

Title (en)  
ANALYTICAL METHOD FOR DETECTING SULFATED OLIGOSACCHARIDES

Title (de)  
ANALYTISCHES VERFAHREN ZUM NACHWEIS SULFATIERTER OLIGOSACCHARIDE

Title (fr)  
PROCÉDÉ ANALYTIQUE POUR DÉTECTER DES OLIGOSACCHARIDES SULFATÉS

Publication  
**EP 3019861 A4 20170222 (EN)**

Application  
**EP 13888999 A 20130711**

Priority  
US 2013050147 W 20130711

Abstract (en)  
[origin: WO2015005928A1] The present invention describes an analytical method for detecting and quantitating poly-sulfated oligosaccharides, including Fondaparinux sodium, using hydrophilic interaction ultra-performance liquid chromatography (HILIC-UPLC) coupled with a charged aerosol detector (CAD) or a mass spectrometer (MS). This analytical method provides in-process control in a total synthesis of highly sulfated oligosaccharides by separation, quantification and mass identification. Systems and conditions utilizing such methods are also provided.

IPC 8 full level  
**G01N 30/88** (2006.01); **B01D 15/30** (2006.01); **C08B 37/00** (2006.01); **G01N 30/72** (2006.01)

CPC (source: EP)  
**B01D 15/305** (2013.01); **C08B 37/0078** (2013.01); **G01N 30/88** (2013.01); **G01N 30/7233** (2013.01); **G01N 2030/8836** (2013.01)

Citation (search report)

- [A] WO 2011073408 A2 20110623 - ENDOTIS PHARMA [FR], et al
- [IY] R.REID TOWNSEND ET AL: "Multimode High-Performance Liquid Chromatography of Fluorescently Labeled Oligosaccharides from Glycoproteins", ANALYTICAL BIOCHEMISTRY, vol. 239, no. 2, 1 August 1996 (1996-08-01), pages 200 - 207, XP055108618, ISSN: 0003-2697, DOI: 10.1006/abio.1996.0315
- [YA] JOSÉ M. CINTRÓN ET AL: "Hydrophilic interaction chromatography with aerosol-based detectors (ELSD, CAD, NQAD) for polar compounds lacking a UV chromophore in an intravenous formulation", JOURNAL OF PHARMACEUTICAL AND BIOMEDICAL ANALYSIS, vol. 78-79, 1 May 2013 (2013-05-01), US, pages 14 - 18, XP055242173, ISSN: 0731-7085, DOI: 10.1016/j.jpba.2013.01.022
- [A] DAVID C. A. NEVILLE ET AL: "Development of a Single Column Method for the Separation of Lipid- and Protein-Derived Oligosaccharides", JOURNAL OF PROTEOME RESEARCH, vol. 8, no. 2, 6 February 2009 (2009-02-06), pages 681 - 687, XP055108809, ISSN: 1535-3893, DOI: 10.1021/pr800704t
- See references of WO 2015005928A1

Cited by  
US11123656B2

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 2015005928 A1 20150115**; AU 2013393832 A1 20160204; AU 2013393832 B2 20171130; CA 2917460 A1 20150115; CN 105431733 A 20160323; CN 105431733 B 20190122; EP 3019861 A1 20160518; EP 3019861 A4 20170222; IL 243405 A0 20160229; JP 2016524166 A 20160812; JP 6208866 B2 20171004; KR 20160030963 A 20160321

DOCDB simple family (application)  
**US 2013050147 W 20130711**; AU 2013393832 A 20130711; CA 2917460 A 20130711; CN 201380078160 A 20130711; EP 13888999 A 20130711; IL 24340515 A 20151230; JP 2016525337 A 20130711; KR 20167003059 A 20130711