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(54) Title: ARTICLE SUCH AS A MAKE-UP REMOVAL PAD COMPRISING AN EXTERNAL SURFACE FOR APPLYING
AQUEOUS PRODUCTS ON THE SKIN

(54) Titre : PRODUIT TEL QU'UN TAMPON A DEMAQUILLER COMPRENANT UNE FACE EXTERNE DESTINEE A AP-
PLIQUER DES PRODUITS AQUEUX SUR LA PEAU

(57) Abstract: The invention concerns an article such as a make-up removal pad based on hydrophilic cotton fibres, comprising
an external surface for applying aqueous products on the skin. The invention is characterised in that said external surface includes
an agent delaying absorption of the aqueous products. The inventive article is used for applying care products, such as cosmetic
products, on the skin.

(57) Abrégé : L'invention concerne un produit tel qu'un tampon à démaquiller à base de fibres de coton hydrophiles, comprenant
une face externe destinée à appliquer des produit aqueux sur la peau. Selon l'invention, la face externe précitée comprend un agent
retardant l'absorption des produits aqueux. Le produit selon l'invention est utilisé pour appliquer des produits de soin tels que des
produits cosmétiques, sur la peau.

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PRODUCT SUCH AS A MAKE-UP REMOVING PAD
COMPRISING AN OUTER SIDE FOR APPLYING AQUEOUS PRODUCTS ON
THE SKIN

The invention relates to a cotton product for caring the skin, such as a make-up removing pad, comprising an outer side for applying aqueous products on the skin.

This cotton product is a product or pad cut into formats shaped round usually called "make-up removing disk", oval, square of any other shape.

In the following text the term "pad based on hydrophilic cotton fibres" encompasses any product comprising essentially hydrophilic and absorbent cotton fibres in a proportion from 70 to 100 percent of cotton fibres and 0 to 30 per cent of artificial fibres such as viscose fibres or synthetic fibres such as polyolefin fibres or bicomponent fibres (for example, polyester/polyester, polyester/polypropylene, polypropylene/polyethylene fibres).

This cotton product has a basic weight in the range from 150 to 400 g/m², preferably from 180 to 300 g/m².

Skin care includes body care, face care and more particularly beauty care using cosmetic products: making up the face and removing make-up from it, baby care: washing and changing the baby.

Due to the hydrophilic character of cotton fibres, a major disadvantage of cotton or pad products is their excessively great capacity to absorb products applied on their surface. In fact, the generally aqueous product penetrates into the inside of the cotton pad by capillary action, sometimes even goes through the pad and wet the hands.

The care product is thus wasted ad the pad is deformed.

Solutions to the problem of the pad being totally penetrated by the care product have been found.

One of the solutions, for example, described in the American patent No. 5 230 119, consists in providing a pad having a handle and a rear layer made up of an impermeable fine plastic film or a paper sheet treated to be impermeable.

Another solution described in the European patent No. 0 441 667 consists in using a make-up removing pad having a central barrier layer which is hydrophobic or impermeable to the make-up product to be removed in the process of make-up removing, and two layers of an absorbent material adhering to two sides of the central layer. The absorbent material used is preferably combed or carded cotton. The barrier layer can be made up of a film formed by one or several flexible plastic materials, such as polyethylene, polypropylene or polyester.

However, in these solutions the impermeable layers or barrier layers are very close to one another, and they are not made of the absorbent material or the lap that makes up the pad. They are totally impermeable and cannot be intended for use on the skin.

By using the nature of the fibres, it is also possible to modify the properties of the cotton pad or even one of its internal layers.

For instance, it is possible to combine hydrophobic polyolefin fibres that can be readily carded with hydrophilic cotton fibres. Such fibres are described in the European patent No 0 687 318. But by doing so, the fibrous composition of the cotton product is modified.

Without modifying either the composition or structure of the product, the American patent No. 5 480 699 describes mechanical compressing means to avoid the penetration of large quantities of cream or liquid into the pad. In fact, by compressing one of the outer layers made up of card webs, and by associating the two card webs with a central non-compressed layer, the final product has a more compressed side in which the fibres are more tightened and leave less voids for the cream or liquid to be applied on the skin to penetrate. But this solution does not prevent a certain amount of liquid or cream from penetrating into the inside of the pad through the remaining voids, as compression facilitates capillary action. Absorption is not delayed on of this type of product.

The problem arising in the present invention is to delay the absorption of aqueous products on one of the sides of the cotton product without making the side permanently impermeable and without modifying the fibrous composition of the cotton product.

In fact what is involved is temporary "impermeabilisation" which aims at preventing care products from penetrating at the moment when they are applied on cotton pads and delaying absorption, thus making it possible to apply care products on the skin before they have time to penetrate into the inside of the cotton pad.



