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WASHING AGENTS

Reinhard Zweidler, Basel, Switzerland, assignor to J. R. Geigy A.G., Basel, Switzerland

No Drawing. Continuation-in-part of application Ser. No. 619,037, Feb. 27, 1967. This application Nov. 20, 1967, Ser. No. 684,481

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Int. Cl. C11d 3/42, 3/28

U.S. Cl. 252—152 4 Claims

ABSTRACT OF THE DISCLOSURE

Washing agents having an optically brightening content of naphthotriazolyl-stilbene-sulfamide and being useful for the brightening, in the same wash, of a great variety of fiber materials, such as cotton and nylon, and, at the same time, and without any deterioration in the degree of whiteness achieved, also of polyester fiber materials, e.g. Dacron.

CROSS REFERENCE TO EARLIER APPLICATION

This application is a continuation-in-part of my pending patent application Ser. No. 619,037 filed Feb. 27, 1967 now abandoned.

DESCRIPTION OF THE INVENTION

The present invention concerns washing agents, which contain, in addition to detergent (wash-active) substances, at least one optical brightener of the formula defined below, as well as to washing liquors prepared therewith; the invention further relates to a method for the optical brightening, i.e. for the improvement of the degree of whiteness, of polymeric esters of aromatic dicarboxylic acids with polyvalent alcohols, particularly of polyethyleneglycol terephthalate fibers, with the aid of such washing agents and liquors.

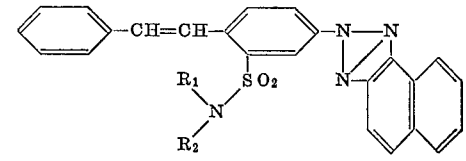
Nowadays, optical brighteners are incorporated into almost all white textiles before use to increase their degree of whiteness. However, fibers brightened in this way do not retain the improved degree of whiteness for as long as desired because optical brighteners turn yellow or grey in time due to deterioration under the effect of light, moisture and/or atmospheric oxygen. Moreover, in order to compensate for the worsening in the appearance of the textiles due to use and age, optical brighteners are added to the washing agents used for the care thereof. Since, in the household and commercial laundering there are usually present fibers of many kinds and origin, the washing agents must contain brighteners which produce good white effects on as many types of fiber as possible under the washing conditions conventional in households and laundries.

Although there are no difficulties in finding brighteners well suited for the brightening of cotton and nylon textiles, including mixed cotton/nylon fabrics, in one and the same washing liquor, there are great difficulties in the simultaneous brightening of terephthalic acid polyester fibers in the washing liquor because, at best, the brightener is only deposited on the surface of the fiber under the standard washing conditions. Although this often gives good results by fluorometric evaluation, there is either no improvement of the degree of whiteness on visual comparison with a whiteness scale or even the reverse, namely a reduction of the degree of whiteness. In order to effectively brighten terephthalic acid polyester fibers, drastic conditions such as do not prevail in household or commercial laundering were hitherto necessary. This type of polyester fiber material is usually pad-dyed with dispersions or solutions of

brightener and then given a heat treatment at 180–220° C. Use can be made of a purely aqueous type of treatment, i.e. with aqueous liquors which, in addition to optical brighteners having affinity to the fiber, also contain dispersing agents, e.g. polyglycol ether of higher alkanols or alkyl phenols, and carriers, e.g. phenyl phenols or polychlorobenzene compounds. However, many brighteners suitable for terephthalic acid polyester fibers have injurious effects on other types of fibers which may be present in the wash. For example, optical brighteners having affinity to polyester from the class of 7-triazinylamino-3-phenyl coumarins, 7-naphthotriazolyl-(2)-3-phenyl coumarins or bis - [alkylbenzoxazolyl - (2)]-thiophenes, on repeated washing produce undesirable green shadings or even green colourings on synthetic polyamide fibers and such optical brighteners from the class of 2-styryl-benzoxazoles produce such undesirable shadings or colourings even on cotton which is washed at the same time. This does not recommend their use in household or commercial laundering agents or liquors.

