

UNITED STATES PATENT OFFICE.

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PROCESS FOR DYEING ACIDYL CELLULOSES.

No Drawing. Original application filed March 3, 1924, Serial No. 696,675, and in Germany May 29, 1923. Divided and this application filed December 10, 1924. Serial No. 755,037.

It is well known that acidyl celluloses have only a small absorptive power for dyestuffs. Attempts have, therefore, not been lacking to avoid this defect. A process is described, for instance, in German Patent No. 355,533, which allows of the direct dyeing of cellulose acetate silk, by the addition to the dye bath of one or more protective colloids, organic acids, and larger quantities of water-soluble salts, particularly chlorides. British Patent 179,384 also recommends the employment of metallic salts such as sodium stannate, magenta, etc., with the simultaneous addition of colloids.

The noteworthy fact has now been established, that salts of the oxy acids of chlorine, as for instance chlorates, etc., are suitable in quite a peculiar degree as additions in dyeing acidyl cellulose, e. g. cellulose acetate silk, films, etc. or their transformation products. The use of protective colloids is superfluous. Even relatively small quantities of these salts produce shades of hitherto unattainable depth.

Example 1.—1 part by weight of chrysoidine G extra is dissolved in 1000 parts by weight of water and 5 parts by weight of chlorate of potassium KClO_3 are added. Ratio 1:20. Dyeing temperature 70° . Time 30 minutes. Instead of chlorate of potassium the chlorates of ammonium, sodium,

magnesium, calcium or zinc and further of such organic bases as monomethylamine, di-methylamine, etc., guanidine, pyridine and piperidine, may be used.

Other dyestuffs or their salts, as for instance methylene blue, rhodulin red, B, safarine, auramine, Bismarck brown, rhodulin yellow, rhodulin blue 6G (nitrate), turquoise blue G, rhodamin 6G extra, new methylene blue F, and many others can be fixed on cellulose acetate silks in this manner, with extraordinary depth of shade.

This application is a division of our application Serial Number 696,675 filed March 3, 1924.

We claim:—

1. Process of dyeing acidyl celluloses characterized in and by the fact that the acidyl celluloses are dyed in a neutral bath containing a salt of an oxy acid of chlorine.

2. Process of dyeing acidyl celluloses characterized in and by the fact that the acidyl celluloses are dyed in a neutral bath containing potassium chlorate.

3. A neutral dyeing composition comprising a dye and a salt of an oxy acid of chlorine.

In testimony whereof, we affix our signatures.

PAUL RABE.
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