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3,790,484

FRAGRANCE-IMPARTING LAUNDERING COMPOSITION

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2 Claims

ABSTRACT OF THE DISCLOSURE

Residual fragrance is imparted to laundered fabric articles by adding to such articles in course of laundering and during or at the inception of final rinse an aqueous composition comprising a fragrant oil, a cationic agent such as a dialkyl fatty quaternary ammonium halide, an organic amine base, and a non-ionic detergent.

BACKGROUND OF THE INVENTION

According to U.S. Pat. 3,271,305 various silicone compounds capable of being hydrolyzed to fragrant essential alcohols are impregnated in textiles to provide a persistent essence therein. Those skilled in the art will recognize that the technique described in this patent is subject to several serious limitations. First, the procedure requires the use of relatively expensive silicone compounds. Secondly, the fragrances available to practice are limited to those which can be produced from a hydrolyzable silicone compound. Thus, many preferred fragrances are not available in this way. Still further, the release of the fragrance is dependent upon the amount of moisture in contact with the treated textile, and washing or laundering releases comparatively large amounts of the essential alcohol so that the source of the essential alcohol is quickly depleted. Finally, because of the tendency of the silicone compounds to hydrolyze, they cannot be incorporated in home laundering procedures to restore the fragrance once the initial treatment has been exhausted. Normally, the silicone compounds can be incorporated in the textile only under carefully controlled conditions which exist only in a textile treatment mill.

Accordingly, the present invention is directed to a composition for imparting fragrances to textiles which is uniquely adapted for administration in the home in the normal laundering operations.

BRIEF SUMMARY OF THE INVENTION

According to this invention, there are provided aqueous compositions suitable for use in home laundering operations to impart lasting fragrance to articles comprised of cellulosic fabrics, e.g., cotton, linen, cotton-polyester blends, viscose rayon, etc. The compositions are principally comprised of a cationic agent such as a fatty quaternary ammonium halide, an amine sufficient in quantity to neutralize the composition to pH in the range from about 5 to 8, preferably 6 to 7, a minor proportion of fragrant oil, a non-ionic detergent sufficient in quantity to solubilize the fragrant oil in the composition and water, essentially all of which is deionized. Placed in a conventional home washing machine during or at the inception of the final rinse cycle, from about 1 to 2 ounces of the composition of the invention sufficiently endures normal automatic drying temperatures (e.g., up to about 180° F.) as to impart to laundered articles residual fragrances lasting up to a week or more after laundering.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

A preferred cationic agent for inclusion in the present composition is a dialkyl di(hydrogenated tallow) ammonium halide such as the dimethyl di(hydrogenated tallow) ammonium chloride available from Armour Chemical Corporation under the name "Arquad 2HT-75." The quaternary ammonium halides exhibit an innate affinity for cellulosic fabrics and are believed to so condition the surface of the fabric as to transiently bind the fragrant oils thereto.

Preferably, from about 8 to about 12 parts by weight dialkyl di(hydrogenated tallow) ammonium chloride (75% active) is employed for from about 2 to about 4 parts by weight fragrant oil in 100 parts deionized water. Increased proportions of the fragrant oil, of course, call for additional increments of the cationic agent if fragrance retention through the drying cycle is to be maximized. In any case, the foregoing relative proportions have been found to serve admirably in imparting a useful, albeit not overpowering, degree of fragrance to laundered fabric when the preferred oils are employed, i.e. Alpine Aromatics, Inc. (of Metuchen, N.J.) Jasmine 24-711, Orange Blossom 44-931, J.E. Type 42-431, Baby Powder 5606 and Ginger Spice 62-701. I also employed in the fragrance-imparting composition an organic amine base, preferably a tertiary amine base such as polyoxyethylene cocoamine available from Armour Chemical Corporation under the name "Ethomeen C-25." The base is used in proportion sufficient to provide pH between about 5 and 8, preferably from about pH 6 to about pH 7. In the case of the composition proportioned above, about 2.5 parts by weight polyoxyethylene cocoamine is preferably employed. Finally, the composition desirably contains a substantial proportion of non-ionic detergent, e.g., alkylphenoxypolyethoxyethanol (Rohm & Haas' Triton X-100), sufficient in amount as to solubilize the fragrant oil in the composition. Where the foregoing fragrances are employed in the proportions referred to above, about 25 to about 50 parts by weight non-ionic detergent may be employed, about 25 parts being the preferred proportion. Of course, coloring agents and non-ionic or anionic conventional laundry addends may optionally be added to the composition.

I claim:

1. As a fragrance-imparting composition, an aqueous liquid having as its water component essentially only deionized water, said liquid comprising from about 8 to 12 parts of a dimethyl di(hydrogenated tallow) quaternary ammonium chloride, from about 2 to 4 parts fragrant oil, polyoxyethylene cocoamine sufficient in proportion to provide said composition with pH in the range from about 5 to about 8, and at least an effective fragrant oil-solubilizing amount of an octyl phenoxypolyethoxyethanol, said parts being by weight based upon 100 parts by weight deionized water.

2. A liquid according to claim 1 having about 25 parts by weight of said non-ionic detergent, based upon 100 parts by weight deionized water.

References Cited

McCutcheon: Detergents and Emulsifiers, 1970 edition, Allured Publ. Corp., p. 243.

WILLIAM E. SCHULZ, Primary Examiner

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