

PART I.

THEORETICAL.

1.—THE CHEMICAL COMPOSITION OF COLLODION EMULSION.

THE actual preparation of collodion emulsion, suitable for colour sensitizing is difficult, requiring no small amount of chemical knowledge and special equipment. The collodion emulsion of commerce, however, is generally of a reliable nature, and it would hardly pay the practical man to spend valuable time in preparing emulsion himself. It is, however, desirable that he should know something of its constituents and their relative action.

To prepare a collodion emulsion, the silver haloid must be precipitated in the film itself, that is to say, we cannot satisfactorily prepare a silver haloid and add it to the plain collodion. We must bring together the silver nitrate and the haloid salt (usually a bromide), with which the silver re-acts, in the presence of one of the solvents in which collodion itself is soluble. Such a solvent is alcohol, and if we dissolve in it some haloid salt and mix this solution with the collodion, we can then add an alcoholic solution of silver nitrate also to the collodion, and thus precipitate the silver as a haloid in the required