

#9220 JOB E-6 Color Positive Developing Kit

Das JOB E-6 Color Positive Developing Kit (2,5L working solution) is a chemical processing kit for color reversal films designed especially for rotary processing. The developing kit should only be used in manual processing if temperature and agitation can be fully controlled. Best results may only be expected with precise temperature control and constant agitation.

All the processing chemical is concentrated solution to make max of 2.5L working solution which allows processing up to 40 rolls of film (135-36exp or 120 films). The JOB E-6 Color Positive Developing Kit combines low environment load provide with excellent developing performance.

1. Contents of JOB E-6 Color Positive Developing Kit (2,5L)

Process	Chemicals	Bottles	Stock solution	Working sol.	Capacity
First dev.	R1 : FD	1	500 ml x 1	for 2,5 L	20 - 40 rolls / 135-36
Reversal bath	R2 : RV	1	125 ml x 1	for 2,5 L	
Color dev.	R3 : CD Part-A	1	500 ml x 1	for 2,5 L	
	R3 : CD Part-B	1	50 ml x 1		
Conditioner	R4 : CT	1	250 ml x 1	for 2,5 L	
Bleach	R5 : BL	2	650 ml x 2	for 2,5 L	
Fixer	R6 : FX	1	325 ml x 1	for 2,5 L	
Stabilizer	R7 : STB	1	25 ml x 1	for 2,5 L	

- 2,5 l of working solutions can be made by diluting the stock solutions above.
- It is possible to make the needed amount of working solutions by measuring corresponding volume of stock solutions according to the amount of films to be processed.

Please note that:

- The stock solution of R3: CD bottles are divided into Part-A and Part-B bottles.
- There are 2 bottles of 650ml R5: BL stock solution packed in each kit.
- The precautions are indicated on each label on bottles or package.

2. How to make working solutions

- Please measure the amount of water accurately and warm up water to $30\pm 5^{\circ}\text{C}$ before diluting the stock solutions.
- In case working solution needs to be stored for a while, it should be stored in an air-tight bottle in order to avoid oxidization.
- Don't mix chemicals with each other to avoid possible toxic gas and heat from being generated.
- Appropriate results cannot be expected even if only a very small amount of other processing solution is contaminated into "First developer solution" or "Color developer solution".
- If any precipitate appears in the concentrated solution, please dip the closed bottle in warm water to resolve any precipitate before use.
- Please always prepare water amount first. Then pour part 1 into water and mix well (about 30 sec.) before mixing with part 2 (in case of more than 1 part).

How to make 2,5L working solutions

Process	Chemicals	Water	Part-A	Part-B	Total
First dev.	R1 : FD	2000 ml	+ 500 ml	-	= 2500 ml
Reversal bath	R2 : RV	2375 ml	+ 125 ml	-	= 2500 ml
Color dev.	R3 : CD	1950 ml	+ 500 ml	+ 50 ml	= 2500 ml
Conditioner	R4 : CT	2250 ml	+ 250 ml	-	= 2500 ml
Bleach	R5 : BL	1200 ml	+ 650 ml x 2	-	= 2500 ml
Fixer	R6 : FX	2175 ml	+ 325 ml	-	= 2500 ml
Stabilizer	R7 : STB	2475 ml	+ 25 ml	-	= 2500 ml

- **First Dev.:** Pour 500ml (1 bottle) of R1: FD stock solution into 2000ml of water and stir it to be 2500ml of working solution. Always be sure to mix the First Developer before mixing the other chemicals to avoid contamination of the first developer. Firmly tighten mixed chemistry and stock solution containers before opening other chemistry bottles.
- **Reversal bath:** Pour 125ml (1 bottle) of R2: RV stock solution into 2375ml of water and stir it to be 2500ml of working solution.
- **Color Dev.:** Pour R3: CD Part-A 500ml (1 bottle) into 1950ml of water and stir to be clear solution. Then add R3: CD Part-B 50ml (1 bottle) and stir it to be 2500ml of R3: CD working solution.
- **Conditioner:** Pour 250ml (1 bottle) of R4: CT stock solution into 2250ml of water and stir it to be 2500ml of working solution.
- **Bleach:** Pour 2 bottles (650ml x 2) of R5: BL stock solution into 1200ml of water and stir it to be 2500ml of working solution.

