

UNITED STATES PATENT OFFICE

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PHOTOGRAPHIC EMULSION

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2 Claims. (Cl. 95—7)

My present invention relates to photographic emulsions and more particularly to such emulsions optically sensitized or hyper-sensitized.

One of its objects is to provide a process of protecting emulsions made from kinds of gelatin having a tendency for fogging and optically sensitized or hyper-sensitized from fogging while simultaneously stabilizing the same. Another object is these stabilized emulsions themselves.

In U. S. specifications Nos. 1,696,830 and 1,758,577 there is described a method for producing clear silver halide gelatin emulsions from kinds of gelatin having a tendency to cause fog, which consists in adding to the emulsion at any stage of its manufacture an organic compound which forms a silver salt with a solubility in water at 18° C. not surpassing that of silver chloride. The compound may be, for instance, an imidazole, a tetrazole, a thiophene, thioglycollic acid or the like.

This invention is based on the observation that these organic compounds do not only retard the fog-promoting action of certain kinds of gelatin, but are suited to take the place of additions (for instance, potassium bromide) hitherto used for increasing the stability of optically sensitized and particularly hyper-sensitized emulsions. They differ from potassium bromide hitherto used for this purpose by the advantage that they do not detrimentally affect the sensitization.

In explanation of the term "optically sensitized", an emulsion is said to be optically sensitized when, owing to the presence in it of a dyestuff or similar substance having an inherent property of absorbing light, it is rendered sensitive towards regions of the spectrum to which it would otherwise be but little or not at all sensitive.

The compounds are added to the emulsions which have been hyper-sensitized in known manner, for instance by washing with water or by addition of silver salt solutions, before the emulsions are poured onto the support. There may be used a single representative of the said group of substances or a member thereof. The usual known additions may also be incorporated in the emulsion prior to its being poured on the support.

The following examples illustrate the invention.

Example 1.—To 1 kilo of a panchromatic emulsion ready for being applied to a support and prepared in the usual manner are added 40 cc. of an aqueous solution of 1% strength of silver nitrate and 10–20 milligrams of ethylthiotriazole in an alcoholic solution, before the emulsion is poured on the support.

Example 2.—0.1 gram of nitrobenzimidazole is added to 1 kilo of a panchromatic emulsion hyper-sensitized with a silver nitrate solution according to Example 1, before it is poured on the support.

My invention is not limited to the foregoing examples or to the specific details given therein and I contemplate as included within my invention all such modifications as fall under the scope of the appended claims.

What I claim is:

1. In the manufacture of optically sensitized or hyper-sensitized silver halide emulsions the step which comprises incorporating in said emulsion ethylthiotriazoles.
2. An optically or hypersensitized silver halide emulsion containing ethylthiotriazole.

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