

PRODUCT INFORMATION

C-41 CD-LR Colour Developer Replenisher *Low Rate*

C-41 CD-LR is a 3-part Colour Developer with a low replenishment rate, designed for the development of C-41 compatible colour negative films in minilabs and rack & tank processors. Forseen for laboratories with high workload.

C-41 CD-LR	Pack for 4 x 10 L replenisher for 1818 rolls 135-24	REF 13214
Pack content:	Part A: 4 x 600 ml Part B: 4 x 100 ml Part C: 4 x 500 ml	
C-41 CD-S	Colour Developer Starter 1 L conc. for 25 L working solution	REF 13220
CD-Additiv Plus	Antioxidant, 2 x 0.5 L concentrate for 250-500 L	REF 16222






Colour Developer Starter CD-S is required for the preparation of working solution.

CD-Additive Plus is an Antioxidant, to be applied optionally. It prevents premature oxidation of the Colour Developer at low workload.

The Low Rate formula C-41 CD-LR with a capacity of 1,818 films 135-24, resp. 1,212 films 135-36 per pack enables particularly economical working with a large range and at the same time low disposal quantity. CD-LR is designed and intended for machines with high to very high workload.

A high workload is given, when the working tank of the machine can be exchanged by CD-LR replenisher within approx. 2 weeks - this corresponds to a daily throughput of approx. 5 films 135-24 or 3 films 135-36 per every litre of CD-LR working solution

MIXING OF REPLENISHER

Water	CD-LR Part A	CD-LR Part B	CD-LR Part C	Replenisher
				
880 ml 8,8 L 35,2 L	60 ml 600 ml 2,4 L	10 ml 100 ml 400 ml	50 ml 500 ml 2 L	1 L 10 L 40 L

Warm water (> 25 °C) promotes fast and good mixing. Do not go below the start amount of water. Stir for approx. 30-60 s after the addition of each part, same for prepared replenisher.

Only as much replenisher should be prepared, as can be used up within 1-2 weeks. The storage tank must be covered and protected from access of air.

PROCESSING PARAMETERS

Time: 3:15 s **Temperature:** 38°C ± 0,2°C **Replenishment rate:** 22 ml/135-24 38 ml/film 120
33 ml/135-36 45 ml/meter film 120
20 ml/ meter film 135

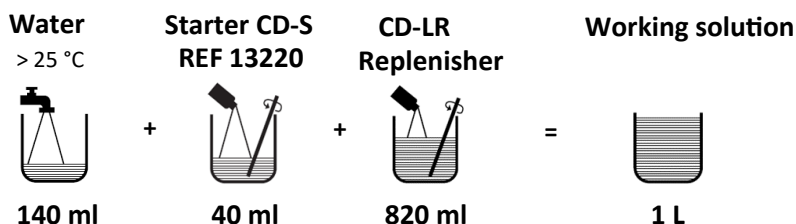
The data given are guideline values that may deviate in practice, depending on the individual developing machine used, on the type of films and on the workload.

Tempered working solutions are subject to a continuous evaporation of water. Accordingly, the evaporation should be compensated by a daily addition of water to the working solution in order to avoid an increase in the concentration. Top up the tank with water up to the overflow level, every day before starting work.

Any tempering has a stressing effect on the shelf life of the chemicals, therefore the processor should be switched off immediately after the end of work, the timer should be programmed accordingly.

MIXING OF WORKING SOLUTION

Mixing of working solution is required, when the working tank of the machine is to be refilled newly, e.g. when a machine was installed or after tank cleaning during maintenance work.



Corresponding to the size of the respective Colour Developer working tank, the quantities for water, CD-S starter and CD-LR replenisher are to be multiplied.

Fill the specified amount of water into the empty tank, then add Starter CD-S, followed by CD-LR replenisher. The circulation in the working tank ensures the necessary mixing of the working solution.

During filling of the other working tanks, the Colour Developer working tank must be covered and protected well in order to exclude any possible contamination with other baths, such as Bleach, Fixer or Stabilizer.

Any potential input of even very small amounts of these baths would contaminate and thus damage the Colour Developer, so that a draining of the working solution and a fresh mixing would become necessary.

OPTIONAL USE OF CD-ADDITIV PLUS

Addition of CD-Additiv Plus: Once after mixing of replenisher and weekly directly to the working solution.

Replenisher: 4 ml CD-Additiv Plus per litre CD-LR, once after mixing.

Working solution: 2 ml CD-Additiv Plus per litre CD-LR, one time a week

TANK CLEANING

Cleaning of Colour Developer rack and working tank, e.g. after maintenance work should only be carried out with specially designed cleaners, e.g. Calbe Lab Cleaner REF 16460. After cleaning, rinse thoroughly with water to ensure the entire removing of any residues of the cleaner. It is recommended to fill the working tank with inserted rack completely with water.

Then switch on the machine - after approx. 3 minutes switch it off again and drain the water. Repeat process twice.

OCCUPATIONAL SAFETY

Handling of photographic chemicals is safe, if used properly and protective measures are followed. Hazard and precautionary information can be found on the label (H and P phrases, hazard symbol) and in the safety data sheet. Personal protective equipment should include safety goggles or face shield, protective gloves and a lab coat or apron.

STORAGE

C-41 CD-LR concentrates should be stored dry, frost-proof and out of the reach of children. The maximum temperature range is between 5°C and 25°C. Storage temperatures between 10°C and 20°C are ideal.

SHELF LIFE

C-41 CD-LR concentrates in unopened, originally sealed bottles and canisters have a shelf life of approx. 2 years.

DISPOSAL

Photographic chemicals - concentrates or used baths - must not be discharged into the public sewerage system. These chemicals must be discarded by commercial waste treatment companies, who properly treat and dispose of in accordance with legal regulations. Further information can be found in the safety data sheet.