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(54) Dispensing devices for use with laundry detergents

(57) The present invention relates to a dispensing device which is easier to recover from a laundry load at the end of a wash, and which will not be noticeably discoloured by dye transfer from textile fabrics in the wash load. This is achieved by dispensing device or scoop which comprises a fabric portion, wherein the outer surface of the fabric portion is pigmented or dyed, and/or pretreated with a fabric whitening agent.

Description

The present invention relates to the field of laundry detergents, and in particular to dispensing devices for use with laundry detergents.

EP-A-0 253 419, published 20th January 1988, and EP-A-0 343 070, published on 23rd November 1989, disclose scoops and dispensing devices for granular detergents, as well as methods of using the dispensing devices.

Dispensing devices have been common-place in domestic laundry processes since the publication dates of these applications. Typically the dispensing devices are distributed with detergent products by the manufacturers of these products. The consumer gets benefits of improved washing performance when using dispensing devices compared to the more traditional method of dispensing laundry products by means of a drawer usually located near the top of the washing machine. This is because the so-called "heart-of-the-wash" effect results in less product being lost in the washing machine sump, and therefore more product being available to dissolve rapidly in the wash liquor, thereby promoting the washing performance. Furthermore the consumer benefits from improved convenience and less messiness compared with the drawer dispensing method.

However one disadvantage of these dispensing devices is that, at the end of the wash, the dispensing device needs to be recovered from the wash load and retained for use in the next wash. If the dispensing device is the same colour as most or all of the wash load then it is inconvenient for the consumer to search through the load in order to recover the dispensing device. Dispensing devices currently supplied by detergent producers are predominantly white or translucent, and, of course, many wash loads are predominantly white fabrics.

Many dispensing devices comprise a fabric portion, for example, in the form of a pouch or bag in which the detergent product may be retained. A further disadvantage of this type of dispensing device is that it becomes discoloured after a number of washes. In particular it may become dingy (i.e. more grey) as a result of textile dyes transferred in the wash onto the fabric portion of the dispensing device.

The object of the invention is to provide a dispensing device which is easier to recover from a laundry load at the end of a wash, and which will not be noticeably discoloured by dye transfer from textile fabrics in the wash load.

Summary of the Invention

According to the invention this object is achieved by dispensing device or scoop which comprises a fabric portion, wherein the outer surface of the fabric portion is pigmented or dyed, and/or pretreated with a fabric whitening agent.

Detailed Description of the Invention

The term "dispensing device or scoop" as used herein refers to devices which essentially comprise a bag-shaped flexible sheath extending around at least one orifice. The orifice is defined by a means, such as an annular ring, which also serves as a support for the sheath. The orifice allows the desired quantity of product substantially corresponding to a washing operation and remains at least partially open during washing, the aqueous washing medium penetrating into the interior of the sheath at least through its orifice in order progressively to dissolve the particulate product, the particulate product thus being progressively liberated during washing predominantly in the form of aqueous solution passing at least through the orifice. The sheath is produced from a material capable of retaining the particulate product without allowing it to pass in solid form and also capable of withstanding the temperatures of the washing machine and drying of laundry.

According to a preferred embodiment of the invention, the constituent material of the sheath is designed to allow the penetration of the aqueous washing medium through the bag toward the particulate product contained therein as well as the diffusion of an active aqueous solution originating from the progressive dissolution of the particulate product to pass through the sheath from the interior to the exterior thereof. In this embodiment the sheath is permeable to water. The penetration of the aqueous washing medium takes place through the orifice of the sheath and across the sheath, and the diffusion or liberation of the active solution of product also takes place through the orifice and across the sheath.

Normally the device is recovered at the end of washing and can be reused for subsequent washes.

In the present description the flexible sheath is referred to as the "fabric portion" of the scoop or dispensing device. Particularly suitable constituent materials for the flexible sheath are disclosed in more detail in EP-A-0 343 070.

In the present description the term "particulate product" covers all forms of presentation of such solid products such as powders, granules, flakes, tablets and other similar physical structures capable of being dissolved in water under normal washing conditions.

