

Standardization of Exposure

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Standardization of an industry should begin at the beginning, and as the producers of motion picture film have a standardized product to start with, *i. e.*, the film, the first thing for the producer to standardize is the exposure, and this can only be done by standardizing the conditions under which the film is exposed. Of course, I refer to work in the studio.

Messrs. Hurter & Driffeld, of England, whose research work in the photographic field is recognized as standard throughout the world, put great stress on the necessity of securing a technically perfect negative. Let me quote a few words from their little book on "PHOTOCHEMICAL INVESTIGATIONS AND METHODS OF SPEED DETERMINATION":—

"While we quite realize that the artist will always produce the best *picture*, we contend that the scientist will produce the best *negative*. The photographer, therefore, who combines scientific method with artistic skill is in the best possible position to produce good work.

"The truthful representation of light and shade involves the production of a technically perfect negative, *i. e.*, one in which the opacities of its gradations are proportional to the light reflected by those parts of the original object which they represent. Our investigations show that such a relationship does exist, but only when a plate has received what we term a *correct exposure*.

"While many photographers attach very little importance to accuracy in exposure, and maintain that errors may be readily corrected by suitable modifications in the composition of the developer, we have always strongly insisted that a correct exposure is an essential foundation if we aim to procure a technically perfect negative. It must be clearly understood, however, that, by a correct exposure we do not imply that there is necessarily one exposure, and one only, which will yield a negative answering to our definition. Fortunately, most plates admit of some latitude in this respect.

"Our contention is that the latent image, false in its gradations, cannot, by modifications in the constitutions of the developer, be made to yield a visible image true in its gradations. The practice of photography, by methods of scientific predetermination, imperatively demands a correct exposure as a fundamental condition."

The standardization of the exposure so that at all times every foot of film exposed in the studio will be uniform in density will do away with the necessity of variations of timing on the printer, and eliminate the uncertainty of the finished result, and one can predetermine the screen results when toning or dyeing is resorted to.

I have been working on an indirect system of studio lighting to standardize the exposure, in which the volume of indirect light is

governed by the cubical area to be lighted, and in addition to which the light effects are secured by the use of a few diffused direct light units. In this way the photographer can exercise his artistic ability with the assurance of a perfectly exposed negative resulting. Of course, studio conditions will have to be somewhat changed from the present methods of working, but the certainty of the results will warrant the expense.

To my mind the use of direct light in the studio is a great mistake. Ninety percent of the time we spend in indirect, or reflected light. Such being the case, why should we not make our photographs under the conditions under which we normally live?

The Eskimo is a specimen of a human being who spends most of his life under direct light. Now who wants to look like an Eskimo?

By careful use of the exposure meter, in outdoor work, the exterior exposures can be standardized to balance with the studio work, so that the same treatment will do for both.