

Title (en)

Method for improving the cleaning performance of a washing and cleaning agent

Title (de)

Verfahren zur Verbesserung der Reinigungsleistung eines Wasch- und Reinigungsmittels

Title (fr)

Procédé d'amélioration de la puissance de nettoyage d'un produit de lavage et de nettoyage

Publication

EP 2727989 B1 20190626 (DE)

Application

EP 14152970 A 20090710

Priority

- DE 102008038479 A 20080820
- EP 09780407 A 20090710
- EP 2009058789 W 20090710

Abstract (en)

[origin: WO2010020475A2] According to the invention, the cleaning action of a detergent or cleaning agent is improved when the agent comprises at least one hydrolytic enzyme and at least one substance that produces a synergistic cleaning action when the agent is used together with the hydrolytic enzyme. Said substance is selected from the following: i. an amino acid or polyamino acid or derivatives therefrom and/or; ii. biotenside and/or; iii. a microbial metabolite and/or; iv. a preparation of a microbial culture supernatant that contains at least 2.5 % in weight of one of the substances i) to iii).

IPC 8 full level

C11D 3/386 (2006.01); **C11D 3/20** (2006.01); **C11D 3/22** (2006.01); **C11D 3/33** (2006.01); **C11D 3/37** (2006.01); **C11D 3/38** (2006.01)

CPC (source: EP US)

C11D 1/32 (2013.01 - EP US); **C11D 3/2003** (2013.01 - EP US); **C11D 3/201** (2013.01 - EP US); **C11D 3/2041** (2013.01 - EP US); **C11D 3/2044** (2013.01 - EP US); **C11D 3/2065** (2013.01 - EP US); **C11D 3/2072** (2013.01 - EP US); **C11D 3/2075** (2013.01 - EP US); **C11D 3/2079** (2013.01 - EP US); **C11D 3/2082** (2013.01 - EP US); **C11D 3/2086** (2013.01 - EP US); **C11D 3/221** (2013.01 - EP US); **C11D 3/222** (2013.01 - EP US); **C11D 3/33** (2013.01 - EP US); **C11D 3/3719** (2013.01 - EP US); **C11D 3/3723** (2013.01 - EP US); **C11D 3/3753** (2013.01 - EP US); **C11D 3/3757** (2013.01 - EP US); **C11D 3/3769** (2013.01 - EP US); **C11D 3/381** (2013.01 - EP US); **C11D 3/386** (2013.01 - EP US); **C11D 3/38627** (2013.01 - EP US); **C11D 3/38636** (2013.01 - EP US); **C11D 3/38645** (2013.01 - EP US); **C11D 3/3869** (2013.01 - EP US)

Citation (opposition)

Opponent : DANISCO US INC.

US 2020231957 A1 20200723 - FERNANDEZ LAYLA [DE], et al

Opponent : Danisco US Inc.

- US 2011201536 A1 20110818 - O'CONNELL TIMOTHY [DE], et al
- US 4305837 A 19811215 - KAMINSKY GEORGE J, et al
- DE 19953057 A1 20010510 - HENKEL KGAA [DE]

Designated contracting state (EPC)

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 SE SI SK SM TR

DOCDB simple family (publication)

DE 102008038479 A1 20100225; EP 2313482 A2 20110427; EP 2313482 B1 20190612; EP 2313482 B2 20220727; EP 2313483 A2 20110427; EP 2313483 B1 20180620; EP 2727988 A2 20140507; EP 2727988 A3 20160316; EP 2727988 B1 20190904; EP 2727989 A2 20140507; EP 2727989 A3 20160316; EP 2727989 B1 20190626; EP 2727989 B2 20221221; EP 2727990 A2 20140507; EP 2727990 A3 20160316; ES 2744829 T3 20200226; ES 2744829 T5 20221019; ES 2745761 T3 20200303; ES 2745761 T5 20230309; ES 2753240 T3 20200407; PL 2313482 T3 20191129; PL 2313482 T5 20230227; PL 2727988 T3 20200228; PL 2727989 T3 20191231; PL 2727989 T5 20230327; US 2011136720 A1 20110609; US 2011201536 A1 20110818; WO 2010020475 A2 20100225; WO 2010020475 A3 20100617; WO 2010020476 A2 20100225; WO 2010020476 A3 20100617

DOCDB simple family (application)

DE 102008038479 A 20080820; EP 09780407 A 20090710; EP 09780409 A 20090710; EP 14152968 A 20090710; EP 14152970 A 20090710; EP 14152971 A 20090710; EP 2009058789 W 20090710; EP 2009058791 W 20090710; ES 09780407 T 20090710; ES 14152968 T 20090710; ES 14152970 T 20090710; PL 09780407 T 20090710; PL 14152968 T 20090710; PL 14152970 T 20090710; US 201113026344 A 20110214; US 201113026491 A 20110214