Thus, for practical use in washing liquors, a satisfactory polyester brightener to be used should cause no shading or discoloration effects on other types of fiber. On the other hand, it is very desirable that such brightener be able to brighten a great number of fiber types simultaneously and that the degree of whiteness of fiber types which are not brightened should at least not be adversely affected.

Surprisingly, it has now been found that the degree of whiteness of polymeric esters of aromatic dicarboxylic acids with polyvalent alcohols, particularly that of polyethyleneglycol terephthalate fibers, can be improved, in any stage of production desired and also when washed in the presence of other types of fibers in the washing liquors containing the brightener, preferably even on repeated washing, when these washing liquors contain, in addition to the usual detergents and auxiliaries, a finely dispersed optical brightener of formula



(I)

In this formula:

R_1 represents hydrogen, an alkyl group having 1 to 4 carbon atoms or an alkoxyalkyl or hydroxyalkyl group having 2 to 5 carbon atoms or an alkoxyalkoxyalkyl group having 5 to 8 carbon atoms,

R_2 represents hydrogen or an alkyl group having 1 to 4 carbon atoms, and

R_1 and R_2 together with the nitrogen atom linking them may also represent a saturated 6-membered ring optionally containing further hetero atoms.

Alkyl groups symbolised by R_1 and R_2 preferably have straight chains; however, they can also be branched, containing secondary carbon atoms.

Alkoxyalkyl groups represented by R_1 are especially the β-methoxy-ethyl, β-ethoxyethyl, β-propoxyethyl, β- or γ-methoxypropyl and β- or γ-ethoxypropyl groups. Hydroxyalkyl groups represented by R_1 are, for instance, the β - hydroxyethyl, γ - hydroxypropyl and δ-hydroxybutyl groups. Alkoxyalkoxyalkyl groups represented by R_1 preferably have 2 to 3 carbon atoms per alkoxy or alkyl group.

When R_1 and R_2 together with the nitrogen atom linking them form a saturated 6-membered ring, then this is chiefly the piperidine or morpholine ring.

Preferably R_1 represents hydrogen, the methyl or ethyl group and R_2 represents the methyl or ethyl group.

Washing agents according to the invention contain, as detergents, e.g. surface active ionogenic substances such as soaps, in particular, alkali metal salts of higher fatty acids, soluble salts of higher fatty alcohol sulfates, of higher and/or polyalkyl substituted arylsulfonic acids, of sulfocarboxylic acid esters of medium to higher alcohols, and of higher alkanoylamino-alkyl or -aryl-carboxylic or -sulfonic acids or salts of fatty acid glycerol-sulfates, or surface active non-ionogenic substances, e.g. fatty alcohol or higher alkylphenol polyglycol ethers. In addition, the washing agent can contain the usual fillers and auxiliaries, e.g. neutral salts such as sodium sulfate; alkaline earth metal-binding substances such as alkali poly- and polymetaphosphates; alkali metal silicates; metal-binding substances, e.g. complexons such as soluble salts of ethylenediamine-tetra-acetic acid; foam stabilisers such as alkanolamides of higher fatty acids; antistatics; plasticisers; fatty skin protectives such as lanolin; dirt carriers in the liquor such as carboxymethylcellulose or melamine; dyestuffs; perfume and also bleaching agents such as alkali metal salts of perboric acid.

Depending on the number of washings, the liquor ratio (1:5 to 1:50) and the content of washing agent (1 to 10 g. per liter washing liquor), the content of brightener of Formula I in the washing liquor is preferably 0.0002 to 0.05% by weight calculated on the material to be brightened, or 0.0004 to 0.04 g. of brightener per liter washing liquor. Other preferred washing conditions are treatment times of 5–30 minutes, temperatures of 50–95° C., and circulation of the washing liquor.

