

Title (en)
PROTEINS IN A POROUS SUPPORT

Title (de)
PROTEINE IN EINER PORÖSEN MATRIX

Title (fr)
PROTEINES DANS UN SUPPORT POREUX

Publication
EP 1402011 A2 20040331 (EN)

Application
EP 02706428 A 20020221

Priority
• US 0205755 W 20020221
• US 79113801 A 20010221
• US 8173702 A 20020220

Abstract (en)
[origin: WO02068454A2] A protein system is described in which a protein is bound within a matrix material that has pores that are sized to achieve excellent properties such as: activity, protein density, and stability. In a preferred embodiment, the pore sizes range from 50 to 400 Å. One protein that has demonstrated surprisingly good results in this system is OPH. This protein is known to degrade organophosphorus compounds such as are found in chemical weapons and pesticides. Novel methods of forming the protein system and methods of making OPH are also described. Also described is a protein system including a porous matrix material and a protein disposed within the porous matrix material; wherein the protein system contains at least 0.01 mmol of protein per gram of matrix material and exhibits an activity at least 2 times greater than the activity of a protein system that has been formed under identical conditions on a normal silica matrix material. Methods of making protein systems with noncovalent bonding to entrap proteins in the porous matrix are also described.

IPC 1-7
C12N 9/16; C12N 11/14

IPC 8 full level
C12N 15/09 (2006.01); **C12N 9/16** (2006.01); **C12N 11/14** (2006.01)

CPC (source: EP)
C12N 9/16 (2013.01); **C12N 11/14** (2013.01)

Citation (search report)
See references of WO 02068454A2

Citation (examination)
YIU H H P ET AL: "Enzyme immobilisation using siliceous mesoporous molecular sieves", MICROPOROUS AND MESOPOROUS MATERIALS, ELSEVIER SCIENCE PUBLISHING, NEW YORK, US, vol. 44-45, 6 April 2001 (2001-04-06), pages 763 - 768, XP004247215, ISSN: 1387-1811, DOI: DOI:10.1016/S1387-1811(01)00258-X

Designated contracting state (EPC)
AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)
WO 02068454 A2 20020906; WO 02068454 A3 20031224; AU 2002240515 A1 20020912; CA 2438901 A1 20020906; EP 1402011 A2 20040331; JP 2005504505 A 20050217

DOCDB simple family (application)
US 0205755 W 20020221; AU 2002240515 A 20020221; CA 2438901 A 20020221; EP 02706428 A 20020221; JP 2002567964 A 20020221