

SOLUTION I.

Sulphite of soda	3.5 grams.
Yellow prussiate of potash . . .	3 "
Para-amidophenol	0.4 gram.
Water	60 c.c.

SOLUTION II.

Caustic potash	0.5 gram.
Carbonate of potassium	4.5 grams.
Water	60 c.c.

This developer worked with flash-like rapidity, but it was not possible to obtain a fully developed plate without some yellow fog. Otherwise the gradation was good and the developing strength even rather stronger than in the rapid hydroquinone developer.

All these developing prescriptions, according to my opinion, have now been surpassed by the new preparation rodinal, a developer produced from para-amidophenol by Dr. Andresen. Although I have not made many tests yet with this developer, I have no doubt that it is far ahead of all other developers.

I will now give a description of my tests with rodinal.

The rodinal is a clear liquid which does not make the fingers slippery and has a weak taste of sulphite of soda. According to the formula it has to be diluted with thirty times its volume of water.

To test the developing strength, two uniform sensitometers were made, while from the same sheet of tissue paper two identical sensitometer plates of twelve numbers were pasted upon two thin glass plates. Under these two sensitometers two plates were always simultaneously exposed at a distance of 300 cm. from a benzine light; both were then developed simultaneously, each time one in fresh rapid hydroquinone after Lainer and the other in rodinal.

First Experiment.—Normal exposure, two minutes thirty seconds. Rodinal 1:30, freshly mixed. Both plates appear simultaneously; developing

time until the plate developed in rapid hydroquinone showed a light fog. On both plates No. 11 is readable after fixing. No. 1 with rodinal is a little denser; and it is remarkable that with this latter developer Nos. 7, 8, 9 and 10 are covered much stronger than with hydroquinone.

Second Experiment.—Under-exposure, one minute. Developer as before.

On both plates, which are developed until the formation of a dense fog on the hydroquinone plate, No. 7 now just appears; otherwise result as before.

Third Experiment.—Just as I., only rodinal 1:50 diluted. Result as under II., only softer, still very fine graduated scale of the rodinal.

Fourth Experiment.—Four plates, each one minute exposed, all in the same quantity (50 c.c.) rodinal 1:30, one after another developed. Developing time: one minute, one minute, seventy seconds, eighty seconds; completely uniform results of all four plates.

The following would therefore be proven by these experiments: The rodinal is, even if fifty times diluted, of equal value in developing strength to the rapid hydroquinone, but it differs from the same by a much more intense reduction at the places of short exposure. This difference is undoubtedly the reason that several authors have discovered a much greater developing strength in the rodinal in comparison with other developers. If no sensitometer is used, this impression is prevalent, as the following tests will show. Two plates each were exposed on a dark day with the instantaneous shutter, first with an opening of $f/8$, then with $f/16$, and the first two plates were then developed at the same time in hydroquinone and rodinal. They appeared with equal rapidity, and the development was continued until the plate had