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(54) Title: DENTAL COMPOSITION FOR HYPERSENSITIVE TEETH

(57) Abstract: A composition for the treatment of sensitive teeth comprising a suitable carrier and a desensitizing amount of: a) at least one tubule blocking agent, preferably a combination of two such agents; and b) a nerve desensitizing agent selected from the group consisting of at least one potassium salt, at least one strontium salt, and mixtures thereof, wherein the tubule blocking agent deposits or swells upon the dentinal surface and/or precipitates within the dentinal tubules, retaining a higher concentration of the nerve desensitizing agent at the exposed dentinal surface and within the dentinal tubules. The compositions may further contain a source of physiologically acceptable fluoride ion, such as stannous fluoride. Also disclosed are methods of using the subject compositions in the treatment of sensitive teeth.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 7/16

US CL : 424/49

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. : 424/49

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)

WEST 2

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
T/E	US 6,241,972 B1 (HERMS et al.) 05 June 2001, see entire document, polyonhydride resin, col. 5, line 28, desensitizing agents, col. 7, lines 38-42.	1-21
Y	US 6,099,315 A (MARKOWITZ) 08 August 2000, see entire document, polyacrylate polymers, claims 7-9; desensitizing agents, claim 6 and col. 5, lines 21-42.	1-21
Y	US 6,096,292 A (HALECKY et al.) 01 August 2000, see entire document, polyacrylate polymers, col.4, lines 8-10 and 15-17.	1-21
Y	US5,653,964 A (HERMS et al.) 05 August 1997, see entire document, polyacrylate polymers claims 1-4, potassium desensitizing salts, claim 4, potassium nitrate col. 4, line 18.	1-21

☒ Further documents are listed in the continuation of Box C.
 ☐ See patent family annex.

* Special categories of cited documents:		"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
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier document published on or after the international filing date	"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
"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)	"&"	document member of the same patent family
"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		

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,597,552 A (HERMS et al.) 28 January 1997, see entire document, polyacrylate polymers, col. 2, desensitizing potassium and strontium chloride, col. 4, lines 18-23.	1-21
Y	US 5,270,031 A (LIM et al.) 14 December 1993, see entire document, polyacrylic polymers, claim 1, examples 4-5 at col. 6, desensitizing agents, potassium nitrate, strontium chloride, col. 4, lines 60-64.	1-21
Y	US 5,688,492 A (GALLEY et al.) 18 November 1997, see entire document, carboxyvinyl polymer, col. 4, line 25, desensitizing agents, potassium nitrate citrate chloride strontium chloride acetate, col. 5, lines 7-11.	1-21
Y	US 5,240,697 A (NORFLEET et al.) 31 August 1993, see entire document, polyacrylate polymers, col. 4, lines 39-48, potassium salts, col. 7, lines 1-7	1-21
Y	US 4,965,067 A (WIETFELDT) 23 October 1990, see entire document, polyacrylate polymer, col. 3, lines 1-46, col. 5, line 22, strontium salts, col. 3, lines 48-58.	1-21
Y	US 4,871,531 A (HARTLAUB et al.) 03 October 1989, see entire document, polyacrylate polymers, col. 3, lines 1-45, strontium salts, col. 3, lines 46-58.	1-21
Y	US 4,847,070 A (PYRZ et al.) 11 July 1989, see entire document, polyacrylate polymers, col. 3, lines 30-68, col. 5, line 22, strontium salts, col. 4, lines 22-32.	1-21