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(71) Applicant (for all designated States except US): **SYM-RISE GMBH & CO. KG** [DE/DE]; Mühlenfeldstrasse 1, 37603 Holzminden (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SCHMAUS, Gerhard** [DE/DE]; Herrenburgstrasse 29, 37671 Höxter (DE). **LANGE, Sabine** [DE/DE]; Danzigerstrasse 20, 37603 Holzminden (DE).

(74) Agents: **STILKENBÖHMER, Uwe** et al.; c/o Eisenführ, Speiser & Partner, P.O. Box 10 60 78, 28060 Bremen (DE).

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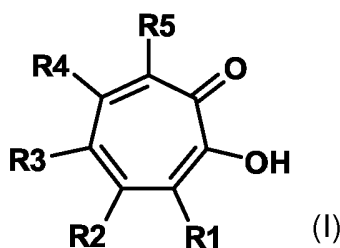
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14 December 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYNERGISTIC MIXTURES OF C6- TO C12-ALKANEDIOLS AND TROPOLONE (DERIVATIVES)



(I)

(57) Abstract: Antimicrobial mixtures comprising or consisting of: (a) one or more branched or unbranched alkanediols having 6-12 carbon atoms, (b) one, two or more compounds chosen from the group consisting of the tropolones of the formula (I) wherein the substituents R1, R2, R3, R4 and R5 independently of one another have the following meaning: H; linear or branched, saturated or unsaturated, aliphatic hydrocarbon radical having up to 30 C atoms; OH; OR6, wherein R6 is a linear or branched, saturated or unsaturated, aliphatic hydrocarbon radical having up to 30 C atoms; COOH; COOR7, wherein R7 is a linear or branched, saturated or unsaturated, aliphatic hydrocarbon radical having up to 30 C atoms; NO₂, NH₂, F, Cl, Br, I, are described.



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER

INV. A01N35/06

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)

A01N

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, CHEM ABS Data, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; HORI, HITOMI ET AL: "Use of hinokitiol and 1,2- alkanediol combination as antiseptic for topical preparations" XP002396727 retrieved from STN Database accession no. 2001:129695 abstract	1-10
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☒ Further documents are listed in the continuation of Box C.

☒ 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
- *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

29 August 2006

Date of mailing of the international search report

13/09/2006

Name and mailing address of the ISA/

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Fort, M

INTERNATIONAL SEARCH REPORT

International application No
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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,P	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; PILLAI, RAVI ET AL: "Cosmetic compositions containing mixtures of alkane diols and chelating agents, tropolone compounds and sesquiterpenes" XP002396728 retrieved from STN Database accession no. 2005:580820 abstract & RD 490 122 20 10 March 2005 (2005-03-10)	1-10
X,P	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; YATAKE, MASAHIRO: "Aqueous ink compositions with antimicrobial ability" XP002396729 retrieved from STN Database accession no. 2005:975942 abstract & JP 2005 239965 A (SEIKO EPSON CORP., JAPAN SEIKO EPSON CORP., JAPAN) 27 February 2004 (2004-02-27)	1-5,8
X,P	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; TACHIBANA, HISASHI ET AL: "Deodorant compositions containing antibacterial glyceryl monoalkyl ethers" XP002396730 retrieved from STN Database accession no. 2005:539772 abstract & JP 2005 162636 A2 (NOEVIR CO., LTD., JAPAN NOEVIR CO., LTD., JAPAN) 1 December 2003 (2003-12-01)	1-10
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; HISAMITSU, KAZUMASA ET AL: "Cosmetics containing tropolone derivatives and polyhydric alcohols" XP002396731 retrieved from STN Database accession no. 2001:736809 cited in the application abstract & JP 2001 278728 A (FANCL CORPORATION, JAPAN FANCL CORPORATION, JAPAN) 31 March 2000 (2000-03-31) ----- -/--	1-10

INTERNATIONAL SEARCH REPORT

International application No
PCT/EP2006/050425

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SAKIHARA, HISAHIRO ET AL: "Storage-stable antiseptic topical compositions" XP002396732 retrieved from STN Database accession no. 2003:508454 abstract & JP 2003 183113 A (NONOGAWA SHOJI LTD., JAPAN NONOGAWA SHOJI LTD., JAPAN) 3 July 2003 (2003-07-03)	1-10
X	DATABASE CA [Online] CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; SUETSUGU, KAZUHIRO ET AL: "Antibacterial cosmetic ingredients with moisture-holding effects" XP002396733 retrieved from STN Database accession no. 2002:570300 abstract & JP 2002 212021 A (NARISU COSMETIC CO., LTD., JAPAN NARISU COSMETIC CO., LTD., JAPAN) 31 July 2002 (2002-07-31)	1-10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2006/050425

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:

Although claim 10 is directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the composition
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:

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.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2006/050425

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
JP 2001048781	A	20-02-2001	NONE
RD 490122	20		NONE
JP 2005239965	A	08-09-2005	NONE
JP 2005162636	A2		NONE
JP 2001278728	A	10-10-2001	NONE
JP 2003183113	A	03-07-2003	NONE
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