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(54) **Sponge with microcapsule**

(57) Sponge for the topical application of cosmetic

active substances contained in a microcapsule provided
in said sponge.

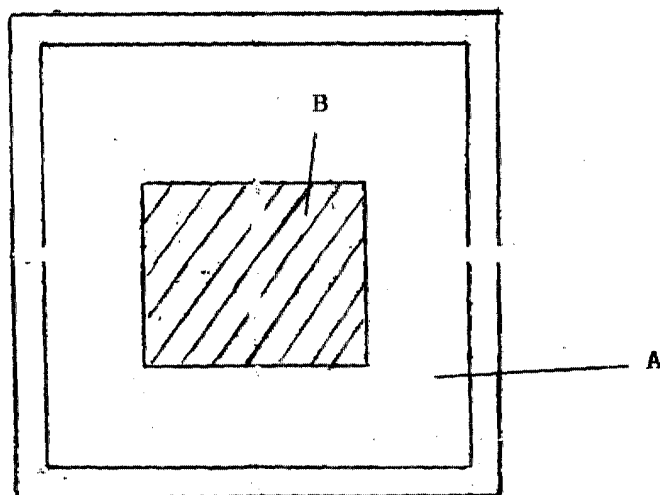


FIG. 1

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Description

[0001] The present invention concerns a sponge for topical application of at least an active substance, characterized in that said active substance is contained in a microcapsule provided in said sponge.

[0002] Said sponge is particularly useful if compared with sponges containing active substances known in the prior art.

[0003] The sponges of the prior art have several disadvantages. In particular, the active substances contained in said sponges, being free inside the sponge, are exposed to moisture, with a consequent degradation and loss of activity, and, in the case of powders, with a consequent creation of lumps which can only be dissolved with great difficulties. Furthermore, when they are wet, the sponges of the prior art completely release all active substances they contain. Since said sponges do not allow an adequate control on the release rate of the active substances, they do not carry out an even distribution of said substances and can be used only once.

BRIEF DESCRIPTION OF THE INVENTION

[0004] The present invention will be better described with reference to a non-limitative preferred embodiment shown in the alleged figure, which represents the sponge according to the present invention with its several component parts.

[0005] Said sponge is formed by two layers (A) and (A'), wherein the layer (A') has the same dimensions as layer (A) and is not shown in the figure because it is covered by layer (A). The two layers (A, A') are made of a polymeric material and preferably by a film of natural latex, polyurethane or polypropylene. Said material can optionally have one or both flocked surfaces, preferably with latex.

[0006] Layers (A) and (A') are preferably square, their sides having a length of 4.5-8.5 cm and preferably 6.5 cm, and being preferably welded along their perimeter in order to form an internal cavity.

[0007] In the internal cavity of the sponge it is provided a microcapsule formed by two layers (B, B'), wherein said layer (B') has the same dimensions as layer (B) and it is not shown in the figure because it is covered by layer (B). Layers (B, B') are preferably square or rectangular, their sides having a length of 1.5-5 cm and preferably 2.5-3 cm, and being preferably welded along their perimeter in order to define an internal cavity. The two layers (B, B') are made of non-woven fabric.

[0008] In the internal cavity of the microcapsule it is contained a suitable amount of at least a water soluble active substance, usually a powder, optionally together with cosmetically acceptable excipients. Preferably, said active substance is selected out of the group consisting of ascorbic acid, allantoin, betaine, azelaic acid, retinil palmitate or dry extract, flowers or leaves of *Camelia sinensis*, *Cucumis sativus*, *Aloe Barbadiensis*,

Ginkgo Bilboa and *Citrus dulcis*. Said excipients are preferably selected out of the group comprising sodium laurylphosphate, sodium cocoylisothonate, sodium laurylglutamate and EDTA disodium salt.

[0009] In use, the sponge is dipped in warm water and lightly rubbed on the skin. The water slowly penetrates the non-woven fabric microcapsule, thus solubilizing the active substances. Said solution is gradually released by the microcapsule thus allowing the active substances to carry out their action on the skin.

[0010] The sponge according to the present invention is useful for topical applications of cosmetic active substances.

[0011] In the sponge according to the present invention the non-woven fabric microcapsule protects said active substances from moisture, thus keeping their efficacy unaltered for a long lapse of time and avoiding the creation of lumps. Furthermore, thanks to the continuous flow of the active substance thus obtained, the sponge according to the present invention allows an even distribution of said active substances on the face and it can be re-used several times.

Claims

1. Sponge for the topical application of at least a cosmetic active substance, **characterized in that** said cosmetic active substance is contained in a non-woven fabric microcapsule provided in said sponge.
2. Sponge according to claim 1, **characterized in that** said sponge is formed by two layers (A, A') of a polymeric material which are welded along their perimeter.
3. Sponge according to claim 2, **characterized in that** said polymeric material is a film of natural latex, polyurethane or polypropylene.
4. Sponge according to claim 3, **characterized in that** said film of natural latex, polyurethane or polypropylene has at least a flocked surface.
5. Sponge according to claim 4, **characterized in that** said flocked surface is flocked with latex.
6. Sponge according to claims 2-5, **characterized in that** said layers (A, A') are square, their sides having a length of 4.5-8.5 cm.
7. Sponge according to claims 1-6, **characterized in that** said microcapsule is formed by two layers (B, B') made of non-woven fabric, which are welded along their perimeter in order to define an internal cavity.
8. Sponge according to claim 7, **characterized in that**

said layers are rectangular, their sides having a length of 1.5-5 cm.

9. Sponge according to claim 7, **characterized in that** said layers are square, their sides having a length of 1.5-5 cm. 5
10. Sponge according to claims 1-9, **characterized in that** said cosmetic active substance is selected out of the group consisting of ascorbid acid, allantoin, betaine, azelaic acid, retinil palmitate or dry extract, flowers or leaves of *Camelia sinensis*, *Cucumis sativus*, *Aloe Barbadiensis*, *Ginkgo Bilboa* and *Citrus dulcis*. 10
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11. Sponge according to claim 10, **characterized in that** said microcapsule contains cosmetically acceptable excipients.
12. Sponge according to claim 11, **characterized in that** said cosmetically acceptable excipients are selected out of the group comprising sodium laurylphosphate, sodium cocoylisothonate, sodium laurylglutamate and EDTA disodium salt. 20
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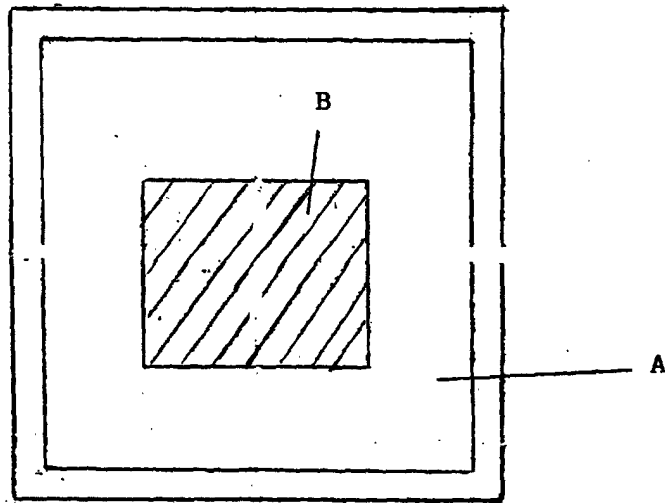


FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 11 0963

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The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20 July 2001	Examiner Porwoll, H
CATEGORY OF CITED DOCUMENTS 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 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			

EPC FORM 1503.03.92 (P04001)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
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