It is of advantage for the commercial exploitation of the invention if the optical brighteners of Formula I are incorporated in suitable amounts into the usual household and laundry washing agents. Thus, the present application provides washing agents which are characterised by a content of 0.02 to 0.5%, preferably of 0.05 to 0.1%, of an optical brightener of the Formula I, calculated on the total weight of the agent. The optical brighteners of Formula I are incorporated into the washing agents by known methods, either by mixing the dry ingredients or milling the various components, or by mixing the optical brightener with a moist paste of the washing agent and subsequently drying and crushing, e.g. pulverising, or by spraying a solution of brightener in a volatile solvent onto the washing agent and then removing the solvent. The finely distributed optical brightener can also be added directly to an otherwise ready-for-use washing liquor, advantageously by mixing the latter with a solution of the brightener in a water soluble organic solvent.

Fiber material having a content of polyethyleneglycol terephthalate fibers washed repeatedly over long periods of use with washing agents according to the invention or in washing liquors according to the invention has a pleasant, white appearance.

The appearance of other types of fiber materials that may be present in the wash is not adversely affected, but, on the contrary, the degree of whiteness of certain types of fiber, other than polyester fibers, is also improved.

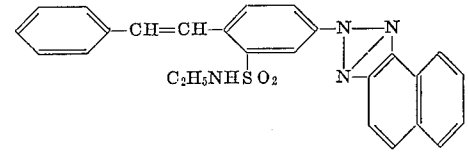
The following non-limitative examples illustrate the invention further. Temperatures are given therein in degrees centigrade. Where not otherwise stated, parts and percentages are given by weight.

EXAMPLE 1

5 g. of a fabric made from polyglycol terephthalate staple fibres, e.g. from Dacron, are introduced into 100 ml. of a 92° hot washing liquor which contains 0.4 g. of a washing agent consisting of:

25 parts of sodium dodecylbenzene sulphonate,
15 parts of pentasodium tripolyphosphate,
0.3 parts of lanolin,
0.1 parts of melamine,
0.2 parts of perfume,
1.5 parts of water and

57.9 parts of sodium sulphate, as well as 0.0002 g. of the optical brightener 2-(stilbyl-4″)-(naphtho-1′2′:4,5)-1,2,3-triazole - 2″ - sulphonic acid monoethylamide of the formula



which has been previously dissolved in 0.2 g. of ethylene glycol monoethyl ether. The fabric is washed, with light mechanical circulation, for 15 minutes at 92°. After this washing, the fabric is rinsed, first with lukewarm and then with cold water.

The washing process described above is performed 10 times with the same fabric but with a new washing liquor each time. A polyester fabric having a beautiful white effect in daylight is obtained. If the white effect of the fabric obtained after washing 10 times is measured with a fluorometer produced by Messr. Schildknecht, Zürich, Switzerland, then a fluorescence value of 44 is determined. If the fabric so washed is compared with the white scale described in SVF (Schweizerische Vereinigung von Färbereifachleute) 19 (1964), No. 6, p. 480, then its degree of whiteness is 160.

That a good white effect is attained on other types of fibre can be seen from the following:

If in the above example, the 5 g. of polyglycol terephthalate fabric are replaced by 5 g. of a synthetic polyamide fabric, e.g. nylon, or by 5 g. of a cellulose diacetate fabric and the procedure given above is followed, then a very beautiful white shading is also obtained on these fabrics. After washing 10 times, the polyamide fabric so treated has a fluorescence value of 80 and a degree of whiteness of 200 and the cellulose diacetate fabric has a fluorescence value of 55 and a degree of whiteness of 140. After washing 10 times, the white effect on cotton is slighter but clearly discernable. There is no tendency towards green shading.

