

Title (en)

PROCESS FOR CONVERTING PLANT MATERIALS TO PLANT EXTRACTS HAVING ANTIMICROBIAL ACTIVITY

Title (de)

VERFAHREN ZUR UMWANDLUNG VON PFLANZENMATERIALIEN IN PFLANZENEXTRAKTE MIT ANTIMIKROBIELLER WIRKUNG

Title (fr)

PROCÉDÉ DE CONVERSION DE MATIÈRES VÉGÉTALES EN EXTRAITS VÉGÉTAUX AYANT UNE ACTIVITÉ ANTIMICROBIENNE

Publication

**EP 3558331 A4 20200520 (EN)**

Application

**EP 17883305 A 20171220**

Priority

- FI 20166020 A 20161222
- FI 2017050912 W 20171220

Abstract (en)

[origin: WO2018115582A1] The invention relates to process for converting plant material to plant extract having antimicrobial activity, said process comprising the steps, where in the first step at least one plant material is ground in the presence of a first medium or without a medium, to obtain particles having average particle size from 10 to 1000 µm, and in the second step the particles are mixed with a second medium to obtain a mixture comprising bioactive compounds, and the mixture is subjected to separation whereby a plant extract is separated from a plant residue.

IPC 8 full level

**A61K 36/00** (2006.01); **A23L 3/3472** (2006.01); **A23L 19/00** (2016.01); **A23L 29/00** (2016.01); **A23L 33/105** (2016.01); **A61K 8/97** (2017.01); **A61K 31/00** (2006.01); **C07D 311/00** (2006.01); **A61K 127/00** (2006.01); **A61K 131/00** (2006.01)

CPC (source: EP FI KR)

**A23L 3/3472** (2013.01 - EP FI KR); **A23L 19/00** (2016.08 - EP FI KR); **A23L 33/105** (2016.08 - EP FI KR); **A61K 8/97** (2013.01 - EP FI); **A61K 31/00** (2013.01 - FI); **A61K 36/00** (2013.01 - FI); **A61K 36/45** (2013.01 - EP); **A61K 36/73** (2013.01 - EP); **A61Q 19/00** (2013.01 - EP); **C07D 311/00** (2013.01 - FI); **A23V 2002/00** (2013.01 - KR); **A23V 2250/00** (2013.01 - KR); **A23V 2300/10** (2013.01 - KR); **A23V 2300/20** (2013.01 - KR); **A23V 2300/31** (2013.01 - KR); **A23V 2300/50** (2013.01 - KR); **A61K 2236/00** (2013.01 - EP); **A61K 2800/805** (2013.01 - EP)

C-Set (source: EP)

1. **A61K 36/45 + A61K 2300/00**
2. **A61K 36/73 + A61K 2300/00**

Citation (search report)

- [Y] EP 1452095 A1 20040901 - MEIJI DAIRIES CORP [JP]
- [Y] KR 20160016059 A 20160215 - JEON CHANG JIN [KR], et al
- [Y] INGA LIEPINA ET AL: "Antimicrobial activity of extracts from fruits of Aronia melanocarpa and Sorbus aucuparia Introduction", ENVIRONMENTAL AND EXPERIMENTAL BIOLOGY, 1 January 2013 (2013-01-01), pages 195 - 199, XP055684824, Retrieved from the Internet <URL:http://eeb.lu.lv/EEB/201312/EEB\_11\_Liepina.pdf>
- [Y] XIAO SHEN ET AL: "Antimicrobial effect of blueberry (Vaccinium corymbosum L.) extracts against the growth of Listeria monocytogenes and Salmonella Enteritidis", FOOD CONTROL, vol. 35, no. 1, 1 January 2014 (2014-01-01), GB, pages 159 - 165, XP055684825, ISSN: 0956-7135, DOI: 10.1016/j.foodcont.2013.06.040
- [Y] S. SILVA ET AL: "Antimicrobial, antiadhesive and antibiofilm activity of an ethanolic, anthocyanin-rich blueberry extract purified by solid phase extraction", JOURNAL OF APPLIED MICROBIOLOGY, vol. 121, no. 3, 1 September 2016 (2016-09-01), GB, pages 693 - 703, XP055684831, ISSN: 1364-5072, DOI: 10.1111/jam.13215

Citation (examination)

- J. AZMIR ET AL: "Techniques for extraction of bioactive compounds from plant materials: A review", JOURNAL OF FOOD ENGINEERING, vol. 117, no. 4, 1 August 2013 (2013-08-01), GB, pages 426 - 436, XP055444044, ISSN: 0260-8774, DOI: 10.1016/j.jfoodeng.2013.01.014
- NN AZWANIDA: "A Review on the Extraction Methods Use in Medicinal Plants, Principle, Strength and Limitation", MEDICINAL & AROMATIC PLANTS, vol. 04, no. 03, 6 July 2015 (2015-07-06), XP055551871, DOI: 10.4172/2167-0412.1000196
- ALTIOK E ET AL: "Isolation of polyphenols from the extracts of olive leaves (Olea europaea L.) by adsorption on silk fibroin", SEPARATION AND PURIFICATION TECHNOLOGY, ELSEVIER SCIENCE, AMSTERDAM, NL, vol. 62, no. 2, 1 September 2008 (2008-09-01), pages 342 - 348, XP022758139, ISSN: 1383-5866, [retrieved on 20080202], DOI: 10.1016/J.SEPPUR.2008.01.022
- See also references of WO 2018115582A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

**WO 2018115582 A1 20180628**; EP 3558331 A1 20191030; EP 3558331 A4 20200520; FI 130152 B 20230316; FI 20166020 L 20180623; KR 102604326 B1 20231123; KR 20190097244 A 20190820

DOCDB simple family (application)

**FI 2017050912 W 20171220**; EP 17883305 A 20171220; FI 20166020 A 20161222; KR 20197021520 A 20171220