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(54) Title: CONTROLLED RELEASE OF ACTIVES IN SKIN

(57) Abstract: Topical compositions are provided in which active compounds for topical delivery through the stratum corneum are complexed with nanospheres of a triblock copolymer having an A-B-A structure wherein each A end block is a water-soluble, hydrophilic and non-toxic polymer or oligomer; and the hydrophobic middle B block is a hydrophobic polymer or oligomer with the same or different repeating units having the structure according to formula(I) wherein X is - C - R - C - or - C - ; Z is between 2 and about 100, inclusive; R₁ is CH=CH or (CH₂)_n, wherein n is from 0 to 18, inclusive; R₂ is selected from hydrogen and straight and branched alkyl, alkoxy, alkylaryl and alkoxyaryl groups containing up to 18 carbon atoms; and R is selected from a bond or straight and branched alkyl, alkoxy, alkylaryl and alkoxyaryl groups containing up to 18 carbon atoms.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER IPC: A61K 9/14(2006.01) USPC: 424/484 According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) U.S. : 424/484 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) EAST				
C. DOCUMENTS CONSIDERED TO BE RELEVANT				
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.		
X --- Y	US 6,475,477 B1 (KOHN et al) 5 Nov 2002 (05.11.2002), col 15 line 4-col 16 line 4 and claims.	1-15 and 17-27 ----- 16, 28-35		
X --- Y	US 5,658,995 (KOHN et al) 19 Aug 1997 (19.08.1997), column 2 lines 28-34, column 3 line 21-column 4 line 57, col 6 line 62-col 7 line 45, examples and claims.	1-13 and 29-30 ----- 14-28, 31-35		
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/> See patent family annex.				
<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> * Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed </td> <td style="width: 50%; vertical-align: top;"> "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family </td> </tr> </table>			* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family
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