If in the above example, the brightener mentioned is replaced by the same amount of 2-(stilbyl-4″)-(naphtho-1′,2′:4,5)-1,2,3-triazole-2″-sulphonic acid-dimethylamide, -diethylamide, -γ-methoxypropylamide or -γ-(β-methoxyethoxypropyl)amide, then after washing 10 times under otherwise the same conditions as given above, polyglycol terephthalate fabric has a degree of whiteness of 150, 160, 160 and 160 respectively, whilst nylon fabric has a degree of whiteness of 205, 190, 180 and 180 respectively. No green shading can be determined on cotton.

Example 2

5 g. of a fabric made from polyglycol terephthalate staple fibres, e.g. Dacron, are introduced into 100 ml. of a washing liquor at 92° which contains 0.5 g. of a washing agent consisting of:

28 parts of sodium dodecylbenzene sulphonate,
40 parts of pentasodium tripolyphosphate,
1 part of nonylphenol polyglycol ether having about 12 ethyleneoxy groups,
2 parts of coconut oil fatty acid mono-β-hydroxyethylamide,
6 parts of sodium silicate,
2 parts of carboxymethyl cellulose,
14 parts of sodium sulphate, and
7 parts of water, as well as
0.0002 g. of the optical brightener 2-(stilbyl-4″)-(naphtho - 1′,2′:4,5) - 1,2,3-triazole-2″-sulphonic acid monoethylamide which has been dissolved in 0.2 g. of ethylene glycol monoethyl ether.

The fabric is washed, with light mechanical circulation, in this liquor for 12 minutes at 92°. After this washing,

the fabric is rinsed first with lukewarm and then with cold water.

The washing process described above is performed 10 times in all with a new washing liquor each time. A polyglycol terephthalate fabric having a beautiful white effect in daylight is obtained.

If in the above example, the polyglycol terephthalate staple fibre fabric is replaced by the same amount of a synthetic polyamide fabric, e.g. nylon or Perlon, or cellulose diacetate fabric, then with otherwise the same procedure as given, these substrata are also brightened. The brightening effect obtained on cotton fabric is slight but clearly discernable. There is no tendency to green shading.

Similar brightening effects are obtained if, with otherwise the same procedure as given, the brightener mentioned above is replaced by an equal amount of 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid-dimethylamide, -diethylamide, -γ-methoxypropylamide or -γ-(β-methoxyethoxypropyl)-amide.

Example 3

0.0002 g. of the optical brightener 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid monoethylamide are dissolved in 0.2 g. of ethylene glycol monoethyl ether and the solution is added to 100 ml. of a washing liquor containing 0.6 g. of a washing agent consisting of:

6 parts of sodium dodecylbenzene sulphonate,
42 parts of pentasodium tripolyphosphate,
12 parts of soap,
4 parts of nonylphenol polyglycol ether having about 12 ethyleneoxy groups,
4 parts of sodium silicate,
2 parts of magnesium silicate,
1 part of carboxymethyl cellulose,
3 parts of sodium sulphate,
18 parts of sodium perborate ($NaBO_3+4H_2O$) and
8 parts of water.

5 g. of a polyglycol terephthalate staple fibre fabric, e.g. Dacron, are introduced into the washing liquor described above at 92° and washed for 15 minutes with light mechanical circulation. After this washing, the fabric is rinsed, first with lukewarm and then with cold water. This washing process is performed, in all, 10 times. The fabric so treated has a beautiful white effect in daylight.

If in the above example, the polyglycol terephthalate staple fibre fabric is replaced by an equal amount of a synthetic polyamide fabric, e.g. nylon or Perlon, or by cellulose diacetate fabric, these substrata are also brightened. If the polyglycol terephthalate staple fibres are replaced by an equal amount of cotton fabric then the brightening effect obtained is slight but clearly discernable. No green shading of the cotton fabric can be determined.

Similar brightening effects are obtained if the optical brightener given above is replaced by an equal amount of 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid-dimethylamide, -diethylamide, -γ-methoxypropylamide or -γ-(β-methoxyethoxypropyl)-amide and otherwise the procedure given in this example is followed.