- **Fixer:** Pour 325ml (1 bottle) of R6: FX stock solution into 2175ml of water and stir it to be 2500ml of working solution.
- **Stabilizer:** Pour 25ml (1 bottle) of R7: STB stock solution into 2475ml of water and softly stir it to be 2500ml of working solution.
- The working solution can be stored according to the instructions 4 below.

How to make 1,25L working solutions

Process	Chemicals	Water	Part-A	Part-B	Total
First dev.	R1 : FD	1000 ml	+ 250 ml	-	= 1250 ml
Reversal bath	R2 : RV	1187,5 ml	+ 62,5 ml	-	= 1250 ml
Color dev.	R3 : CD	975 ml	+ 250 ml	+ 25 ml	= 1250 ml
Conditioner	R4 : CT	1125 ml	+ 125 ml	-	= 1250 ml
Bleach	R5 : BL	600 ml	+ 650 ml	-	= 1250 ml
Fixer	R6 : FX	1087,5 ml	+ 162,5 ml	-	= 1250 ml
Stabilizer	R7 : STB	1237,5 ml	+ 12,5 ml	-	= 1250 ml

- Stock solution can be measured to make needed working solutions in accordance with the amount of films to be processed.
- It is possible to process 20 rolls of films at most with 1,25L of working solutions.
- The remaining stock solutions can be stored in the original bottles.

How to make 1L working solutions

Process	Chemicals	Water	Part-A	Part-B	Total
First dev.	R1 : FD	800 ml	+ 200 ml	-	= 1000 ml
Reversal bath	R2 : RV	950 ml	+ 50 ml	-	= 1000 ml
Color dev.	R3 : CD	780 ml	+ 200 ml	+ 20 ml	= 1000 ml
Conditioner	R4 : CT	900 ml	+ 100 ml	-	= 1000 ml
Bleach	R5 : BL	480 ml	+ 520 ml	-	= 1000 ml
Fixer	R6 : FX	870 ml	+ 130 ml	-	= 1000 ml
Stabilizer	R7 : STB	990 ml	+ 10 ml	-	= 1000 ml

- In case a small amount of film is to be processed, it is possible to make as little working solution as possible.
- For instance, the chart above shows to make 1L of working solutions to process 16 rolls of film at the most.

- In case you want to process less film, the amount of water and stock solutions can be calculated accordingly, but please note a certain minimum amount of working solution may be required depending on the processing methods you use.

3. Processing condition (with 1L of working solution, 135-36exp)

Process	Chemicals	Temp. (°C)	Times setting & numer of films			
			1~4 rolls	5~8 rolls	9~12 rolls	13~16 rolls
Pre warming		38,0 ± 0,6	5'00	5'00	5'00	5'00
First dev.	R1 : FD	38,0 ± 0,3	6'15	6'30	6'45	7'00
First wash	Water	38,0 ± 0,6	2'30	2'30	2'30	2'30
Reversal bath	R2 : RV	38,0 ± 0,6	2'00	2'00	2'00	2'00
Color dev.	R3 : CD	38,0 ± 0,6	6'00	7'00	8'00	9'00
Conditioner	R4 : CT	36 ± 3	2'00	2'00	2'00	2'00
Bleach	R5 : BL	36 ± 3	6'00	6'30	7'00	7'30
Fixer	R6 : FX	36 ± 3	4'00	4'00	4'00	4'00
Second wash	Water	24 ~ 41	3'00	3'00	3'00	3'00
Stabilizer*	R7 : STB	24 ~ 26	1'00	1'00	1'00	1'00

- The chart above shows the necessary processing condition in case 1L of working solution is used to process films in rotary processing.
- The processing times change in accordance with the amount of film to be processed in a working solution to be prepared.
- It may be required to adjust the First Dev (R1: FD) time if a different developing method is being applied.
- The times indicated in the chart include 10 sec of the interval time while draining solutions between the single processing steps.
- *PLEASE NOTE: We strongly recommend to apply the stabilizer bath outside the rotary processor in a separate tray. The stabilizer does not require rotary processing or other agitation as long as the whole film is being immersed for 1 minute. In case stabilizer comes into contact with drum or reels, these must immediately be thoroughly cleaned with water. The stabilizer should NEVER be poured into the Lift for use in the processor!
- Pre warming allows to adjust film, reels and tank to the critical working temperature required for the color developer. It may be required to adjust the First Dev (R1: FD) time if a different developing method is being applied.
- In case of tray processing the films must be processed in complete darkness until the end of Reversal bath processing (R2: RV).

