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(54) Title: CONTACT LENS PACKAGE SOLUTION

(57) Abstract: An aqueous contact lens storage solution comprises a viscoelastic rheology modifier; and not more than 0.3% w/v of an alkali metal salt; the solution has a pH of between 6.0 and 8.0 and an osmolality of between 100 and 400 mOsm/kg, and the solution has viscoelastic properties, even if heat sterilized at 121°C for at least 15 minutes. The viscoelastic rheology modifier may be selected from the following acids or their alkali metal salts: hyaluronic acid, poly(acrylic acid), crosslinked poly(acrylic acid), poly(methacrylic acid), carboxymethyl cellulose, alginate and mixtures thereof. The alkali metal salt may be present in an amount of from 0.01% to 0.3% w/v, and be selected from sodium chloride, sodium bicarbonate, sodium dihydrogen phosphate, disodium hydrogen phosphate, trisodium phosphate, sodium tetraborate, sodium citrate, sodium acetate, sodium lactate, potassium chloride, potassium bicarbonate, potassium dihydrogen phosphate, dipotassium hydrogen phosphate, tripotassium phosphate, potassium tetraborate, potassium citrate, potassium acetate, potassium lactate and mixtures thereof. The solution may be an inhomogeneous combination of a gel component and an additional liquid component. If so, the solution has a pH of between 6.0 and 8.0 and an osmolality of between 100 and 400 mOsm/kg when in a homogeneous form.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER A61L12/08 A61L12/14 C11D3/00 A61K9/00 A45C11/00		
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) A61L C11D A61K A45C		
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 practical, search terms used) EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/060495 A (WAGENAAR, LOUIS, JOHAN) 8 August 2002 (2002-08-08) claims; example C	1-36
A	page 4, lines 5-22	37
X	WO 2004/062660 A (ADVANCED MEDICAL OPTICS INC; COOK, JAMES, N) 29 July 2004 (2004-07-29) paragraph [0031]; claims 1,14,17,22,27,29,36	1-36
X	EP 0 323 522 A (SANTEN PHARMACEUTICAL CO., LTD) 12 July 1989 (1989-07-12) claim 1; examples	1-36
X	WO 94/13774 A (ALLERGAN, INC) 23 June 1994 (1994-06-23) claims; table 2	1-36
-/--		
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C.	<input checked="" type="checkbox"/> See patent family annex.	
* Special categories of cited documents :		
A document defining the general state of the art which is not considered to be of particular relevance	*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	
E earlier document but published on or after the international filing date	*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	
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)	*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.	
O document referring to an oral disclosure, use, exhibition or other means	*&* document member of the same patent family	
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.
X	US 4 259 202 A (TANAKA ET AL) 31 March 1981 (1981-03-31) column 1, lines 6-10 column 4, line 64 - column 5, line 7 column 5, lines 40-43 example 2	1-36
X	----- ARAGONA P ET AL: "LONG TERM TREATMENT WITH SODIUM HYALURONATE-CONTAINING ARTIFICIAL TEARS REDUCES OCULAR SURFACE DAMAGE IN PATIENTS WITH DRY EYE" BRITISH JOURNAL OF OPHTHALMOLOGY, LONDON, GB, vol. 86, no. 2, February 2002 (2002-02), pages 181-184, XP001095826 ISSN: 0007-1161 paragraphs [STUDY], [MATERIALS]	1-36
A	US 2002/037842 A1 (LEAHY CHARLES D ET AL) 28 March 2002 (2002-03-28) paragraph [0015]	1-36
A	examples 7,11	37
Y	----- WO 03/016175 A (NEWMAN, STEPHEN, DONALD; CLEARLAB PTE LTD) 27 February 2003 (2003-02-27) page 19, lines 15-22	37
Y	----- US 5 304 182 A (RHEINISH ET AL) 19 April 1994 (1994-04-19) column 4, lines 28-38	37

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

- 1. Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

- 2. Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

- 3. Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

- 1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

- 2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

- 3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

- 4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-36

Aqueous contact lens storage solution comprising a viscoelastic rheology modifier and not more than 0.3 % w/v of an alkali metal salt having a pH of 6.0 to 8.0 and an osmolality of 100 to 400 mOsm/kg, a method of packing a contact lens and a contact lens package both employing the solution.

2. claim: 37

A contact lens package containing a contact lens, a gel comprising viscoelastic rheology modifier and separate liquid component containing additional contact package solution components.

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