès du premier tirage 25% plus rapide qu'avec le traitement RA-4\*
- Réduction des effluents et de leurs coûts d'élimination

\* Les comparaisons supposent un équipement de mini-laboratoire utilisé régulièrement et des produits chimiques classiques, tels que KODAK EKTACOLOR PRIME pour traitement RA-4 et KODAK FLEXICOLOR pour traitement C-41.

### Produits chimiques KODAK FLEXICOLOR SM

Traitement C-41SM, pour développement des films Kodak, par exemple Bright Sun, ADVANTiX, ROYAL GOLD et MAX, ainsi que les films négatifs couleur d'autres fabricants.

Kodak propose un large choix de conditionnements, pour produire de 1,5 litre à 3,8 litres de traitement C-41SM. Pour des formats et des références spécifiques, consultez votre catalogue KODAK ou contactez votre distributeur habituel de produits KODAK.

# 4 MINILAB PROCESSORS

There are many different types of minilab processors, and they are used under a variety of conditions. KODAK Chemicals are designed to offer you choices to get the best results from your minilab regardless of its operation.

## WHICH PROCESS CYCLE SHOULD YOU USE FOR YOUR PROCESSOR?

There are three basic processing cycles for processing Kodak color negative films in minilabs. You can use each of these cycles in minilabs that operate with or without wash water. The description of the three cycles will help you decide which matches your particular processor and processing conditions.

**Do not** process KODAK VERICOLOR Slide Film / SO-279/5072 in washless minilab process cycles that use FLEXICOLOR Final Rinse and Replenisher, i.e., Process C-41B and Process C-41RA. Process these films in Process C-41 only using FLEXICOLOR Stabilizer III and Replenisher.

**Note:** If you are using a minilab that uses KODAK SM Chemicals, see KODAK Publication No. Z-101, *Using KODAK SM Chemicals in SM Minilabs*.

### Process C-41RA

This film process cycle is the shortest of the Process C-41 cycles, and the one most commonly used in minilabs. You must use KODAK FLEXICOLOR RA Bleach Replenisher NR and KODAK FLEXICOLOR RA Fixer and Replenisher in this cycle.

Process C-41RA requires special equipment that accommodates the shorter solution times, and the processor must provide higher agitation in the bleach, fixer, and final rinse. Check with your minilab manufacturer to determine if your processor meets Process C-41RA specifications.

Although Process C-41RA is intended to be a washless cycle, you can use it with a processor that includes a final wash if it meets the time and agitation requirements.

**Table 4-1 Process C-41RA Cycle**

Solution/Step	Time* min:sec	Temperature °C (°F)
FLEXICOLOR Developer Replenisher LORR	3:15	37.8 ± 0.15 (100.0 ± 0.25)
FLEXICOLOR RA Bleach Replenisher NR†	1:00	38 ± 3 (100 ± 5)
FLEXICOLOR RA Fixer and Replenisher‡	1:30 to 2:00	38 ± 3 (100 ± 5)
FLEXICOLOR Final Rinse and Replenisher§	1:00	38 ± 3 (100 ± 5)
Dry	As needed	40 to 68 (104 to 155)

\* Immersion time plus crossover time to the next tank. Bleach, fixer, and final rinse times are minimums; longer times are acceptable.

† Use only KODAK FLEXICOLOR RA Bleach Replenisher NR. Your equipment must provide the higher agitation required for this solution.

‡ Use only KODAK FLEXICOLOR RA Fixer and Replenisher. Use two countercurrent-flow fixer tanks with equal times in both tanks (0:45 to 1:00 in each tank). Your equipment must provide the higher agitation required for this solution.

§ Use three countercurrent-flow final rinse tanks with equal times in all tanks (0:20). Your equipment must provide the higher agitation required for this solution. Replenish the third final rinse tank at 40 mL/135-24 roll (36 mL/m). If your processor has two countercurrent-flow final rinse tanks followed by a single tank, replenish the second countercurrent tank at 40 mL/135-24 roll (36 mL/m) and the single tank at 20 mL/135-24 roll (18 mL/m). For minilabs with a final wash after the fixer, use a wash time of 1:40 and reduce the final rinse time to 40 seconds. Use a wash rate of 1250 mL/135-24 roll (330 mL/ft) for a two-stage countercurrent-flow wash. Double this rate for a single wash. Use a final rinse replenishment rate of 33 mL/135-24 roll.

