

Title (en)  
DETERGENT COMPOSITION

Title (de)  
REINIGUNGSMITTELZUSAMMENSETZUNG

Title (fr)  
COMPOSITION DE DÉTERGENT

Publication  
**EP 3798293 A1 20210331 (EN)**

Application  
**EP 19199994 A 20190927**

Priority  
EP 19199994 A 20190927

Abstract (en)

The need for a hand-dishwashing composition which provides good sudsing and a good suds profile even in the presence of greasy stains comprising higher chain-length saturated and/or unsaturated fatty acid chains, as well as improved removal of such stains, is met by formulating the composition with an engineered fatty acid decarboxylase and a surfactant system.

IPC 8 full level

**C11D 3/386** (2006.01)

CPC (source: EP)

**C11D 3/38636** (2013.01); **C11D 3/38681** (2013.01)

Citation (applicant)

- EP 3243896 A1 20171115 - PROCTER & GAMBLE [US]
- CN 108467861 A 20180831 - UNIV YANGZHOU
- US 10000775 B2 20180619 - RUI ZHE [US], et al
- EP 3243896 A1 20171115 - PROCTER & GAMBLE [US]
- US 2009142821 A1 20090604 - CIRINO PATRICK C [US], et al
- WO 2012019844 A2 20120216 - HENKEL AG & CO KGAA [DE], et al
- WO 2012019849 A2 20120216 - HENKEL AG & CO KGAA [DE], et al
- WO 2012019848 A2 20120216 - HENKEL AG & CO KGAA [DE], et al
- US 3915903 A 19751028 - WISE RODNEY M
- WO 2007135645 A2 20071129 - PROCTER & GAMBLE [US], et al
- US 3959230 A 19760525 - HAYS HUGH ROBERT
- US 3893929 A 19750708 - BASADUR MARINO S
- US 4702857 A 19871027 - GOSSELINK EUGENE P [US]
- US 4711730 A 19871208 - GOSSELINK EUGENE P [US], et al
- S CHRISTOPHER DAVIS ET AL.: "Oxidation of v-Oxo Fatty Acids by Cytochrome P450 BM-3 (CYP102", ARCHIVES OF BIOCHEMISTRY AND BIOPHYSICS, vol. 328, no. 1, 1 April 1996 (1996-04-01), pages 35 - 42, XP055315531
- JAMES BELCHER ET AL.: "Structure and Biochemical Properties of the Alkene Producing Cytochrome P450 OleT (CYP152L1) from the Jeotgalicoccus sp. 8456 Bacterium", JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 289, no. 10, 7 March 2014 (2014-03-07), pages 6535 - 6550, XP055206214, ISSN: 0021-9258, doi:10.1074/jbc.M113.527325
- GIRVAN HAZEL M ET AL.: "Applications of microbial cytochrome P450 enzymes in biotechnology and synthetic biology", CURRENT OPINION IN CHEMICAL BIOLOGY, vol. 31, 22 March 2016 (2016-03-22), pages 136 - 145, XP029536984, ISSN: 1367-5931, doi:10.1016/j.cbpa.2016.02.018
- Z. RUI ET AL., PNAS, vol. 111, 2014, pages 18237 - 18242
- KNOOT, C. J.H. B. PAKRASI, SCI. REP., vol. 9, no. 1, 2019, pages 1 - 12
- NEEDLEMANWUNSCH, J. MOL. BIOL., vol. 48, 1970, pages 443 - 453
- HENIKOFF S.HENIKOFF J.G., P.N.A.S. USA, vol. 89, 1992, pages 10915 - 10919
- YI ET AL., PROC. BIOCHEM., vol. 42, 2007, pages 895 - 898
- MARTIN ET AL., APPL. MICROBIOL. BIOTECHNOL., vol. 76, 2007, pages 843 - 851
- KOSZELEWSKI ET AL., J. MOL. CAT. B: ENZ., vol. 63, 2010, pages 39 - 44
- TRUPPO ET AL., ORG. PROC. RES. DEVELOP.
- MATEO ET AL., BIOTECHNOL. PROG., vol. 18, 2002, pages 629 - 34
- ROBERT LAUGHLIN: "The Aqueous Phase Behaviour of Surfactants", 1994, ACADEMIC PRESS, pages: 538 - 542
- KUO-YANN LAI: "soil release agents' definition", LIQUID DETERGENTS, pages 278 - 279

Citation (search report)

- [I] EP 3511403 A1 20190717 - PROCTER & GAMBLE [US]
- [I] WO 2017196786 A1 20171116 - PROCTER & GAMBLE [US]
- [A] ZHU ZHIWEI ET AL: "Enabling the synthesis of medium chain alkanes and 1-alkenes in yeast", METABOLIC ENGINEERING, vol. 44, 20 September 2017 (2017-09-20), pages 81 - 88, XP085285777, ISSN: 1096-7176, DOI: 10.1016/J.YMBEN.2017.09.007
- [A] ZHIWEI ZHU ET AL: "Supplementary information for Enabling the synthesis of medium chain alkanes and 1-alkenes in yeast", 20 September 2017 (2017-09-20), XP055676492, Retrieved from the Internet <URL:<https://ars.els-cdn.com/content/image/1-s2.0-S109671761730126X-mmcl.pdf>> [retrieved on 20200313]
- [A] CORY J. KNOOT ET AL: "Diverse hydrocarbon biosynthetic enzymes can substitute for olefin synthase in the cyanobacterium Synechococcus sp. PCC 7002", SCIENTIFIC REPORTS, vol. 9, no. 1, 4 February 2019 (2019-02-04), XP055676498, DOI: 10.1038/s41598-018-38124-y

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

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
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DOCDB simple family (application)

