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PHOTOGRAPHIC EMULSION CONTAINING CERTAIN DISULPHIDES AS ANTIFOGGANTS

Leslie G. S. Brooker and Cyril J. Staud, Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., a corporation of New York

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3 Claims. (Cl. 95—7)

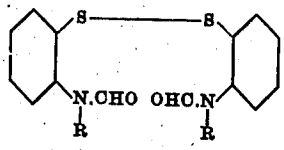
This invention relates to anti-fogging agents for photographic emulsions, such as gelatino-silver-halide emulsions, and more particularly to the use of di-o-formylalkylaminodiphenyldisulphides for that purpose.

Some sensitizing dyes, while being powerful color sensitizers, have a fogging action upon photographic emulsions containing them. It is also well known that when development of photographic film is continued for protracted periods, or at temperatures above normal, fog is apt to result.

We have found that the harmful effects can be decreased by adding a small proportion of one or more of the above disulphides to photographic emulsions.

An object of our invention, therefore, is to provide photographic emulsions of enhanced stability. Other objects will hereinafter appear.

We have found that certain complex disulphides may be used for this purpose. For instance, di-o-formylethylaminodiphenyldisulphide, which is obtained by the alkaline oxidation of benzothiazole ethiodide, is a powerful anti-foggant. Compounds of this type have the structure

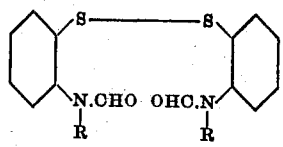


in which R equals an alkyl group.

When a solution containing 2 mg. of di-o-formylethylaminodiphenyldisulphide, for instance, was added to 100 cc. of a fast negative emulsion the fog was materially reduced. This is merely illustrative of the use of these disulphides as antifoggants and is not intended to limit our invention as it applies to the various known emulsions. The preparation of these disulphides is described in the literature and need not be repeated here. The disulphide is merely dissolved in alcohol and a solution containing approximately 1-8 mg. of the disulphide is added to 100 cc. of any of the gelatino-silver-halide emulsions known to photographic experts (usually suitable sensitized as described in the prior art) and the emulsion coated upon a support in the usual way.

What we claim as our invention and desire to be secured by Letters Patent of the United States is:

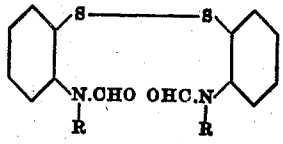
1. A gelatino-silver-halide emulsion containing as an anti-foggant, a compound having the general formula



in which R equals and alkyl group.

2. A gelatino-silver-halide emulsion containing di-o-formylethylaminodiphenyldisulphide as an anti-foggant.

3. A photographic element coated with a gelatino-silver-halide emulsion containing as an antifoggant, a compound having the general formula



in which R equals an alkyl group.

LESLIE G. S. BROOKER.
CYRIL J. STAUD.