

PROCESS INFORMATION RA-4 PROFESSIONAL

RA-4 PROFESSIONAL is the name given to a process variant that has been specially designed for the development of digitally exposed RA-4 Professional Colour Papers. The paper passes through 3 processing steps: Colour Developer, Bleach Fix, and Super Stabilizer. Instead of the Super Stabilizer, a water wash with at least two tanks can be used as an alternative.

RA-4 CD-R 160 Professional Plus is a 2-part Colour Developer, which is preferably used for the processing of Professional Colour Papers with extra-high silver content, such as DP2 and Maxima, recommended for use in machines such as Polielectronica, Theta, Chromira and Noritsu QSS. Processing temperature is 35°C.

RA-4 CD-R 160 Professional Plus delivers deep blacks and clean image whites - this Colour Developer is characterised by an exceptionally high stability, even with fluctuating utilisation. RA-4 CD-R 160 Professional Plus meets the highest demands of laboratories.

At low utilisation, i.e. at a throughput of less than 4.5 m² Colour Paper per litre of working solution in approx. 1 week, CD-Additive REF 16222 should be added to maintain bath stability. Instruction on use can be found on the last page of this Process Information sheet.

RA-4 BX-VR is a 1-part Bleach Fix with a variable replenishment rate for the processing of RA-4 compatible Colour Papers in continuous flow (CF) and roller transport machines.

VR stands for Vario Rate: depending on a different dilution of the BX-VR concentrate with water at mixing of the replenisher, a higher or lower replenishment rate can be set within a range from 54 ml/m², 70 ml/m², 108 ml/m² to 215 ml/m².

For Professional Papers, an average replenishment rate of 108 ml/m² is recommended, based on a mix size of 5 x 7 litres of replenisher for item REF 12660 and of 70 litres of replenisher for item REF 12662.

With low utilisation, i.e. a throughput of less than 3 m² of Colour Paper per litre of working solution in ca. 1 week, BX- Additive REF 16450 should be added to maintain bath stability. Application instructions can be found on the last page of this Process Information sheet.

The **Super Stabilizer** is processed in a cascade consisting of 3 or 4 tanks, with the replenisher fed into the last tank. From there, in each case the overflow enters into the tank located in front of it. Overflow from the first tank is disposed of.

Super Stabilizer Ultra Performance meets the highest standards, offering an enhanced resistance to the formation of bio-slime in the working tanks of the machines. Special optical brighteners ensure brilliant image whites. In addition, the reduced replenishment rate leads to a reduction in disposal costs.

Processing step	Code	Time	Temperature	Replenishment rate /m ²
Colour Developer Professional Plus	CD-R 160 Pro Plus	45 s	35°C ± 0,3°C	160 ml/m ²
Bleach Fix Vario Rate als BX-MR	BX-VR	45 s	36°C ± 3°C	108 ml/m ²
Super Stabilizer Standard or	STAB-WL	90 s	36°C ± 3°C	350 ml/m ² (3 Tank cascade) 250 ml/m ² (4 Tank cascade)
Super Stabilizer Ultra Performance	STAB-WL	90 s	36°C ± 3°C	280 ml/m ² (3 Tank cascade) 200 ml/m ² (4 Tank cascade)
Alternative instead of a Super Stabilizer: Water wash		≥ 90 s	32°C ± 3°C	≥ 6.5 L/m ² (2 Tanks) ≥ 4.3 L/m ² (3 Tanks) ≥ 2.2 L/m ² (4 Tanks)

PRODUCT RANGE

RA-4 PROFESSIONAL

Product	Pack	Yield	Art. No.	Version
Colour Developer Pro Plus	for 2 x 10 L	for ca. 125 m ²	REF 12508	2-Part conc.
Colour Developer Pro Plus	for 50 L	for ca. 312 m ²	REF 12510	2-Part conc.
Bleach Fix BX-VR	for 5 x 7 L*	for ca. 324 m ²	REF 12660	1-Part conc.
Bleach Fix BX-VR	for 70 L*	for ca. 648 m ²	REF 12662	1-Part conc.
Super Stabilizer Standard	for 2 x 10 x 10 L**	for ca. 571 - 800 m ²	REF 12710	1-Part conc.
Super Stabilizer Ultra	for 4 x 20 L	for ca. 285 - 400 m ²	REF 12708	1-Part conc.
Performance				
Colour Developer Starter CD-S	2 L conc.	for 80 L work. solution	REF 12810	1-Part conc.
Bleach Fix Starter BX-S	2 L conc.	for 40 L work. solution	REF 12910	1-Part conc.

*BX-VR (Vario Rate) for use at a replenishment rate of 108 ml/m²: 2 L conc. is mixed to 7 L of replenisher, 20 L conc. is mixed to 70 L.

**Dosage bottles

OPTIONAL USE OF ADDITIVES

The requirements named for different Colour Developers and Bleach Fixes regarding the utilisation of the respective machines ensure a stable process and maximum processing reliability. If the utilisation is lower than the minimum requirement specified for a product, the image quality may be impaired due to progressive oxidation of the chemicals.

To improve the process stability, oxidation inhibitors for photographic chemicals can be used as an option: CD-Additiv Plus supports the shelf life of the RA-4 Colour Developer, while BX-Additiv prevents the RA-4 Bleach Fix from oxidation and decomposition. Addition is to the replenisher and to the working solution.

Addition of CD-Additiv Plus, REF 16222

Once, when mixing replenisher, as well as weekly to the working solution:

Replenisher: 4 ml CD-Additiv Plus per litre when mixing

Working solution: 2 ml CD-Additiv Plus per litre, once a week

Addition of BX-Additiv, REF 16450

Once, when mixing replenisher, as well as weekly to the working solution

Replenisher: 20 ml BX-Additiv per litre, when mixing

Working solution: 5-10 ml BX-Additiv per litre, once a week

ADDITIONAL INFORMATION

Product information on individual items, including additional notes and recommendation for use, are available on the Calbe Chemie GmbH website.

Further information about Calbe chemicals can be found in the instructions for use, which are included in printed form with every item. Instructions for use and product information can be downloaded from the Calbe website.