Example 4

At a temperature of 70°, 5 g. of a polyglycol terephthalate staple fibre, e.g. Dacron, are introduced into 100 ml. of a washing liquor which contains 0.5 g. of a washing agent consisting of:

30 parts of sodium dodecylbenzene sulphonate,
35 parts of pentasodium tripolyphosphate,
8 parts of sodium silicate,
0.5 parts of carboxymethyl cellulose,
18.5 parts of sodium sulphate and
8 parts of water, as well as 0.0002 g. of brightener 2-(stilbyl-4'') - (naphtho-1',2':4,5) - 1,2,3 - triazole-2''-sulphonic acid monoethylamide dissolved in 0.2 g. of ethylene glycol monoethyl ether. The fabric is washed for 15 minutes with slight mechanical circulation, after which it is rinsed, first with lukewarm and then with cold water.

This washing procedure is repeated, in all, 10 times. The fabric so washed has a beautiful white effect in daylight. If in this example, the polyglycol terephthalate staple fibre fabric is replaced by an equal amount of a nylon, Perlon or cellulose diacetate fabric, then this substrate is also brightened. If the polyglycol terephthalate fabric is replaced by a cotton fabric, the brightening effect is slight but clearly discernible. There is no green shading of the substrate.

Similar brightening effects are obtained if the brightener mentioned above is replaced by an equal amount of 2-(stilbyl-4'')-(naphtho-1',2':4,5) - 1,2,3-triazole-2''-sulphonic acid-dimethylamide, -diethylamide or -γ-methoxypropylamide.

Example 5

5 g. of a fabric made from polyethyleneglycol terephthalate fibers (e.g. Dacron) are treated by the same procedure as in Example 1, but using in lieu of the 0.4 g. of washing agent employed therein, (a) 0.5 g. of a washing agent consisting of

16 parts of sodium dodecylbenzene sulfonate
4 parts of sodium lauryl sulfate
35 parts of pentasodium tripolyphosphate
7 parts of tetrasodium pyrophosphate
7 parts of sodium disilicate [$Na_2(SiO_3)_2$]
2 parts of magnesium metasilicate
1 part of carboxymethylcellulose
0.5 part of sodium ethylenediamine-tetra-acetate
25 parts of sodium sulfate
2.5 parts of water

in combination with the same amount of the same optical brightener as in the said Example 1.

The fluorescence value of the laundered fabric, determined in the same manner as in Example 1, but with a Harrison fluorometer, is 64.

Good brightening effects are also attained on nylon, Perlon or cellulose diacetate fibers as have been described in Example 1. The white aspect of cotton is not enhanced; however, neither is a greenish shade imparted thereto.

Similar brightening effects are achieved when using the other optical brighteners mentioned in Examples 1–18 in combination with the washing agent described in the instant example.

Example 6

Example 3 is repeated, but there are used in the washing liquor in lieu of 0.6 g. of the washing agent employed in Example 3, 0.5 g. of a washing agent consisting of

40 parts of soap (mixture of sodium salt of coconut oil fatty acid and sodium stearate in a weight ratio of about 1:2)
31 parts of pentasodium tripolyphosphate
9 parts of sodium pyrophosphate
6 parts of sodium disilicate
3 parts of magnesium metasilicate
0.5 part of sodium ethylenediamine-tetra acetate and
5.5 parts of sodium sulfate.

Similar good brightening effects are attained on the same fibers as are described in Example 3, with each of the optical brighteners mentioned in the latter example.

Similar brightening effects are obtained when using, with otherwise the same procedure as given in Examples 1–6, about equal amounts of the compounds falling under the general Formula I, supra, the substituents R_1 and R_2 of which are those given in the respective columns of the following table, instead of the brighteners mentioned in the preceding examples.

