

Title (en)

METHOD USED FOR THE ENZYMATIC REDUCTION OF SUBSTRATES BY MOLECULAR HYDROGEN

Title (de)

VERFAHREN ZUR ENZYMATISCHEN REDUKTION VON SUBSTRATEN MIT MOLEKULAREM WASSERSTOFF

Title (fr)

PROCEDE DE REDUCTION ENZYMATIQUE DE SUBSTRATS AU MOYEN D'HYDROGENE MOLECULAIRE

Publication

EP 1419262 A2 20040519 (DE)

Application

EP 02767065 A 20020727

Priority

- DE 0202775 W 20020727
- DE 10139958 A 20010821

Abstract (en)

[origin: WO03018824A2] The invention relates to a method for the enzymatic reduction of substrates by molecular hydrogen, according to which a mediator is reacted with hydrogen using hydrogenase. The method is especially useful for reducing chemical mediators or cofactors of enzymes. The method is mainly utilized to reduce NADP<+> to NADPH or to use the enzyme described in the application to regenerate the cofactor of NADPH by molecular hydrogen. The advantage of the inventive method over all the methods for regenerating NADPH so far described is the use of inexpensive molecular hydrogen for generating or regenerating the cofactor, and thereby avoiding an additional by-product to be removed. In this case, water is formed as the by-product. As a catalyst, various purifications and preparations of the enzyme *Pyrococcus furiosus* can be used.

IPC 1-7

C12P 13/14; **C12P 19/36**; **C12P 7/22**

IPC 8 full level

C12P 7/22 (2006.01); **C12P 13/14** (2006.01); **C12P 19/36** (2006.01)

CPC (source: EP)

C12P 7/22 (2013.01); **C12P 13/14** (2013.01); **C12P 19/36** (2013.01)

Citation (search report)

See references of WO 03018824A2

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

WO 03018824 A2 20030306; **WO 03018824 A3 20031002**; DE 10139958 A1 20030320; EP 1419262 A2 20040519

DOCDB simple family (application)

DE 0202775 W 20020727; DE 10139958 A 20010821; EP 02767065 A 20020727