

Derwent Biotechnology Resource (Subscriber File: BIOTECHDS; Non-subscriber File: BIOTECHABS) covers the worldwide literature on all aspects of biotechnology, from genetic manipulation, through biochemical engineering and fermentation, to downstream processing. About 30% of the database cites patent publications. In addition to bibliographic information records contain Derwent's abstract and controlled term indexing.

For file crossover to DWPI, the Derwent Accession Number is available in all BIOTECHABS/BIOTECHDS patent records.

SUBJECT COVERAGE

- Agriculture
- Biocatalysis
- Biochemical Engineering
- BIOINFORMATICS methodologies, databases, hardware and software
- Cell Culture
- Chemistry: Physicochemical and Biological Assays relevant to Biotechnological Processes
- Downstream Processing
- Food Additives and SCP
- Fuels produced by Fermentation or Similar Processes
- GENOMICS and PROTEOMICS, including pharmacogenomics, expression profiling, ESTs and SNPs, and high throughput screening
- Microbiology: Genetics and Fermentation
- Other Chemicals produced by Microorganisms and Enzymatic Synthesis
- Pharmaceuticals produced by Microorganisms and Enzymatic Synthesis
- Tissue culture and engineering products, processes and applications
- Waste Disposal

SOURCES

- Journals
- Patents
- Conference contributions

FILE DATA

- 1982 to present (04/08): 442,793 citations
- Updated weekly
- Automatic current-awareness searches (SDIs) are run weekly or every two weeks. Every two weeks is the default.

PRODUCER

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USER AIDS

- BIOTECHABS/BIOTECHDS Database Description
- Derwent Biotechnology Resource User Guide *
- Derwent Biotechnology Resource Introduction *
- Online Helps (HELP DIRECTORY lists all help messages available)
- STNGUIDE
- * Available at producer

BIOTECHABS/BIOTECHDS

SEARCH AND DISPLAY FIELDS

| Search Field Name | Search Code | Search Examples | Display Code |
|---|----------------|--|----------------|
| Basic Index (contains single words from the title (TI), abstract (AB), and controlled term (CT), as well as enzyme commission number (EC) fields) | None or /BI | S PRODUCTION OF CARBOCYCLIC NUCLEOSIDES S EC-3.1.1.3 S LIPASE(L)CARBOXYLESTERASE | TI, AB, CT, EC |
| Application Country | /AC | S EP/AC(S)1992/AY | AI |
| Application Date 1) | /AD | S EP/AC(S)20 FEB 1992/AD | AI |
| Accession Number | /AN | S 1992-14434/AN | AN |
| Application Number 2) | /AP | S 1992EP-0250036/AP S EP1992-250036/AP | AI |
| Author | /AU | S BAINES B S/AU S BAINES, B S/AU | AU |
| Application Year 1) | /AY | S 1991-1992/AY(S)FR/AC | AI |
| Classification Code (code and/or text) | /CC | S K/CC AND GLAXO/CS | CC |
| Corporate Source 3) | (/CCEN) /CS | S LIPASE NOT BIOCATALYSIS/CC S GRANADA-GENET?/CS S "GRANADA-GENET."/CS | CS |
| Controlled Term 3) | /CT | S SOIL DECONTAMINATION/CT | |
| Document Type (code and text) | /DT (/TC) | S K/CC AND P/DT S JOURNAL/DT AND SOIL DECONTAMINATION/CT | DT |
| Enzyme Commission Number | /EC | S EC-3.1.1.3/EC AND US/PC | TI,AB,CT,EC |
| Entry Date 1) | /ED (/UP) | S DEC 1998<ED<JULY 1998 | ED |
| International (Standard) Document Number (contains CODEN and ISSN) | /ISN | S EMTEED2/ISN S 1001-0742/ISN | ISN, SO |
| Journal Title | /JT | S DNA CELL BIOL./JT | JT, SO |
| Language (ISO code and text) | /LA | S DE/LA AND L10 S L7 AND ENGLISH/LA | LA |
| Location 4) | /LO | S GLAXO RESEARCH/LO | LO |
| Other Source 5) | /OS | S 1992-333672/OS | OS |
| Patent Assignee 3) | /PA | S PREUSSAG/PA S PROTEIN-DESIGN-LABS/PA | PA |
| Patent Country | /PC | S EP/PC(S)1992/PY S UNITED KINGDOM/PC | PI |
| Publication Date 1) | /PD | S 7 OCT 1992/PD(S)EP/PC | PI |
| Patent Number 2) | /PN | S EP-507421/PN S EP507421/PN S EP0507421/PN | PI |
| Priority Country | /PRC | S BE/PRC(S)1991/PRY S UNITED STATES/PRC | PRAI |
| Priority Date 1) | /PRD | S 18 FEB 1991/PRD | PRAI |
| Priority Date First 1) | /PRDF | S MARCH 1992/PRDF(S)JP/PRC | PRAI |
| Priority Number 2) | /PRN | S 1991EP-0200379/PRN S EP1991-200379/PRN | PRAI |
| Priority Year 1) | /PRY | S 1990-1991/PRY | PRAI |
| Priority Year, First 1) | /PRYF | S 1990-1991/PRYF(S)BE/PRC | PRAI |
| Publication Year 1) | /PY | S 1990-1991/PY(L)EMTEED2/SO | PI, PY, SO |
| Source (contains journal title, CODEN, ISSN, collation and meeting information) | /SO | S ENZYME MICROB/SO S (DECHEMA(S)CONF?)/SO | SO |
| Title | /TI | S DECONTAMINATION OF SOIL/TI | TI |

