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(54) Title: COSMETIC AND PHARMACEUTICAL COMPOSITION COMPRISING CHELATING/SEQUESTERING AGENTS AND THEIR COSMETIC AND DERMATOLOGICAL USE

(57) Abstract: Pharmaceutical and cosmetical compositions comprising a chelating and a sequestering agent, and optionally containing further ingredients. Use of such compositions to make water more compatible with the skin. Use of such compositions to prevent or treat skin conditions such as eczema, irritation and skin dryness.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/10393

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K7/48 A61K31/00

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)

IPC 7 A61K

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, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 540 863 A (CALTON GARY J ET AL) 30 July 1996 (1996-07-30) column 1, line 14-16 column 2, line 19-36, 50-52 column 3, line 8 -column 4, line 3 table 1 claims 1,3,11-20	1,9,12
X	EP 0 412 705 A (PROCTER & GAMBLE) 13 February 1991 (1991-02-13) example VI	1,9,10, 12,13
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 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° 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 document but 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

Date of the actual completion of the international search

10 May 2002

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19. 09. 2002

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 01/10393

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X A	WO 99 62482 A (ITO SHINOBU ;TSUZUKI TOSHI (JP); FURUYA KAZUO (JP); MASATSUJI EIKO) 9 December 1999 (1999-12-09) page 1, line 6-15 page 3, line 15-22 page 12, line 9 -page 13, line 17 example 7 claims 1,7,8 ---	1,10-13 14,15
X	US 5 635 167 A (SAID HAYEL ET AL) 3 June 1997 (1997-06-03) abstract column 9, line 60 -column 10, line 58 ---	1,10-12
X	WO 93 11737 A (VITACHLOR CORP) 24 June 1993 (1993-06-24) abstract page 5, line 17 -page 6, line 5 page 7, line 12-29 page 8, line 6-19 claims 1,3,4,11,12,14,16,21-25 ---	1,10-12
A	BABCOCK GOVE P.: "Webster's Third New International Dictionary" , MERRIAM-WEBSTER INC. , SPRINGFIELD, MASSACHUSETTS, U.S.A. XP002164871 see "1 chelate" and "2 chelate" page 383, middle column see "1 sequester" (definition 3) and "sequestrant" page 2071, right-hand column ---	1-15
A	WENNINGER J.A. AND MCEWEN G.N. JR: "International Cosmetic Ingredient Dictionary and Handbook, Vol. 2" 1997 , THE COSMETIC, TOILETRY, AND FRAGRANCE ASSOCIATION , WASHINGTON, DC, U.S.A. XP002164872 page 1626, paragraph 2 ---	1-15
A	DE 199 07 014 A (BAYER AG) 24 August 2000 (2000-08-24) page 2, line 1-11 page 3, line 3 -page 4, line 58 claim 3 -----	1-15

INTERNATIONAL SEARCH REPORT

International application No.
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Box I Observations where certain claims were found unsearchable (Continuation of item 1 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:
see FURTHER INFORMATION sheet PCT/ISA/210

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 II Observations where unity of invention is lacking (Continuation of item 2 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.:
1 (partially), 2-8 (completely), 9-15 (partially)

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

Continuation of Box I.2

Present claims 1-15 relate to an extremely large number of possible compounds (namely chelating or sequestering agents). In fact, the terms "chelating agents" and "sequestering agents" (often used in the art as synonyms) contain so many options, that a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search over the whole scope of the claims impossible.

Moreover, present claims 2-7 relate to a very large number of possible chelating or sequestering agents (iminodisuccinate acid and salts thereof and polyaspartic acid and salts thereof). Again a lack of clarity (and conciseness) within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search over the whole scope of the claims impossible.

Consequently, the search for the first invention has been carried out for those parts of the application which do appear to be clear (and concise), namely N-(1,2-dicarboxyethyl)-aspartic acid or salts, in combination with the polyaspartic acid salt of formula III, with due regard of the general idea underlying the invention.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

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 (partially), 2-8 (completely), 9-15 (partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of iminodisuccinate salts and acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts.

2. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of ethylene diamino tetraacetate salts (EDTA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts.

3. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of ethylene diamino tetraacetate salts (EDTA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of cellulose derivatives.

4. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of ethylene diamino tetraacetate salts (EDTA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

5. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of diethylene triamino pentaacetate salts (DTPA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

6. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of propylene diamino tetraacetate salts (PDTA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

7. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of hydroxyethylene diamino triacetate salts (HEDTA) and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

8. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of tetrahydroxypropyl ethylenediamine, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

9. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of pentetate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

10. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of etidronate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

11. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of nitrilotriacetate (NTA) salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts.

12. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of nitrilotriacetate (NTA) salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of cellulose derivatives.

13. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of nitrilotriacetate (NTA) salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks or salts thereof.

14. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of acrylic

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

acid/acrylamidomethyl propane sulfonic acid copolymer polyacrylate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

15. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of phosphonate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

16. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of poly- or metaphosphate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts.

17. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of poly- or metaphosphate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of cellulose derivatives.

18. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of poly- or metaphosphate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks or salts thereof.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

19. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of citrate salts and citric acid, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid or its salts.

20. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of citrate salts and citric acid, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of cellulose derivatives.

21. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of citrate salts and citric acid, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks or salts thereof.

22. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of galactaric acid and galactaric acid salts, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

23. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of iminodisuccinate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

monomeric building blocks and salts thereof, as far as not comprised in subject 1.

24. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of zeolithe; bentonite; laminar disilicate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

25. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of N-acylethylenediaminotriacetate salts and the acid form thereof, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

26. Claims: 1, 9-15 (all partially)

A cosmetic or pharmaceutical composition comprising a cosmetically/pharmaceutically acceptable chelating agent selected from the group consisting of phytic acid and phytic acid salts, in combination with a cosmetically/pharmaceutically acceptable sequestering agent selected from the group consisting of polyaspartic acid and its salts; cellulose derivatives; copolymers that contain maleic or hydroxysuccinic acid as monomeric building blocks and salts thereof.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 01/10393

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