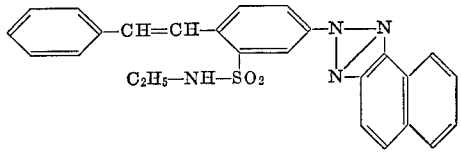
TABLE

Example	R_1	R_2
7	—H	—H
8	—H	—CH_3
9	—H	—CH_2—CH_2—CH_3
10	—H	—CH_2—CH_2—CH_2—CH_3
11	—H	—CH(CH_3)—CH_3
12	—H	—CH(CH_3)—CH_2—CH_3
13	—CH_2—CH_2—OH	—H
14	—CH_2—CH_2—OH	—CH_3
15	—CH_2—CH_2—CH_3	—CH_2—CH_2—CH_3
16	—CH_2—CH_2—CH_2—CH_3	—CH_2—CH_2—CH_2—CH_3
17	—CH_2—CH_2—O—CH_2—CH_2—	
18	—CH_2—CH_2—CH_2—CH_2—CH_2—	

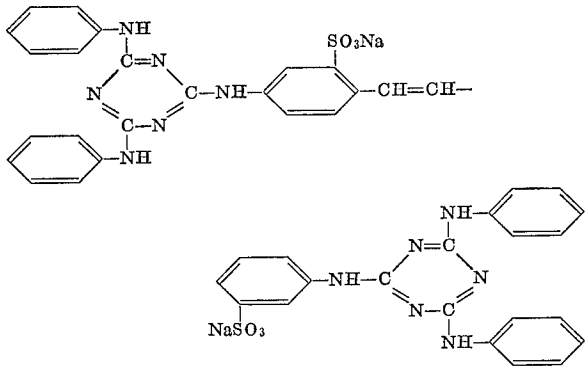
Example 19

1000 g. of usual household laundry, consisting of polyglycol terephthalate fibre fabrics, synthetic polyamide fibre fabrics and cotton fabrics or mixed fabrics containing these fibres are introduced into 20 litres of an 85–90° hot washing liquor which contains 80 g. of a washing agent, consisting of

25 parts of sodium dodecylbenzene sulphonate,
15 parts of pentasodium tripolyphosphate,
0.3 parts of lanolin,
0.1 parts of melamine,
0.2 parts of perfume,
1.5 parts of water and
57.9 parts of sodium sulphate, as well as 0.04 g. of optical brightener of the formula



and 0.16 g. of optical brightener of the formula

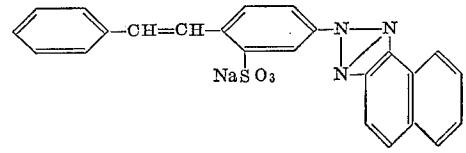


The fabric is then washed for 15 minutes at 90° with slight mechanical circulation. At the end of this washing, the fabric is rinsed, first with lukewarm and then with cold water.

The washing procedure described above is performed, in all, 10 times with a new washing liquor each time. Fabrics are obtained which have a beautiful white effect in daylight, regardless of which type of fibers they are made of.

White effects which differ somewhat both in strength and according to the type of fibre, are obtained if, with otherwise the same procedure, instead of 0.16 g., only 0.06 g. of the brightener 4,4'-bis-[4,6-dianilino-s-triazinyl-(2)-amino]-stilbene-2,2'-disulphonic acid sodium salt are

added and, in compensation, 0.05 g. of the optical brightener of the formula



are added.

Also, 4,4' - bis - [4,6-dianilino-s-triazinyl-(2)-amino]-stilbene-2,2'-disulphonic acid sodium salt can be excluded completely and only 0.08 g. of the brightener 2-(stilbyl-4'') - (naphtha-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid sodium salt added.

Some of the brighteners of Formula I mentioned above are described in the French Patent No. 1,134,746; the compounds not described in this patent are produced as follows:

44.6 g. of 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid chloride are dissolved in 500 g. of abs. chlorobenzene, the solution is cooled and, at a temperature of 50–60°, is saturated with gaseous monomethylamine.

