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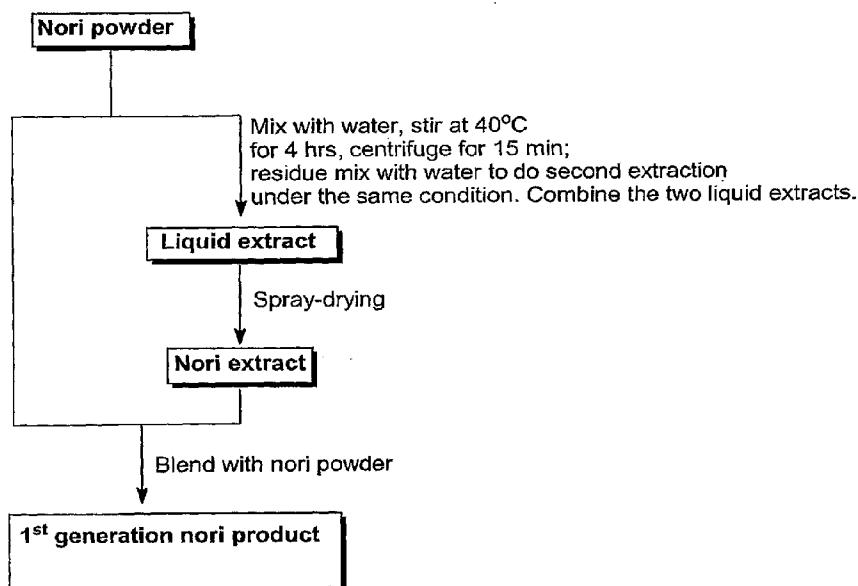
- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:

29 January 2009

(54) Title: COMPOSITIONS COMPRISING PORPHYRA AND METHODS OF MAKING AND USING THEREOF

FIGURE 1



(57) Abstract: Disclosed herein are compositions comprising Porphyra, as well as methods of making and using such compositions.

INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/002849

A. CLASSIFICATION OF SUBJECT MATTER

INV. A23L1/30 A23L1/337 A61K36/04

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)

A23L A01G 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, FSTA, BIOSIS, EMBASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 1 433 500 A (SHIRAKO CO LTD [JP]) 30 June 2004 (2004-06-30)	1-33
X	DATABASE WPI Week 200482 Thomson Scientific, London, GB; AN 2004-827609 XP002487036 & JP 2004 339161 A (KENSHO YG) 2 December 2004 (2004-12-02) abstract	1, 15-17, 19, 20, 25, 33
X	DATABASE WPI Week 200569 Thomson Scientific, London, GB; AN 2005-670412 XP002487037 & JP 2005 270024 A (NAGATANEN KK) 6 October 2005 (2005-10-06) abstract	1, 5, 6, 15-20, 25, 29, 32, 33
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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.
- *Z* document member of the same patent family

Date of the actual completion of the international search

4 July 2008

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INTERNATIONAL SEARCH REPORT

International application No

PCT/IB2007/002849

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 FSTA [Online] INTERNATIONAL FOOD INFORMATION SERVICE (IFIS), FRANKFURT-MAIN, DE; JANG-WOOK LEE ET AL: "Preparation of noodle with laver powder and its characteristics." XP002487035 Database accession no. 2000-00-m1053 abstract & KOREAN JOURNAL OF FOOD SCIENCE AND TECHNOLOGY, vol. 32, no. 2, 2000, pages 298-305, CORRESPONDENCE (REPRINT) ADDRESS, YANG-KYUN PARK, DEP. OF FOOD ENG., MOKPO NAT. UNIV., CHUNGGYE, MUAN, CHONNAM 534-729, KOREA. TEL. 82-636-450-2422. FAX 82-636-454-1521. E-MAIL YKPARK(A)CHUNGKYE.M	1,15-20, 25, 27-29, 32,33
A	WO 03/041679 A (LARENA [FR]; LECLERC CHRISTIAN [FR]; PAUL FRANCOIS [FR]) 22 May 2003 (2003-05-22)	1-33
A	EP 0 438 302 A (YAMANOUCHI PHARMA CO LTD [JP]) 24 July 1991 (1991-07-24)	1-33

INTERNATIONAL SEARCH REPORT

International application No.
PCT/IB2007/002849

Box No. 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:
see FURTHER INFORMATION sheet PCT/ISA/210
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 No. 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 allsearchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search reportcovers 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.:

1-33

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.1

Although claims 21-24 are 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 compound/composition.

Continuation of Box II.1

Claims Nos.: -

Although claims 21-24 are 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 compound/composition.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-33

A composition comprising a blend of Porphyra and an extract of Porphyra

2. claims: 34-38

A composition comprising an extract of Porphyra, wherein the extract is obtained by a process comprising the steps of:

a. extracting a Porphyra powder with a first organic extraction solvent, thereby providing a first extracted residue;

b. extracting the first extracted residue with a second organic extraction solvent, thereby providing a second extracted residue; and

c. extracting the second extracted residue at least once with water, thereby providing the extract of Porphyra.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/IB2007/002849

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 1433500	A	30-06-2004	DE 60306877 T2	15-02-2007
			JP 2004201568 A	22-07-2004
			KR 20040057909 A	02-07-2004
			US 2004131636 A1	08-07-2004
JP 2004339161	A	02-12-2004	NONE	
JP 2005270024	A	06-10-2005	NONE	
WO 03041679	A	22-05-2003	AU 2002352337 A1	26-05-2003
			CA 2467102 A1	22-05-2003
			CN 1617702 A	18-05-2005
			EP 1443898 A2	11-08-2004
			FR 2832629 A1	30-05-2003
			JP 2005508999 T	07-04-2005
			US 2004228875 A1	18-11-2004
EP 0438302	A	24-07-1991	DE 69101847 D1	09-06-1994
			DE 69101847 T2	01-12-1994
			US 5160736 A	03-11-1992