- In case failure is found in the color balance, it may be suspected that small amounts of other processing solutions have contaminated into First Dev (R1: FD) or Color Dev (R3: CD).
- **CAPACITY:** To ensure repeatable and optimal results of your slide processing, both first developer (R1: FD) and color developer (R3: CD) should be used as one-shot processors for single use only. The minimum filling quantity of the JOB drum system is about 120 ml per film. This means a maximum of 20 films can be processed with the 2.5 L kit in perfect quality. For one-shot processing the times of 1-4 rolls and 5- 8 rolls apply respectively.
- Higher capacity may be achieved using the extended capacity times in the table (columns 9-12 and 13- 16) with the following caveats: If users choose to reuse 1L of chemicals for additional 4 films (totaling 12 films to be processed with 1L), the times setting for 9-12 rolls apply, and the quality of the process will still be quite good. It is possible to use the same 1L working solution to process a total of 16 films, however the process will show less reproducible results in terms of maximum density and color precision. (Here the times for 13-16 rolls of film apply). After processing a maximum of 40 rolls of film, the chemistry will be utterly depleted.

4. Storage Condition

Process	Chemicals	Stock solution in bottles opened once	Working solution
First dev.	R1 : FD	12 weeks	1 week
Reversal bath	R2 : RV	12 weeks	1 week
Color dev.	R3 : CDA	12 weeks	1 week
Conditioner	R4 : CT	12 weeks	1 week
Bleach	R5 : BL	24 weeks	24 weeks
Fixer	R6 : FX	24 weeks	24 weeks
Stabilizer	R7 : STB	24 weeks	24 weeks

- **Chemistry must NEVER reach minus temperatures (in °C).**
To ensure perfect working quality the temperature must always remain between 5°C and 30°C during storage and transportation.
- Once the original bottles have been opened, please store the stock solutions in the original bottles in a dark and cool place.

5. Disposal

Please contact your local government authorities on the appropriate disposal of used or remaining chemistry. Immediately rinse completely emptied chemistry containers while mixing the last kit of chemistry so that plastic bottles can be recycled or re-used.

6. Safety precautions

Keep chemistry out of reach of children. In case chemistry comes into eye contact, please rinse with water. In case of symptoms please contact your doctor.

7. Trouble shooting

Fault	Possible Cause	Remedy
Slides too light	Over exposure; Developing time of first developer too long; Contamination of first developer with bleach or fixer	Check cameras and exposure; Shorten developing time by 15-30 s; Rinse equipment and reels thoroughly
Slides too dark	Under exposure; Pre warming of the tank has been omitted; Developing time of first developer too short	Check camera and exposure; Add a pre warming time of 5 min. to the program; Extend developing time by 15-30 s
Uneven color areas, streaks and stripes	Insufficient filling quantity or poor agitation; First developer or color developer was pored in too slowly	Check filling amounts and sufficient rotation; Add a pre warming time of 5 min. to the program; Fill in the first developer and color developer quickly
Color fog	Mixing vessels of the processor are not clean; Contamination of the developer by other chemicals	Use individual mixing vessels and mixing rod for each bath
Drying spots on the dry film	Tap water is too hard when preparing the stabilizer bath	Mix tap water with distilled or demineralized water in the proportion 1:2
Maximum density green / green shadows	Contamination of first developer or color developer with stabilizer	Use individual mixing vessels and mixing rod for each bath; Keep bottles of stock solution and working solutions tightly closed and separated from the other chemicals; Never fill the stabilizer into the Lift of the JOB processor to avoid permanent contamination ; Film should be put into stabilizer without drum and reel in a separate tray
Maximum density too light: blue (depending on degree of contamination)	Contamination of first developer with color developer	Use individual mixing vessels and mixing rod for each bath; Keep individual bottles of stock solutions and working solutions tightly closed and separated from each other

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