It would be desirable to provide a cotton product such as a make-up removing pad based on hydrophilic cotton fibres, providing a solution to the aforementioned problem to efficiently apply aqueous products on the skin.

5 According to one aspect, the present invention provides a dry cosmetic care product comprising hydrophilic cotton fibers and an outer side for applying aqueous products on the skin, wherein the said outer side comprises an agent which delays the absorption of aqueous products, said agent being an emulsion of a naturally occurring mineral, vegetal or animal
10 wax.

According to an essential feature of the invention, one of the outer sides of the cotton product comprises an agent which delays the absorption of aqueous products.

15 According to an advantageous feature of the invention, the agent which delays the absorption of aqueous products is a composition based on softeners or waxes.

According to another feature of the invention, the absorption delaying



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agent is a composition that adheres to fibres, such as complex metal salts of stearic acid, perfluorinated derivatives, zirconium salts or silicones.

According to a preferred feature of the invention, the agent is an emulsion of a naturally occurring mineral, vegetal or animal wax.

According to a particularly preferred feature of the invention, the agent is an emulsion of beeswax.

According to another feature of the invention, the agent is an emulsion or dispersion comprising at least 30% of active matters.

According to another advantageous feature of the invention, the first side comprises at least 0.3 g/m² of active matters.

The other features and advantages of the invention will be more readily understood from the following description.

In order to optimise the application of a care product on the skin or skin cleansing, make-up removing and/or make-up efficiency with the help of cosmetic products, the product or cotton pad according to the invention comprises an agent which delays the absorption of aqueous products on one of the outer sides which will be referred to herein as first outer side.

The absorption delaying agent is a component based on softeners or wax or a component adhering to fibres.

It was surprisingly found that, when applied in small amounts on conventionally hydrophilic and absorbent cotton products, these components made it possible to delay the absorption of aqueous products applied on the surface of cotton products.

Examples of softeners are fatty amines, fatty alcohols, fatty esters, fatty polyethylenes or polyamides or their mixtures.

Components adhering to fibres are, for example, complex metal salts of stearic acid, perfluorinated derivatives, zirconium salts or silicones.

Wax-based components are wax emulsions and paraffins or emulsions of pure waxes.

Preferably, the agent which delays the absorption of aqueous products is an emulsion of a naturally occurring mineral, vegetal or animal wax.

Examples of naturally occurring animal wax are spermaceti wax and beeswax.

Examples of vegetal wax are candellila wax and carnauba wax.

Examples of mineral wax are ceresin and azocerite.¹

¹ Translator's note: This term is probably misspelled, and should be replaced with "ozocerite".

Beeswax emulsion is particularly advantageous and suitable for cosmetic use of the pad, as it has been dermatologically tested. It is a cationic bleached emulsion of beeswax which comprises beeswax, water, emulsifying agents, glyceryl stearate and diethanolaminoether stearate.

Beeswax itself is made up of esters of waxy fatty acids such as myricyl palmitate, cerotic acid and other homologous waxy acids and small amounts of hydrocarbons, cholesterol esters and cerylic alcohols.

The absorption delaying agent is an emulsion or dispersion containing at least 30% of active matters.

The first side of the cotton product or pad according to the invention comprises at least 1 g/m² of applied emulsion, namely at least 0.3 g/m² of active matters applied.

The first side having on the surface such an agent acquires very advantageous properties.

It delays the penetration of aqueous products applied on the surface of the pads.

The penetration of care products such as cosmetic milks and make-up removing products is a major disadvantage of conventional hydrophilic cotton pads. Care products or cosmetic products are wasted and are not economically used as sometimes they penetrate through the pad. Cleansing of the skin is not optimised.

Treating the first side of the pad in this way creates temporary "impermeability" to water, and this makes it possible to avoid quasi-spontaneous absorption of aqueous products by hydrophilic cotton fibres when they are applied on the pad.

A simple test which proves this property consists in depositing at ambient temperature (about 20°C) on the surface of a container filled with water pads treated according to the invention, the treated side being turned outwards and the absorbing side toward the water, and state-of-the art pads entirely made of cotton fibres. The first remain on the surface for at least 5 minutes, the other are almost instantaneously impregnated with water and are very rapidly immersed, generally within 3 to 5 seconds.

The advantage so obtained is to be able to maintain the products on the surface for a longer period of time and use the whole amount of the product applied on the pad for caring the skin, without loss of the product and deformation of the pad.

A test of internal use at the applicant's company was conducted with 25 persons usually and exclusively using state-of-the-art hydrophilic cotton pads B for skin care and make-up removal, etc.

Pads B, entirely made of cotton fibres, are made from cotton laps according to the European patent application No. 0 735 175 and are commercially available under the trade mark DEMAK'UP®.

