

Title (en)

METHOD FOR PURIFYING CARBOXYLIC ACIDS FROM FERMENTATION BROTHS

Title (de)

VERFAHREN ZUR AUFREINIGUNG VON CARBONSÄUREN AUS FERMENTATIONSBRÜHEN

Title (fr)

PROCÉDÉ DE PURIFICATION D'ACIDES CARBOXYLIQUES ISSUS DE BOUILLONS DE FERMENTATION

Publication

**EP 2788310 A1 20141015 (DE)**

Application

**EP 12794869 A 20121115**

Priority

- DE 102011120632 A 20111209
- EP 2012004741 W 20121115

Abstract (en)

[origin: WO2013083229A1] The invention relates to a method for separating and purifying carboxylic acids from fermentation broths, comprising the following steps: a) separating the biomass and any solid materials that may be present from the fermentation broth, b) using nanofiltration for the fine-purification of the fermentation broth from method step a), and c) separating the carboxylic acid by means of adsorption to one or more solid phases which have tertiary amino groups.

IPC 8 full level

**C07C 51/42** (2006.01); **C07C 55/02** (2006.01); **C07C 57/02** (2006.01); **C12P 7/42** (2006.01); **C12P 7/44** (2006.01); **C12P 7/46** (2006.01); **C12P 7/48** (2006.01); **C12P 7/56** (2006.01)

CPC (source: EP US)

**B01D 61/08** (2013.01 - EP US); **C07C 51/42** (2013.01 - EP US); **C07C 51/47** (2013.01 - EP US)

C-Set (source: EP US)

1. **C07C 51/47 + C07C 59/08**
2. **C07C 51/42 + C07C 59/06**
3. **C07C 51/42 + C07C 59/153**
4. **C07C 51/47 + C07C 59/153**
5. **C07C 51/47 + C07C 59/255**
6. **C07C 51/42 + C07C 59/255**
7. **C07C 51/42 + C07C 59/265**
8. **C07C 51/47 + C07C 59/265**
9. **C07C 51/47 + C07C 59/00**
10. **C07C 51/42 + C07C 59/00**
11. **C07C 51/42 + C07C 55/02**
12. **C07C 51/42 + C07C 59/08**
13. **C07C 51/47 + C07C 55/02**
14. **C07C 51/42 + C07C 55/06**
15. **C07C 51/47 + C07C 55/06**
16. **C07C 51/47 + C07C 57/145**
17. **C07C 51/42 + C07C 57/145**
18. **C07C 51/42 + C07C 57/15**
19. **C07C 51/47 + C07C 57/15**
20. **C07C 51/47 + C07C 59/06**

Citation (search report)

See references of WO 2013083229A1

Citation (examination)

- DE 19939630 C2 20010712 - MG TECHNOLOGIES AG [DE]
- DE 69815369 T2 20040506 - CARGILL INC [US]
- DE 19580599 C1 19990225 - FRAUNHOFER GES FORSCHUNG [DE]
- M. ISABEL GONZÁLEZ ET AL: "Purification of Lactic Acid from Fermentation Broths by Ion-Exchange Resins", INDUSTRIAL & ENGINEERING CHEMISTRY RESEARCH., vol. 45, no. 9, 1 April 2006 (2006-04-01), US, pages 3243 - 3247, XP055340255, ISSN: 0888-5885, DOI: 10.1021/ie051263a

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 2013083229 A1 20130613**; BR 112014013798 A2 20170613; BR 112014013798 A8 20170613; DE 102011120632 A1 20130613; EP 2788310 A1 20141015; US 2014371486 A1 20141218; US 9272976 B2 20160301

DOCDB simple family (application)

**EP 2012004741 W 20121115**; BR 112014013798 A 20121115; DE 102011120632 A 20111209; EP 12794869 A 20121115; US 201214363844 A 20121115