The term "pigmented or dyed" as used herein refers to any outer surface which is visibly coloured (i.e. not white), at least when viewed from the outside. The whole outer surface of the dispensing device may be coloured, or, alternatively, only a part of the outside surface need be coloured. Any colour may be used, for example primary colours: red, blue, yellow, or orange, green, indigo, violet etc. One single colour may be used on a single dispensing device, or the device may be multi-coloured. The pigments or dyes may lend the dispensing device a matt or glossy appearance, and may even be fluorescent. Any dye must be colour-fast, which

is to say that it must not be free to pass from the dispensing device into the wash liquor during the wash cycle. If this would happen, the dye could be free to redeposit on the wash load which would be undesirable.

Plastic components may be pigmented by any conventional process such as masterbatch or by overspraying a finished component with paint or similar coloured substance. Fabric components may be dyed by, for example, any conventional dyeing process. According to one embodiment of the present invention, a dispensing device may optionally comprises both plastic and fabric portions. In this embodiment at least part of the fabric portion alone is be pigmented or dyed. Alternatively both portions may be pigmented or dyed. The fabric portion of the dispensing device may be pre-treated with a fluorescent whitening agent in addition to also being pigmented or dyed.

The term fluorescent whitening agent as used herein refers to any agent which absorbs light in the visible part of the light spectrum and re-emits it at the blue end, or in the ultra-violet part of the spectrum.

Suitable stilbene brighteners for use in the present invention are derived from bis(4,4'-triazinylamino) stilbene-2,2'-disulphonic acid, preferably derived from: disodium 4,4'-bis[(4-anilino-6-R-1,3,5 triazin-2-yl)amino]-2,2'-stilbenedisulphonate or tetrasodium 4,4'-bis[(4-sulfoanilino-6-R-1,3,5 triazin-2-yl)amino]-2,2'-stilbenedisulphonate (according to the Ullmann's Encyclopedia of Industrial Chemistry, 1991, Vol A 18 page 158-159). The stilbene brightener is most preferably derived from disodium 4,4'-bis[(4-anilino-6-R-1,3,5 triazin-2-yl)amino]-2,2'-stilbenedisulphonate where R = morpholino or diethanolamino (also known as Colour Index No 71 and no 28 according to the Society of Dyers and Colorists and the American Association of Textile Chemists and Colorists).

Suitable biphenyl and benzoxazole brighteners for use in the present invention are derived from distyrylbiphenyl, bis(benzo[b]furan-2-yl)biphenyl and bis(benzoxazole) according to the Ullmann's Encyclopedia of Industrial Chemistry, 1991, Vol A 18 page 157-163). Preferred examples include those derived from: disodium 4,4'-bis (2-sulphostyryl) biphenyl; disodium 4,4'-bis (4-chloro-3-sulphostyryl) biphenyl; disodium 4,4'-bis(sulfonylbenzo[b]furan-2-yl)biphenyl; 2,5-bis(benzoxazole-2-yl)thiophene; and mixtures thereof. Of these the most preferred is disodium 4,4'-bis (2-sulphostyryl) biphenyl (also known as Colour Index No 351 according to the Society of Dyers and Colorists and the American Association of Textile Chemists and Colorists).

Claims

1. A dispensing device or scoop which comprises a fabric portion, characterised in that the outer surface of the fabric portion being pigmented or dyed, or pretreated with a fabric whitening agent.

2. A dispensing device or scoop according to claim 1 for use with detergent products, the dispensing device comprising a plastic portion and a fabric portion, the fabric portion being pigmented or dyed.
3. A dispensing device according to claim 1 for use with detergent products, the dispensing device comprising a plastic portion and a fabric portion, the fabric being pretreated with a fluorescent whitening agent.
4. A dispensing device according to any of claims 1 to 3 comprising a fabric portion, fabric portion being pretreated with a fluorescent whitening agent, and the fabric portion being also pigmented or dyed.

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DOCUMENTS CONSIDERED TO BE RELEVANT			CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	
A	EP 0 683 262 A (THE PROCTER & GAMBLE COMPANY) * claims 1,7-10; figure 2 * ---	1-3	D06F39/02
A,D	EP 0 343 070 A (THE PROCTER & GAMBLE COMPANY) * abstract; figures * -----	1-3	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
Place of search		Date of completion of the search	Examiner
THE HAGUE		7 October 1997	Courrier, G
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			