

Title (en)

DETERGENTS CONTAINING AMYLASE AND ACETONITRILE

Title (de)

AMYLASE UND ACETONITRIL-DERIVATE ENTHALTENDE WASCH- UND REINIGUNGSMITTEL

Title (fr)

DETERGENTS CONTENANT UNE AMYLASE ET DES DERIVES D'ACETONITRILE

Publication

EP 1084217 A1 20010321 (DE)

Application

EP 99925032 A 19990525

Priority

- DE 19824687 A 19980603
- EP 9903570 W 19990525

Abstract (en)

[origin: DE19824687A1] The invention aims at improving the cleaning performance of detergents containing enzymes, especially in relation to starch-containing stains. This is substantially achieved in that the detergent contains alpha -amylase from *Bacillus amyloliquefaciens* and a compound having formula (I) $R_{<1>}R_{<2>}R_{<3>}N<+>CH_2CN X<->$, wherein $R_{<1>}$, $R_{<2>}$ and $R_{<3>}$ independently stand for an alkyl, alkenyl or aryl group with 1 to 18 C atoms, whereby the groups $R_{<2>}$ and $R_{<3>}$ can also be part of a heterocycle comprising an N atom and optionally other heteroatoms and X is a charge-equalizing anion, $<->$ in addition to other usual ingredients compatible with said constituents.

IPC 1-7

C11D 3/386; **C11D 1/62**; **C11D 7/32**

IPC 8 full level

C11D 1/62 (2006.01); **C11D 3/26** (2006.01); **C11D 3/28** (2006.01); **C11D 3/386** (2006.01); **C11D 3/395** (2006.01); **C11D 7/32** (2006.01); **C11D 7/42** (2006.01); **C11D 3/39** (2006.01)

CPC (source: EP)

C11D 3/26 (2013.01); **C11D 3/28** (2013.01); **C11D 3/386** (2013.01); **C11D 3/3902** (2013.01); **C11D 3/3932** (2013.01)

Designated contracting state (EPC)

AT BE DE ES FR GB IT NL

DOCDB simple family (publication)

WO 9963038 A1 19991209; AT E223473 T1 20020915; DE 19824687 A1 19991209; DE 59902575 D1 20021010; EP 1084217 A1 20010321; EP 1084217 B1 20020904; ES 2183561 T3 20030316; HU P0102184 A2 20011028; JP 2002517553 A 20020618; PL 344533 A1 20011105

DOCDB simple family (application)

EP 9903570 W 19990525; AT 99925032 T 19990525; DE 19824687 A 19980603; DE 59902575 T 19990525; EP 99925032 A 19990525; ES 99925032 T 19990525; HU P0102184 A 19990525; JP 2000552235 A 19990525; PL 34453399 A 19990525