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### "READY-SENSITIZED" PAPER.

#### PRINTING, TONING, AND FIXING.

WHAT is commonly entitled "ready-sensitized" albumenized paper is coming more and more into general use. When first introduced, it was used exclusively by amateurs, and was looked upon with the greatest contempt by the profession—and, indeed, there was at that time some reason for this. The results obtained from it were much inferior to prints from paper prepared in the ordinary way, and, moreover, the price paid was almost prohibitory for work on any large scale.

Now, things are quite different. In spite of the fact that some professional photographers affect to scoff at ready-sensitized paper, there are other professionals who use it, and use it in large quantities. The results to be obtained from at least certain brands are quite equal to what can be had from paper sensitized as it is used, granted, of course, the necessary experience, while the price is very little in advance of that at which paper can be sensitized at home.

A few remarks on printing, toning, and fixing of ready-sensitized paper will not be out of place. As the qualities of different brands vary considerably, our remarks may not be found applicable to all. They apply, however, to those brands which have worked best of the many that we have tried.

First, as regards printing. It is usual to place ordinary paper in the frames before it is quite dry, and if the printing takes at all a long time, there is a liability to slight blurring from the continuance of the drying in the frame, and the consequent contraction of the paper. Ready-sensitized paper may be used quite dry. The printing proceeds much as with ordinary paper, but takes somewhat less time. The colour is also somewhat different. The printing does not require to be carried quite so far as with ordinary paper, as there is less loss of colour in the toning and fixing baths.

The question of the best toning bath to use, and the much-vexed one of complete or slight washing before toning, have next to be taken into consideration.

To take the latter first, after considerable experiment, we have concluded that a comparatively thorough washing before toning gives the best results. It is quite true that toning will take place much more rapidly if a considerable amount of free nitrate of silver is left in the paper, but the final results are, in our opinion, much inferior to those produced when a thorough washing is resorted to.

The following experiment is instructive. A suitable negative is selected, one giving a print with plenty of detail and contrast; two prints are taken from this; one is washed thoroughly—that is, till it no longer causes any cloudiness to the water—the other is but slightly washed. Both are now placed in the toning bath. The last-

mentioned will tone much the faster of the two—will, in fact, probably have reached a warm tint before the other shows any change at all. When it has come thus far, it is removed from the solution, and we wait till the other print assumes somewhat the same tone, which will take a considerable time. After sufficient washing, both are placed in the fixing solution; and now let us note the different manner in which the two are acted upon. The print which was thoroughly washed shows scarcely any change of colour, whilst the other fades into a sickly yellow. It is true that it will somewhat recover its colour after a few minutes of fixing; but it will never equal the first. We may vary the experiment by allowing the slightly-washed print to tone to a deeper colour than the other, and hereby we may get as great depth of tone in the one case as in the other, but never, in our experience, as pleasing a colour. Besides, even if we could, it is most objectionable to have to allow in toning for a loss of colour which is afterwards to take place. As regards toning bath to use, of the many which we have tried we prefer two—namely, the well-known acetate bath, and the borax bath.

The latter has the advantage that it does not require to be mixed several days before use, as does the former. As it may not be known to all our readers, we give the manner of mixing it. We take 90 grains of borax for every sheet of paper which is to be used, and dissolve in it a few ounces of warm water; to this we add 1 grain of gold chloride—this latter being for the sake of convenience kept in the form of a stock solution of any strength we please to adopt; it is common to make it up a grain of the gold salt to a drachm of water. We next dilute the bath with water to whatever extent we please. The more dilute it is, of course the slower it tones. We consider that the best results are got from a bath which takes about fifteen or twenty minutes to bring about the desired change of colour. If the prints have been but slightly washed, this will be effected by a bath containing 1 grain of gold chloride to 16 ounces of water. If they have been thoroughly washed, as we advise, the strength will require to be greater than this. One grain of the gold salt to 10 or 12 ounces of water will be found a good strength. The amount of washing which we recommend is such that the washing water has ceased to be at all perceptibly milky, unless special means be taken to examine it. The last trace of the free nitrate will not even then be gone, and it appears undesirable to get rid of this trace. The existence of it may be proved, even after very prolonged washing, by comparing in glass tubes a long column of the washing water with tap water.

The fixing bath should not be too strong; two ounces of hyposulphite of soda to each pint is sufficient. It is well to render the solution slightly alkaline by placing in it a small piece of washing soda. With a weak bath like this a