

Title (en)  
PROTEASE AND AMYLASE-CONTAINING DETERGENT

Title (de)  
PROTEASE- UND AMYLASEHALTIGES WASCHMITTEL

Title (fr)  
DETERGENT CONTENANT DE LA PROTEASE ET DE L'AMYLASE

Publication  
**EP 0964911 A1 19991222 (DE)**

Application  
**EP 97954439 A 19971219**

Priority  
• DE 19700327 A 19970108  
• EP 9707171 W 19971219

Abstract (en)  
[origin: DE19700327A1] The combination of a protease mutant, in which the amino acid leucine present in position 211 (BLAP (bacillus lentus alkaline protease) counting method) in the wild-type protease is exchanged at this location for an aspartic acid or glutamic acid, and of an amylase mutant, in which at least one methionine, tryptophane, cysteine or tyrosine present in the wild-type amylase is removed or exchanged for another amino acid which is in particular not cysteine or methionine, results in unexpected synergistic improvements in performance in textile detergents.

IPC 1-7  
**C11D 3/386**; **C12N 9/98**

IPC 8 full level  
**C12N 9/98** (2006.01); **C11D 3/386** (2006.01); **C12N 9/28** (2006.01); **C12N 9/54** (2006.01)

CPC (source: EP)  
**C11D 3/386** (2013.01); **C12N 9/2417** (2013.01); **C12N 9/54** (2013.01)

Citation (search report)  
See references of WO 9830669A1

Designated contracting state (EPC)  
AT BE DE ES FR GB IT LU NL

DOCDB simple family (publication)  
**DE 19700327 A1 19980709**; EP 0964911 A1 19991222; JP 2001507748 A 20010612; WO 9830669 A1 19980716

DOCDB simple family (application)  
**DE 19700327 A 19970108**; EP 9707171 W 19971219; EP 97954439 A 19971219; JP 53050298 A 19971219