**Table 4-2 Starting-Point Replenishment Rates—Process C-41RA**

Solution	Starting-Point Replenishment Rate	
	mL/135-24 Roll (mL/m)	mL/25-Exp ADVANTIX Film (mL/m)*
FLEXICOLOR Developer Replenisher LORR	20 (18)	11.1 (10.2)
FLEXICOLOR RA Bleach Replenisher NR	5 (4.5)	3.4 (3.1)
FLEXICOLOR RA Fixer and Replenisher	35 (32)	24 (22)
FLEXICOLOR Final Rinse and Replenisher	40 (36)	27 (25)

\* These rates are averages based on an estimated film-speed mix in 25-exposure rolls of KODAK ADVANTIX Films.



simple  
solutions

**Kodak** Chemicals

*Flexicolor*

# C-41RA Chemicals



# Kodak Flexicolor C-41RA chemicals

features

benefits

## **WHAT IS C-41RA?**

- *The C-41RA film cycle is designed for RA (rapid access) minilab equipment. The rapid access system has unique bleach and fixer formulations which allow the process cycle to be shortened, giving faster access to processed film and therefore prints.*
- *Easy to mix as all of the concentrate chemicals are liquid, saving time, allowing more time for producing prints.*
- *Convenient kit sizes designed to make solution mixing as simple and easy as possible.*
- *All of Kodak's minilab chemical packaging is color and shape coded to aid solution choice and so minimize expensive mixing errors.*
- *The products carry easy to recognize color coding used for all Kodak minilab chemicals. The color coding is displayed on the cases, bottle labels and caps.*
- *The minilab chemicals are packaged in specially designed bottles, which have excellent pouring and emptying characteristics, minimizing splashing and chemical concentrate to be rinsed out of the bottle.*

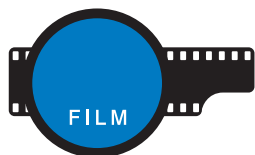
## THE COMPLETE RANGE OF PRODUCTS FOR C-41RA

**KODAK FLEXICOLOR**  
Developer Replenisher LORR

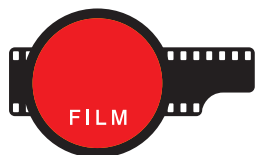
**KODAK FLEXICOLOR**  
RA Bleach Replenisher NR

**KODAK FLEXICOLOR**  
RA Fixer and Replenisher

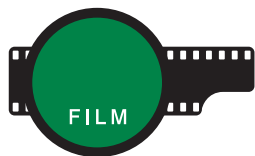
**KODAK FLEXICOLOR**  
Final Rinse and Replenisher



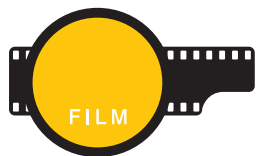
DEVELOPER



RA BLEACH



RA FIXER



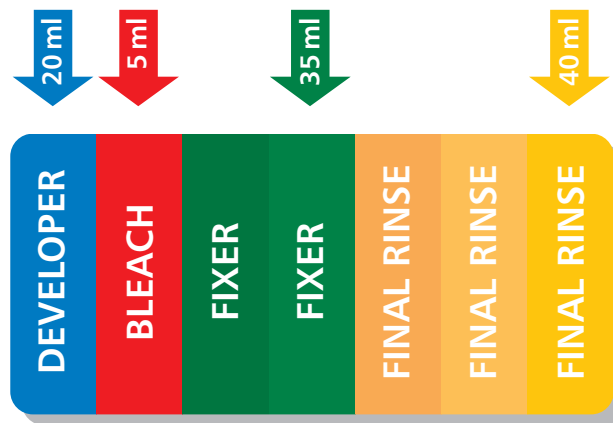
FINAL RINSE

## THE C-41RA KIT SIZES

*Designed for your convenience*

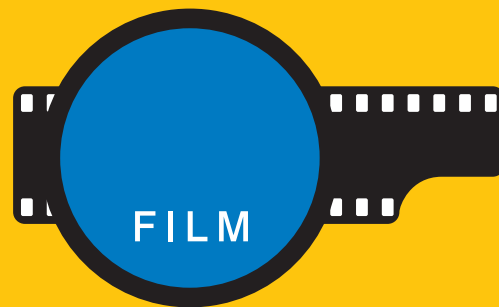
- Developer Replenisher LORR, to make 4 x 10L of replenisher. Catalog number: 812-1857
- RA Bleach Replenisher NR, a ready to use solution to make 2 x 5L of replenisher. Catalog number: 825-5549
- RA Fixer and Replenisher, to make 2 x 10L of replenisher. Catalog number: 821-8950
- Final Rinse and Replenisher, to make 12 x 10L of replenisher. Catalog number: 813-6368

## REPLENISHMENT RATES (135 x 24exp roll)



the **C-41RA**

range





# Kodak Flexicolor C-41RA chemicals

## ENVIRONMENT

Kodak products are designed to minimize the impact to the environment. The solutions are designed to be used at the lowest replenishment rates to achieve optimum quality of the processed film and the packaging is formatted to give maximum product protection, while minimizing the plastic and cardboard used. Our commitment to the environment also includes our manufacturing sites which are registered to ISO 14001.