Pads A according to the invention, whose first side has been treated with an absorption delaying agent, more precisely a beeswax emulsion, were tested in comparison with state-of-the-art pads B.

It was observed as follows.

For pads A according to the invention whose first side was treated, almost all the test participants (92%) noticed the capacity of the pad to delay the absorption of care products applied on the surface of the pads.

With the pads according to the invention whose first side was treated, the number of persons who found improvement of skin cleansing rose to 92%.

Finally, regarding make-up removal, 85% of the persons observed better efficiency of make-up removing with pads according to the invention whose first side was treated.

Similar advantages could also be observed for make-up products such as lotions, creams, make-up foundations, blushes, to apply and spread the product on the skin.

The participants also advantageously used the product according to the invention to apply perfumery products such as scent water. The immediate absorption of scent water by the pad is avoided in comparison with application of scent water with prior art cotton products.

The cotton product or pad according to the invention is made up of one or several cotton fibre laps obtained by lapping, carding or by pneumatic means.

These laps can be of an identical or different fibre quality. They can be directly made from bleached hydrophilic cotton. They can also be obtained from grey raw grey cotton, then chemically treated. They are subsequently superposed and associated by any known means such as gluing means or mechanical means such as calendering or needling. Associating means may even be hydraulic.

It is possible to obtain good association by impregnation, pulverisation or pouring a solution. This impregnation is associated with the quantity of liquid absorbed which compacts the lap and eliminates part of the quantity of liquid contained in the wet lap, for example by calendering or passing over a slot under vacuum.

The hydrobinding technique makes it possible to simultaneously associate two laps with each other and bind the surfaces of the sheets.

Hydrobinding treatment can take place in case of an unbleached lap which is to be chemically treated, just after the stage of impregnation of the sheet as

described in the European patent application No. 0 735 175.

This hydrobinding step can also be placed in the final rinsing stage according to the European patent No. 0 805 888 in the name of the applicant where the production of the cotton sheet is carried out continuously.

5 During the production of the product according to the invention, one of the outer sides (first outer side) of the cotton product is treated so as to delay the absorption of aqueous products (care products...) for cosmetic use of the pads.

10 After the steps of impregnation and before or after drying, this first side is treated by applying an agent which delays the absorption of aqueous products as described previously. According to a preferred embodiment of the invention, a wax emulsion is applied in a quantity of at least 1 g/m², which means at least 0.3 g/m² of the active matter (waxes) is deposited on the surface of the product.

15 The side treatment can be carried out by any conventional way, such as pulverisation with nozzles, calendar coating, rotogravure printing,...

In order to better distinguish the treated side from the untreated side, the product according to the invention can have visual distinction of the two sides obtained, for example, by a side marked with a pattern and the other side unmarked, or the two sides are marked in a different manner (with different
20 patterns) or colouring one of these sides, etc...

The product so produced, which have sides made different by treatment of one of the outer sides, are then cut into formats and packed in flexible packages or sachets.

25 Throughout the description and claims of this specification, use of the word "comprise" and variations of the word, such as "comprising" and "comprises", is not intended to exclude other additives, components, integers or steps.

30 The above discussion of documents, acts, materials, devices, articles and the like is included in this specification solely for the purpose of providing a context for the present invention. It is not suggested or represented that any or all of these matters formed part of the prior art base or were common general knowledge in the field relevant to the present invention as it existed in Australian before the priority date of each claim of this application.



The Claims Defining The Invention Are As Follows:

1. A dry cosmetic care product comprising hydrophilic cotton fibers and an outer side for applying aqueous products on the skin, wherein the said
5 outer side comprises an agent which delays the absorption of aqueous products, said agent being an emulsion of a naturally occurring mineral, vegetal or animal wax.
2. A dry cosmetic care product as claimed in claim 1, wherein the
10 naturally occurring animal wax is spermaceti wax or preferably beeswax.
3. A dry cosmetic care product as claimed in claim 1 or claim 2, wherein the naturally occurring vegetal wax is candellila wax or carnauba wax.
- 15 4. A dry cosmetic care product as claimed in any one of claims 1 to 3, wherein the naturally occurring mineral wax is ceresin or azocerite.
5. A dry cosmetic care product as claimed in any one of the preceding
20 claims wherein said agent is an emulsion or dispersion comprising at least 30% of active ingredients.
6. A dry cosmetic care product as claimed in claim 5, wherein the side intended for applying aqueous products on the skin comprises at least
25 0.3g/m^2 of active matters.
7. A dry cosmetic care product as claimed in any one of the preceding
30 claims, wherein the aqueous products are care products such as cosmetic products which particularly comprise make-up products, make-up removing products, cosmetic milks.
8. A dry cosmetic care product according to claim 1 substantially as hereinbefore described, with reference to the test described.