

## Title (en)

INDIRECT SUBSTRATES FOR MICROORGANISMS METABOLIZING 1,2-PROPANEDIOL

## Title (de)

INDIREKTE SUBSTRATE FÜR MIKROORGANISMEN ZUR METABOLISIERUNG VON 1,2-PROPANDIOL

## Title (fr)

SUBSTRATS INDIRECTS POUR DES MICROORGANISMES DONT LE MÉTABOLISME PRODUIT DU PROPANE-1,2-DIOL

## Publication

**EP 2677886 A4 20150902 (EN)**

## Application

**EP 12749453 A 20120223**

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## Abstract (en)

[origin: WO2012115588A1] The present invention relates generally to enhanced activity of certain probiotics. The increased efficacy is achieved by using certain substrate components that indirectly supply the probiotics with a specific source of energy. The substrate components are specifically designed to stimulate 1,2-propanediol production. The substrate is exemplified with rhamnose, fucose, pectin with a high percentage of rhamnose, and fucodian having a high percentage of fucose.

## IPC 8 full level

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## CPC (source: EP KR US)

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## Citation (search report)

- [YD] WO 2009151391 A1 20091217 - BIOGAIA AB [SE], et al
- [A] EP 2143341 A1 20100113 - NESTEC SA [CH]
- [A] JP 3587219 B2 20041110
- [Y] CHERYL A. KERFELD ET AL: "Bacterial Microcompartments", ANNUAL REVIEW OF MICROBIOLOGY, vol. 64, no. 1, 13 October 2010 (2010-10-13), pages 391 - 408, XP055201028, ISSN: 0066-4227, DOI: 10.1146/annurev.micro.112408.134211
- [Y] SRIRAMULU D D ET AL: "Lactobacillus reuteri DSM 20016 produces cobalamin-dependant diol dehydratase in metabolosomes and metabolizes 1,2-propanediol by disproportionation", JOURNAL OF BACTERIOLOGY, AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 190, no. 13, 1 July 2008 (2008-07-01), pages 4559 - 4567, XP003025600, ISSN: 0021-9193, DOI: 10.1128/JB.01535-07
- [A] J. XUE ET AL: "Exogenous or L-Rhamnose-Derived 1,2-Propanediol Is Metabolized via a pduD-Dependent Pathway in Listeria innocua", APPLIED AND ENVIRONMENTAL MICROBIOLOGY, vol. 74, no. 22, 15 November 2008 (2008-11-15), pages 7073 - 7079, XP055200994, ISSN: 0099-2240, DOI: 10.1128/AEM.01074-08
- See references of WO 2012115588A1

## Designated contracting state (EPC)

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## DOCDB simple family (application)

**SE 2012050202 W 20120223**; AU 2012221154 A 20120223; BR 112013020695 A 20120223; CA 2828072 A 20120223; CN 201280009918 A 20120223; EP 12749453 A 20120223; JP 2013555393 A 20120223; KR 20137017242 A 20120223; MX 2013009650 A 20120223; NZ 61331812 A 20120223; RU 2013142920 A 20120223; SG 2013049101 A 20120223; ZA 201304704 A 20130624