

Title (en)

SOLID DISHWASHING DETERGENT WITH IMPROVED PROTEASE PERFORMANCE

Title (de)

FESTES GESCHIRRSPÜLMITTEL MIT VERBESSERTER PROTEASELEISTUNG

Title (fr)

DÉTERGENT SOLIDE POUR LAVE-VAISSELLE COMPRENANT UNE PROTÉASE À PERFORMANCE AMÉLIORÉE

Publication

EP 2888362 A4 20160406 (DE)

Application

EP 13830324 A 20130813

Priority

- DE 102012215107 A 20120824
- IB 2013056605 W 20130813

Abstract (en)

[origin: WO2014030097A2] The aim is to improve detergency, in particular on custard stains, in an essentially solid dishwashing detergent. This is accomplished with an essentially solid dishwashing detergent which comprises a protease which comprises an amino acid sequence which is at least 80% identical to the amino acid sequence given in SEQ ID NO. 1 and which has the amino acid glutamic acid (E) or aspartic acid (D) at position 99 in the count according to SEQ ID NO. 1.

IPC 8 full level

C12N 9/54 (2006.01); **C07K 14/32** (2006.01); **C11D 3/386** (2006.01); **C11D 3/39** (2006.01); **C11D 3/395** (2006.01); **C12N 15/57** (2006.01)

CPC (source: CN EP RU US)

C11D 3/38609 (2013.01 - CN EP RU US); **C11D 3/3951** (2013.01 - RU US); **C11D 3/3953** (2013.01 - RU US)

Citation (search report)

- [XYI] WO 2011032988 A1 20110324 - HENKEL AG & CO KGAA [DE], et al
- [XYI] DE 102010028951 A1 20111117 - HENKEL AG & CO KGAA [DE]
- [Y] WO 2011110625 A1 20110915 - HENKEL AG & CO KGAA [DE], et al
- [Y] US 6831053 B1 20041214 - GHOSH CHANCHAL KUMAR [US], et al
- See references of WO 2014030097A2

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 2014030097 A2 20140227; **WO 2014030097 A3 20140417**; BR 112015003689 A2 20171212; CA 2882331 A1 20140227; CN 104736703 A 20150624; DE 102012215107 A1 20140227; EP 2888362 A2 20150701; EP 2888362 A4 20160406; IN 1653DEN2015 A 20150703; JP 2015532670 A 20151112; JP 6247297 B2 20171213; KR 20150048777 A 20150507; MX 2015002293 A 20150623; MX 369328 B 20191105; RU 2015110083 A 20161010; RU 2668822 C2 20181002; US 10093888 B2 20181009; US 2015291917 A1 20151015

DOCDB simple family (application)

IB 2013056605 W 20130813; BR 112015003689 A 20130813; CA 2882331 A 20130813; CN 201380055347 A 20130813; DE 102012215107 A 20120824; EP 13830324 A 20130813; IN 1653DEN2015 A 20150227; JP 2015527988 A 20130813; KR 20157006734 A 20130813; MX 2015002293 A 20130813; RU 2015110083 A 20130813; US 201314422397 A 20130813