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(54) Title: PLANT EXTRACT AND PUFA COMBINATIONS

(57) Abstract: The present invention relates to the combination of a plant extract, such as oregano extract and a polyunsaturated fatty acid or a derivative (such as an ethyl ester "PUFA EE") which is stable under storage conditions.



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. A23L1/30 A23L1/00 A23D7/06 C11B5/00 A61K36/53 A61K31/201 A61K31/202		
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 A23D C11B 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, BIOSIS, FSTA, 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	WO 2008/017484 A1 (DSM IP ASSETS BV [NL]; FOWLER ANN [CH]; GORALCZYK REGINA [DE]; KILPERT) 14 February 2008 (2008-02-14) cited in the application claims 1-6; examples 16,17 -----	1-12
L	LAURENCE LIVERNAIS-SAETTEL: "Soybean oil" INTERNET ARTICLE, [Online] 2002, XP002543248 Retrieved from the Internet: URL: http://www.dietobio.com/dossiers/en/soy/oil.html [retrieved on 2009-08-27] the whole document ----- -/--	1-12
☒ 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		
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28 August 2009	07/12/2009	
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Fischer, J	

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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	FR 2 513 262 A1 (ASAMA KASEI KK [JP]) 25 March 1983 (1983-03-25) page 4, line 2 - page 5, line 20 page 7, line 5 - page 8, line 24; claims 1-14; example 1 -----	1,2,4, 10,12
X	US 2003/232100 A1 (THEOHARIDES THEOHARIS C [US]) 18 December 2003 (2003-12-18) paragraph [0013] - paragraph [0030]; claims 1-11; example 5 -----	1,4,10
X	US 2006/013905 A1 (TEHOARIDES THEOHARIS C [US]) 19 January 2006 (2006-01-19) paragraph [0014] paragraph [0027] - paragraph [0038]; claims 1,5-9; examples 5,10b,10c -----	1,4
X	US 6 200 601 B1 (GORENBEIN DAVID [US] ET AL) 13 March 2001 (2001-03-13) claims 1-19 -----	1,4,10, 12
X	WO 2008/012329 A2 (MANE FILS V [FR]; MANE JEAN [FR]; HANNETEL JEAN-MICHEL [FR]; DAILLAND) 31 January 2008 (2008-01-31) page 2, line 19 - page 6, line 14 page 8, line 9 - line 24; claims 1,6-10,12-17,22-25,29-31 -----	1,3,4, 10,12
X	WO 02/060510 A2 (GLOBAL ACCESS INC [US]) 8 August 2002 (2002-08-08) page 4, line 15, paragraph 5 - page 5, line 24, paragraph 4 claims 1-3,6; examples 2,3 -----	1,12
X	WO 00/51576 A (IDA DEVELOPMENTS A S [DK]; WEIDNER MORTEN SLOTH [DK] IDA DEVELOPMENTS) 8 September 2000 (2000-09-08) page 4, line 12 - page 7, line 24 page 8, line 16 - page 10, line 4; claims 1-19; example 1 -----	1,3,4, 10,12
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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	WO 2008/028584 A1 (COGNIS IP MAN GMBH [DE]; FABRY BERND [DE]) 13 March 2008 (2008-03-13) page 2, line 1 - page 15, line 18; claims 1-11; examples 1,3 -----	1, 3, 4, 10, 12
A	US 5 017 397 A (NGUYEN UY [CA] ET AL) 21 May 1991 (1991-05-21) the whole document -----	1-12
A	BAHLE ET AL.: "Oregano and rosemary extracts inhibit oxidation of long-chain n-3 fatty acids in Menhaden oil" JOURNAL OF FOOD SCIENCE, vol. 72, no. 9, 2007, pages C504-C508, XP002543249 cited in the application the whole document -----	1-12

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International application No.
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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:
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 all searchable 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 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.:

1-12(partially)

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

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

1. claims: 1-12 (partially)

A stable composition comprising an oregano extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA which is not a Menhaden oil, wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

2. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a thyme extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

3. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a lippia extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

4. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a lemon balm extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

5. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a chamomille extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

6. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a hops extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

7. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a valerian extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

8. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising an olive extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

9. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a majoram extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

10. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a sage extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

11. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a laurel extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

12. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a black cumin extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

13. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a kava kava extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

14. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a black pepper extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

15. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a fennel extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

16. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a cinnamon extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

17. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a ginseng extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

18. claims: 1 (partially), 3-4 (partially), 10 (partially), 12 (partially)

A stable composition comprising a ginger extract and a polyunsaturated fatty acid (PUFA) or derivative of a PUFA , wherein the plant extract is present in an amount of at least 8% by weight; and a food comprising the composition.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2009/057189

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