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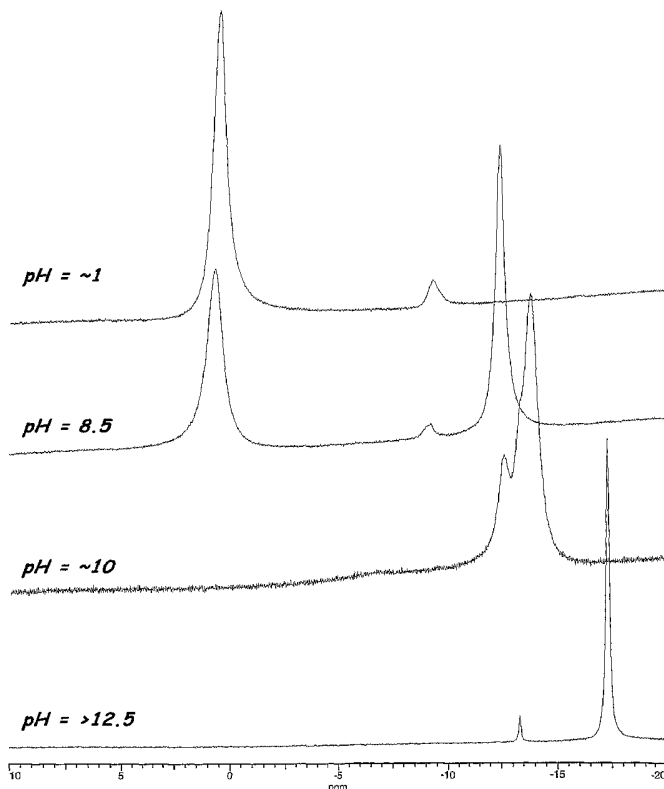
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(54) Title: ENZYME STABILIZATION

[B] : [LacticAcid] = 0.2 : 0.2



(57) Abstract: A method is disclosed for stabiliz-
ing liquid enzyme-containing liquid formulations
by adding at least one boron compound and at least
one alpha-hydroxy-mono-carboxylic acid or the salt
of an alpha-hydroxy-mono-carboxylic acid capable
of forming an enzymestabilizing compound. An
enzyme-stabilized formulation is disclosed compris-
ing an alphahydroxy-mono-carboxylic acid or
the salt of an alpha-hydroxy-mono-carboxylic acid,
a boron containing compound capable complexing
with an alpha-hydroxy-mono-carboxylic acid, the
complex formed by the boron compound and the
an alpha-hydroxy-monocarboxylic acid, and an
enzyme. The invention applies to both enzyme
concentrate raw materials, and to useful product
formulations.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER					
INV.	C12N9/96	C11D3/386	C11D3/20	C11D3/02	C02F3/34
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	A23K1/165	A23L1/03	C12P1/00		

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C12N C11D C02F A61K A61Q A23K A23L

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 37 41 617 A1 (COLGATE-PALMOLIVE CO) 7 July 1988 (1988-07-07) page 6 - page 7; claims; example 4	1-22, 26, 29-31, 33-51, 53-57, 60-66, 70
X	US 4 900 475 A (RAMACHANDRAN ET AL) 13 February 1990 (1990-02-13) claims; example 2	1-26, 29-31, 33-51, 53-57, 60-70

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

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- *&* document member of the same patent family

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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 842 758 A (CRUTZEN ET AL) 27 June 1989 (1989-06-27) cited in the application claims; examples -----	1-22, 26, 29-31, 33-51, 53-57, 60-66, 70
X	US 2003/157088 A1 (ELLIOTT RUSSELL PHILLIP ET AL) 21 August 2003 (2003-08-21) claims; example XV -----	1-11, 15, 17-25, 28-34, 36-51, 53-57
X	US 5 160 525 A (STILLMAN ET AL) 3 November 1992 (1992-11-03) claims; examples -----	29-34, 38-57, 60-66, 70
X	US 5 364 553 A (CAO ET AL) 15 November 1994 (1994-11-15) column 14; claims; examples -----	1-57, 60-70

INTERNATIONAL SEARCH REPORT

Information on patent family members

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