

THE DRY COLLODION PROCESS

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The dry collodion process by Charles A. Long

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CHARLES A. LONG

**THE DRY
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PROCESS**

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DRY COLLODION
PROCESS.

BY
CHARLES A. LONG.

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P R E F A C E.



THE following pages shall be devoted to the description of a process on Dry Collodion, which I believe to be at once simple and effective. The experiments connected with the perfection of this process have occupied my leisure time for the space of two years or more, and have been conducted with all the care of which I was master. The constant repetition of them enables me to say, that whoever will follow diligently the process step by step, as detailed in this Pamphlet, must succeed in producing pictures in every way such as could be required by the most exacting critic.

The process is simple, clean, and expeditious; and the resulting Negatives possess the exquisite softness of Albumen, the brilliancy of the wet Collodion, and the fine artistic texture of the Paper process.

To disarm criticism, and to make peace with my fellow labourers in our art, I wish it to be understood that I do not claim the use of Collodion, of Gelatine, of Metagelatine, or of any of the Chemicals used in the process, most of these have been employed by others in various ways; I merely reserve to myself the pleasure of placing in the hands of Photographers a definite and simple plan by which pictures may be taken on Dry Collodion.

CHARLES A. LONG.

June 20, 1857.

THE

DRY COLLODION PROCESS.

BEFORE describing in detail the manipulations of the process on Dry Collodion plates, it will be necessary to say a few words on the materials and apparatus to be employed, and also to give an account of the means of preparing the various solutions used in the process. First,

THE COLLODION.

This being the principal material we have to use, we must exercise great care in the selection of a sample that possesses all the characteristics which fit it for a dry process. We must reject all samples that possess great tenacity and contractile power: the Collodion must not be too thick, and it must flow evenly over the plate, and not set in ridges. The best condition for the Iodized Collodion is that known as *powdery*, that is, being spread on the plate and partially dry, it cannot be removed as a film, but crumbles up on being pressed by the finger in its passage across the plate; in fact, such a condition as would arise from using gun cotton prepared with acids at a high temperature.

The following formula will be found to answer most admirably:—

Gun Cotton	60 grains.
Absolute Alcohol	5 ounces.
Sulphuric Æther, sp. gr. '730	15 ounces.

The cotton is to be shaken up with the mixture of alcohol and æther, and when dissolved, the bottle containing it must be stood aside, in order that any undissolved particles of cotton may subside. The clear liquid may then be decanted into a clean bottle for use.

The IODIZING SOLUTION that I have found to give the best results in this process is made in the manner following:—

Absolute Alcohol	8 ounces.
Iodide of Cadmium	64 grains.
Iodide of Ammonium	64 grains.

The iodides are to be dissolved by agitation in the alcohol, and the resulting solution is to be carefully filtered, and preserved in a well-stoppered bottle.

The IODIZED COLLODION consists of—

Iodizing Solution	2 drams.	} 1 ounce.
Plain Collodion	6 drams.	

The Collodion should always be iodized at least twelve hours before it is required; this interval allows any insoluble matters either from the iodizing solution or from the Collodion itself to fall to the

bottom, and enables the operator to pour off the clear solution into a perfectly clean bottle for use.

Next in importance to the Iodized Collodion comes

THE PRESERVATIVE SOLUTION.

Some care is required in the preparation of this solution, in order that it may be clear and bright when finished, and not contain particles that would be deposited in its passage over the Collodion film when being used. The chief precaution to be observed is *not to allow it to boil too rapidly, and not to conduct the operation over too fierce a fire*; attention to this will prevent many failures, and ensure a solution in every way suited for the process.

Take 200 grains of the best transparent gelatine, cut into small shreds, and throw it into a pipkin in which has been previously placed 10 ounces of distilled water; set this on a slow fire, or over a lamp, until the gelatine is completely melted; then weigh out 100 grains of pure citric acid and dissolve it in 2 ounces of distilled water; add this to the solution of gelatine, stirring it during the addition with a glass rod. The solution in the pipkin is now to be gently boiled until half of it has evaporated; this should be in about 15 minutes: remove it from the fire, and add sufficient distilled water to make up the bulk of liquid to 12 ounces. When quite cold, the liquid in the pipkin is to be filtered through two