## Investment *in quality*

Kodak invests many millions of dollars each year on research and development programs to improve the final print quality, of which the film process is an integral part. By using Kodak chemicals you can be assured of optimum film processing quality for all film types.

The Kodak investment in quality also covers its manufacturing operations worldwide. Not only are all of the raw material we use in making the photochemicals specified to a high standard, our manufacturing process is also certified to the internationally accepted ISO 9002 standard to assure consistent batch to batch quality.

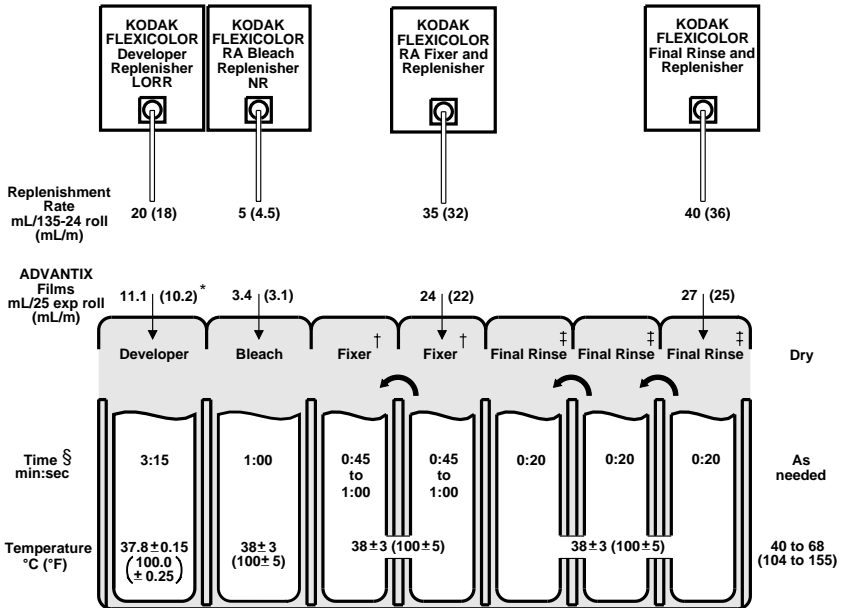


***For more information visit the Kodak website at:  
[www.kodak.com/go/photochemicals](http://www.kodak.com/go/photochemicals)***

Because of our constant endeavor to improve quality and design, modifications may be made to products from time to time. Details of stock availability and specifications given in this publication are subject to change without notice.

### Process C-41RA Cycle

Process C-41RA has a shorter total process time than Process C-41 or C-41B. To use this cycle, the minilab must be capable of providing the higher fixer and stabilizer agitation required (direct-impingement agitation or high turbulence) and must use KODAK FLEXICOLOR RA Bleach Replenisher NR and FLEXICOLOR RA Fixer and Replenisher. Although Process C-41RA was designed to be a “washless” cycle, you can use it with a final wash.



\* These rates are averages based on an estimated film-speed mix in 25-exposure rolls of KODAK ADVANTIX Films.

† Use two countercurrent-flow fixer tanks with equal times in both tanks (0:45 to 1:00 in each tank). Your equipment must provide the higher agitation required for this solution.

‡ Use three countercurrent-flow final rinse tanks with equal times in all tanks (0:20). Your equipment must provide the higher agitation required for this solution. Replenish the third final rinse tank at 40 mL/135-24 roll (36 mL/m). If your processor has two countercurrent-flow final rinse tanks followed by a single tank, replenish the second countercurrent tank at 40 mL/135-24 roll (36 mL/m) and the single tank at 20 mL/135-24 roll (18 mL/m).

For minilabs with a final wash after the fixer, use a wash time of 1:40 and reduce the final rinse time to 40 seconds. Use a wash rate of 1250 mL/135-24 roll (330 mL/ft) for a two-stage countercurrent-flow wash. Double this rate for a single wash. Use a final rinse replenishment rate of 33 mL/135-24 roll.

§ Immersion time plus crossover time to the next tank. Bleach, fixer, and final rinse times are minimums; longer times are acceptable.