

Title (en)  
Stabilized aqueous enzyme composition.

Title (de)  
Stabilisierte wässrige Enzymzusammensetzung.

Title (fr)  
Composition d'enzyme aqueuse stabilisée.

Publication  
**EP 0118933 A1 19840919 (EN)**

Application  
**EP 84200157 A 19840206**

Priority  
US 46624383 A 19830214

Abstract (en)  
alpha -Amylase derived from B. licheniformis is stabilized in aqueous liquid detergent compositions containing surfactants and sequestering agents by the inclusion of a calcium-containing component that provides at least about  $1 \times 10^{-4.5}$  millimole of enzyme-accessible calcium per liter of composition.

IPC 1-7  
**C11D 3/386**

IPC 8 full level  
**C12N 9/96** (2006.01); **C11D 3/386** (2006.01)

CPC (source: EP)  
**C11D 3/38663** (2013.01)

Citation (search report)  

- EP 0028866 A1 19810520 - PROCTER & GAMBLE [US]
- US 4305837 A 19811215 - KAMINSKY GEORGE J, et al
- US 4111855 A 19780905 - BARRAT CHRISTIAN ROLAND, et al
- DE 2025748 A1 19701210

Cited by  
US5605881A; RU2767187C2; US5269960A; US5223166A; EP0342499A3; US5234832A; EP0268227A3; JPS63135123A; EP0199404A3

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI NL SE

DOCDB simple family (publication)  
**EP 0118933 A1 19840919; EP 0118933 B1 19880601**; AT E34767 T1 19880615; AU 2453884 A 19840823; AU 575313 B2 19880728; CA 1213541 A 19861104; DE 3471687 D1 19880707; GR 81415 B 19841211; IE 57055 B1 19920408; IE 840321 L 19840814; JP S59206497 A 19841122; MX 161307 A 19900906

DOCDB simple family (application)  
**EP 84200157 A 19840206**; AT 84200157 T 19840206; AU 2453884 A 19840213; CA 447238 A 19840213; DE 3471687 T 19840206; GR 840173724 A 19840206; IE 32184 A 19840213; JP 2492084 A 19840213; MX 20032184 A 19840214