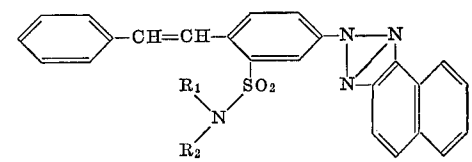
The reaction mixture is then slowly heated to 115–120° while introducing further monomethylamine and it is stirred at this temperature for 6 hours. After cooling, the crystal mass is filtered off, washed first with water, then well with alcohol, dried and then recrystallised from boiling chlorobenzene. The 2 - (stilbyl - 4'') - (naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid monomethylamide is obtained as a yellowish powder which melts at 222–223°.

44.6 g. of 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid chloride are dissolved hot in 500 g. of chlorobenzene and the solution is cooled to a temperature of 20–25°. Within half an hour, 13 g. of n-propylamine, or 13 g. of isopropylamine, or 16.5 g. of n-butylamine, or 16.5 g. of sec. butylamine, or 17 g. of N-methyl-monoethanolamine, or 22.5 g. of di-n-propylamine, or 20 g. of γ-methoxypropylamine, or 30 g. of γ-(β-methoxyethoxy)-propylamine are added to the crystal suspension obtained. This is slowly brought to the boil and stirred overnight under reflux. The reaction mixture is then evaporated to dryness on a rotatory evaporator, the residue obtained is washed first with water, then well with alcohol and dried. The residue is then dissolved in as little as possible boiling chlorobenzene, difficultly soluble parts are removed by filtering until the filtrate is clear, the filtrate is left to crystallise, the crystals are filtered off, washed with a little chlorobenzene and dried in vacuo. In this way, 2-(stilbyl-4'')-(naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid-n-propylamide, M.P. 188–190°, or 2 - (stilbyl - 4'') - (naphtho-1',2':4,5)-1,2,3-triazole-2''-sulphonic acid-isopropylamide, M.P. 212–213°, or -n-butylamide, M.P. 172–175°, or sec. butylamide, M.P. 174–176°, or N-methyl-monoethanolamide, M.P. 172–175°, or -di-n-propylamide, M.P. 156–158°, or -γ-methoxypropylamide, M.P. 161–162°, or -γ-(β-methoxyethoxy)-propylamide, M.P. 111–113° respectively are obtained as yellowish to pale yellowish powders. (All melting points given are uncorrected).

I claim:

1. A process for improving the degree of whiteness of polyglycolterephthalate fibers comprising treating the said fibers with an aqueous washing liquor which contains a washing agent composition consisting essentially of

(a) from about 0.02 to 0.5%, calculated on the total weight of said agent, of a compound of the formula



wherein

R_1 represents hydrogen, an alkyl group having 1 to 4 carbon atoms, or an alkoxyalkyl or hydroxyalkyl group having 2 to 5 carbon atoms, or an alkoxyalkoxyalkyl group having 5 to 8 carbon atoms, and

R_2 represents hydrogen or an alkyl group having 1 to 4 carbon atoms, and

R_1 and R_2 together with the nitrogen atom linking them may also represent a saturated six-membered ring which optionally contains further hetero atoms, and

(b) a surface active anionic substance, or a surface active nonionic substance

in sufficient amount to simultaneously wash and optically brighten said fiber.

2. A process as defined in claim **1**, wherein said fibers are made from polyethylene glycol terephthalate.

3. A process for improving the degree of whiteness of a material made from polyglycolterephthalate fibers in a load of laundry containing the same as well as materials made from one or several kinds of fibers selected from polyamide, cellulose diacetate and cotton fibers, comprising treating said laundry with an aqueous washing liquor

which contains a washing agent composition as defined in claim **1**, in sufficient amount to simultaneously wash and optically brighten at least said polyglycol material without deteriorating the degree of whiteness of any cotton material present.

4. A polyglycolterephthalate fiber material optically brightened with a washing agent composition as defined in claim **1**.

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LEON D. ROSDOL, Primary Examiner

M. L. HALPERN, Assistant Examiner

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