

TECHNICAL INFORMATION

ORWO - Instruction no. 1182

ORWO black & white negative camera films
ORWO black & white duplicating positive films
ORWO black & white duplicating negative films

Application: ORWO negative black & white motion picture films and also both duplicating positive and duplicating negative films are to be developed according to ORWO Instruction no. 1182

Procedure:

no.	process	bath	time (min)	temperature (°C)
1	developing	ORWO 17 or Kodak D 96	5 ... 8	21 ± 1
2	spray-washing	-	½ ... 1	20 ... 24
3	fixing	Calbe A 300 * or RF 90 *	5 ... 7	20 ... 22
4	spray-washing	-	5 ... 8	20 ... 24
5	wetting	Calbe F 905 * (1+200)	1 ... 2	20 ... 22
6	drying			max. 40

1 - 3 dark-room processing

Comment:

If you want to receive a very fine graininess we suggest the developer, mentioned down, but you have to expect a little bit less in sensitivity, too.

If you are depending to the real sensitivity and a normal fine graininess we suggest you to process according to ORWO Instruction no. 1183 with the phenidone-developer.

Depending on the processing equipment, deviations of time and temperature are practicable, if a comparable processing quality is guaranteed.

Lower temperatures for spray-washing are practicable too, if the washing time is extended (i.e. 30 ... 40 % at 12 ... 15°C).

Formulae:

Developer:

Water	750 ml
Pentasodiumtriphosphate *	2,00 g
Metol *	1,50 g
Sodium sulphite	75,00 g
Hydroquinone *	1,50 g
Sodium tetraborate 10 hydrate	4,50 g
Potassium bromide	0,80 g
...fill up water to	1 litre
pH - value	9,1 ± 0,1

* Explanations:

Pentasodiumtriphosphate	Anticalcium agent based on polyphosphate
Hydroquinone	Developing agent
Metol	Developing agent (monomethyle-p-aminophenol sulphate)
F 905	Calbe Wetting agent
A 300	Calbe Rapid fixing based on ammonium thiosulphate
RF 90	Calbe Rapid fixing based on ammonium thiosulphate

We reserve the right to change the ORWO-Instruction no. 2182 to improve the characteristics of film and perfect the safety of processing bathes.



FILMOTEC GmbH
 Ortsteil Wolfen
 ChemiePark Bitterfeld Wolfen
 Areal A, Röntgenstraße Geb. 415
 06766 Bitterfeld-Wolfen
 Tel.: +49 (0) - 3494 - 36 96 80
 Fax: +49 (0) - 3494 - 36 96 82
filmotec@filmotec.de
www.filmotec.de