

# PHOTOGRAPHERS' FORMULARY INC.

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## THE PYROCAT-HD IN GLYCOL DEVELOPER

CAT. NUMBER 01-5091 LIQUID TO MAKE 10 LITERS

CAT. NUMBER 01-5093 LIQUID TO MAKE 50 LITERS  
OF WORKING SOLUTION

Pyrocat-HD in glycol is a high acutance developer formulated by Sandy King as an alternative to other pyrogallol based staining developers. Pyrocat-HD gives negatives of fine grain and full emulsion speed and is suitable for all types of development methods, including rotary, normal agitation, minimal agitation and stand development. Packaging in glycol stabilizes the formula to give a very long shelf life and long term consistency.

### FOR YOUR CHEMICAL SAFETY

All chemicals are dangerous and must be treated with respect. Please read the warnings listed here. Always use rubber gloves and dust mask when using chemicals.

**Catechol** (pyrocatechin), has a high vapor pressure and it is a phenol. The high vapor pressure means that solid catechol evaporates readily. When you open a bottle containing solid catechol, you can smell it. Always store the solid catechol in a tightly capped glass container. When mixing a solution containing catechol, work in a ventilated area. When catechol is in solution, its high vapor pressure is not a problem.

The fact that catechol is a phenol means that it is corrosive and can cause skin burns. If you should spill a solution of catechol, wash the area (or skin) with soap and water. Use tongs or rubber gloves whenever possible when working with this compound or its solutions.

The user assumes all risks upon accepting these chemicals. IF FOR ANY REASON YOU DO NOT WISH TO ASSUME ALL RISKS, PLEASE RETURN THE CHEMICALS WITHIN 30 DAYS FOR A FULL REFUND.

Please consult with local sewer and water authorities regarding proper disposal of darkroom chemicals in your area.

### Pyrocat-HD Film Developer

#### Stock Solution A

<b>Propylene Glycol (150°F)</b>	<b>75 ml</b>	<b>375 ml</b>
Sodium Metabisulfite	1 g	5 g
Pyrocatechin	5 g	25 g
Phenidone	.2g	1 g
Potassium Bromide	.1g	.5 g
Propylene Glycol (68°F)	100 ml	500 ml

#### Stock Solution B

<b>Distilled Water (68°F)</b>	<b>75 ml</b>	<b>375 ml</b>
Potassium Carbonate	75 g	375 g
Water to make (68°F)	100 ml	500 ml

#### Working Solution

To make a standard working solution mix 1 part A with 1 part B with 100 parts water.

The working solution can be made quite a bit more energetic (faster working) by using a dilution of 3:2:100 or 5:3:100. The stronger dilutions would generally be used only when developing negatives for printing with alternative processes, which require negatives of much greater contrast than silver papers.

Use a plain water stop bath for one minute or an acetic stop bath at one-half normal strength. Use an alkaline fixer (Such as TF-4) for 5 minutes. Wash in running water for 10-15 minutes.

One major difference between PMK and Pyrocat-HD is the color of the stain. PMK stain has a strong yellow/green color, which inhibits blue and magenta. When printing on graded paper, the yellow/green stain essentially adds more density to the negative and boosts the contrast. When printing on variable contrast paper, the yellow/green stain tends to reduce contrast, particularly in the high values. These effects can be good or bad, depending on the negative. Pyrocat-HD's stain is brown in color. Pyrocat negatives print much like PMK negatives on VC papers, though with slightly less highlight shouldering. Pyrocat-HD negatives print faster on graded papers than similar PMK negatives because brown stain doesn't inhibit the blue light that the paper is sensitive to as much as yellow/green stain.

**Suggested Development Times.** The suggested times assume a 1:1:100 dilution of Pyrocat-HD (One Part A + One Part B + 100 Parts Water), with rotary development in Jobo or BTZS tubes. These times, at the temperatures indicated, should give an approximate CI of .56 when measured with a densitometer in blue mode, appropriate for printing on graded silver papers of #2 contrasts. For variable contrast silver papers be sure to increase development times by about 35%. For developing in tray with shuffle agitation, or in tanks with agitation every 30-60 seconds, increase time of development by about 15%. When developing with rotary processing, either Jobo or BTZS type tubes, use a minimum of 75 ml of the standard working solution per sheet of 4X5 film, (minimum of 250 ml of working solution for a sheet of 8X10 film). A pre-soak of two minutes is recommended as good practice with rotary processing.

Pyrocat-HD gives negatives of very great acutance with minimal agitation. When using minimal agitation be sure to extend development time by about 50% over normal time for rotary processing, and agitate every two or three minutes. Minimal agitation is recommended only when the adjusted development time is about fifteen minutes or more.

Film	EI	70°	75°	80°
Across	100	8:00 min	6:30 min	5:15 min
BPF 200	100	8:00 min	6:30 min	5:15 min
Delta 100	125	8:00 min	6:30 min	5:15 min
Efke 25	35	7:00 min	5:30 min	4:00 min
Efke PL 200	100	12:00 min	9:30 min	8:30 min
FP4+	125	8:30 min	7:15 min	5:15 min
HP5+	400	10:00 min	8:00 min	6:00 min
J&C 400	350	10:00 min	8:00 min	6:00 min
Tmax-400	500	10:00 min	8:00 min	6:00 min
Tri-X 320	400	10:00 min	8:00 min	6:00 min

The suggested development times are guidelines. Do not hesitate to increase or decrease time of development over the recommended times if your prints have too little or too much contrast.



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