

But no matter how energetically this formula works, and how fine, handsome and clear negatives are obtained, it has also its defects. A slight fog is quite unavoidable if the extreme developing strength is applied. This may be of no great consequence as long as a good printing light is at our disposal during the summer months; however, in winter even the slightest fog may prolong the printing time improperly. But sometimes, which is worse, the caustic potash acts extremely energetically upon the gelatine film; the same swells very much, and on many plates there is a considerable tendency to peel off, and it becomes very injurious. Plates developed with hydroquinone take twice as long to dry as those developed with pyro-soda. The worst, finally, is the danger of yellow fog. If the plate, after being fully developed, looks thin and the development is continued for one or two minutes, to give it strength, a slight yellow fog, sometimes appearing only on some parts, can be calculated upon with utmost certainty. Nothing is known to prevent this.

I have tried replacing part of the caustic potash by carbonate of potassium, to obtain more clearness, less swelling and less yellow fog, without sacrificing rapidity and energy. I succeeded tolerably well with this attempt, and developed with good success with the following developer:

SOLUTION I.

Sulphite of soda	35 grams.
Yellow prussiate of potash....	30 "
Hydroquinone.....	10 "
Water	550 c.c.

(Therefore a little more hydroquinone.)

SOLUTION II.

Caustic potash	5 grams.
Carbonate of potash.....	35-40 "
Water	550 c.c.

The plates so developed work just as quickly and give the same sensitometer number, but the high lights are unfor-

tunately wanting, the two highest sensitometer numbers having no more difference in density, and this is the case with Lainer's formula. This defect might be more injurious to portrait pictures than to instantaneous views.

About a month and a half ago I received from Dr. Th. Schuchardt and from Professor Dr. Witt samples of para-amidophenol, chemically pure, and made some tests with this preparation, based upon Professor Dr. Eder's formula (*Photo Correspondenz*, July, 1891). Eder gives the following prescriptions as being the best:

I. PARA-AMIDOPHENOL AND POTASH.

Para-amidophenol	4 grams.
Potash	40 "
Sulphite of soda	120 "
Water	1,000 c.c.

II. PARA-AMIDOPHENOL AND SODA.

Para-amidophenol	4 grams.
Soda (fused).....	40 "
Sulphite of soda	120 "
Water	1,000 c.c.

I have tried only the first one, and obtained results which are quite analogous to Eder's. The developing rapidity is between hydroquinone—potash and hydroquinone—caustic potash; the sensitometer number obtained is exactly the same with all those developers, the gradation likewise. A tendency to yellow fog I could not discover; the plates were much clearer than with hydroquinone and the covering strength with purely gray color, according to the time of development, a very suitable one. All these properties speak very much in favor of para-amidophenol, which led to the idea, to force the developing rapidity by caustic potash. Eder mentions this experiment, but says that this developer can show no advantages in comparison with rapid hydroquinone. In my hands this developer did not prove to be particularly good. I used the following mixture: