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PHOTOGRAPHIC DEVELOPER

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The present invention relates to photographic developers and more particularly to photographic developers of the pyrogallol type.

Heretofore photographic developers containing pyrogallol have been used but had the disadvantage of being very sensitive to oxygen of the air. After being affected by oxygen, the foregoing developers became dark. As a result such prior developers could not be kept very well for a long period of time. Although many attempts have been made to overcome the aforesaid disadvantage, no attempt, as far as I am aware, has been wholly satisfactory and successful when carried into practice on a commercial and practical scale.

I have discovered a photographic developer which overcomes the aforesaid disadvantages of prior developers and which possesses many advantages.

It is an object of the invention to provide a photographic developer which is not highly sensitive to oxygen and which produces a clear, unfaded negative.

It is also within the contemplation of the invention to provide a photographic developer which is wholly satisfactory in practical use and which is commercial and is capable of being manufactured on an industrial scale.

Other objects and advantages of the invention will become apparent from the following description.

According to the present discovery, it has been found that pyrogallol monomethyl ether possesses the advantages of pyrogallol as a photographic developer while at the same time being free from the disadvantage of high sensitiveness to oxygen. With the present developer, perfectly clear unfaded negatives can be produced.

It has likewise been discovered that homologues of pyrogallol monomethyl ether can also be used as photographic developers. Thus, for instance, monoethyl ether of pyrogallol or monomethyl ether of methyl pyrogallol can be employed instead of pyrogallol monomethyl ether.

For the purpose of giving those skilled in the

art a better understanding of the invention, the following specific and illustrative example is given.

Solution A

A photographic developer is prepared with about 100 parts by weight of water, about 65 parts by weight of sodium sulfite and about 1.7 parts by weight of potassium pyrosulfite. To this solution about 1.7 parts by weight of pyrogallol monomethyl ether or pyrogallol monoethyl ether are added.

Solution B

A solution is made by dissolving about 20 parts by weight of soda crystals (sodium carbonate) to about 100 parts by weight of water.

About equal volumes of Solution A, of Solution B and of water are mixed together to give a developer. The recipe and the handling of the developer is essentially the same as that of pyrogallol.

It is to be observed that the present invention is a surprising discovery which could not have been predicted by those skilled in the art. This is particularly true because prior experiments have shown that pyrogallol 1.3 dimethyl ether is practically ineffective as a developer.

Furthermore, it is to be noted that pyrogallol monomethyl ether can be easily produced by partially demethylating the dimethyl ether according to known method. It is likewise possible to convert pyrogallol into monoethyl ether by treating it with dimethyl sulfate. A very good yield may be obtained in this latter process.

I claim:—

1. A photographic developer containing a pyrogallol monoalkyl ether.
2. A photographic developer containing pyrogallol monomethyl ether.
3. A photographic developer containing pyrogallol monoethyl ether.
4. A photographic developer containing monomethyl ether of methyl pyrogallol.

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