- 1) Numeric search field that may be searched using numeric operators or ranges.
- 2) Numbers are searchable in DERWENT and STN format.
- 3) Search with implied (S) proximity is available in this field.
- 4) Search with implied (L) proximity is available in this field.
- 5) Contains the WPIDS/WPIX/WPINDEX accession number.

BIOTECHABS/BIOTECHDS

DISPLAY AND PRINT FORMATS

Any combination of display fields and formats may be used to display or print answers. Multiple codes must be separated by commas or spaces, e.g. 'D L1 1-5 TI PI'. The fields are displayed or printed in the order requested.

Hit-term highlighting is available for most searchable fields. Highlighting must be ON during SEARCH in order to use the HIT, KWIC, and OCC formats.

More information about display fields for specific types of information is available by typing one of the following 'HELP' commands at an arrow prompt (=>) in the BIOTECHABS/BIOTECHDS database:

| | | |
|----------------|---|--------------------------------|
| HELP DFIELDS | - | lists all valid custom formats |
| HELP EFIELDS | - | lists all selectable fields |
| HELP FORMATS | - | lists valid predefined formats |
| HELP SRTFIELDS | - | lists valid sort fields |

| Format | Definition | Examples |
|-----------------|---|---------------|
| AB | Abstract | D AB |
| AI (AP) 1) | Application Information | D AI |
| AN | Accession Number | D AN |
| AU | Author | D AU |
| CC (CCEN) | Classification Code (code and/or text) | D CC |
| CS | Corporate Source | D AU CS |
| CT | Controlled Term | D CT |
| DT (TC) | Document Type | D DT |
| EC 2) | Enzyme Commission Number | D EC |
| ISN 2) | International (Standard) Document Number | D ISN |
| JT 2) | Journal Title | D JT |
| LA | Language | D LA |
| LO | Location | D LO |
| LS | Legal Status (from the INPADOCDB database) | D LS |
| LS2 | Legal Status (from the INPADOCDB database), detailed version with display headers | D LS |
| OS | Other Source | D OS |
| PA | Patent Assignee | D PA TI 1-10 |
| PI (PN) 1) | Patent Information | D PI PRAI |
| PRAI (PRN) 1) | Priority Information | D PRAI |
| PY 2) | Publication Year | D PY |
| SO | Source | D SO |
| TI | Title | D TI CT |
| ABS | AN, AB | D TI ABS 1-5 |
| ALL | AN, TI, AU, CS, PA, LO, SO, PI, AI, PRAI, DT, LA, OS, AB, CC, CT | DIS ALL |
| DALL | ALL, delimited for post-processing | |
| IALL | ALL, indented with text labels | D IALL 1-3 L4 |
| BIB | AN, TI, AU, CS, PA, LO, SO, PI, AI, PRAI, DT, LA, OS (default) | D BIB ABS |
| IBIB | BIB, indented with text labels | D IBIB KW |
| FAM 1) | Family Information from the Derwent World Patents Index (PI, ADT, FDT, PRAI) | |
| IND | AN, CC, CT | |
| SCAN 3) | AN, TI | D SCAN |
| TRIAL (TRI,SAM) | AN, TI, CC, CT | D TRI 1-10 |
| HIT | Hit-term(s) and field(s) | D HIT |
| KWIC | Up to 50 words before and after hit-term(s) (KeyWord-In-Context) | D KWIC |
| OCC | Number of occurrences of hit-term(s) and field(s) in which they occur | D OCC |

1) Application, priority and patent numbers are available in DERWENT and STN format. The format for DISPLAY, PRINT, SELECT and SORT is controlled by the Messenger SET PATENT command. The STN format is default. 'SET PAT DERWENT' changes (permanently) to the DERWENT format. To change to the STN format again, enter 'SET PAT STN'.

2) Custom display only.

3) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.

BIOTECHABS/BIOTECHDS

Controlled Term (/CT) Thesaurus

All Relationship Codes may be used with both the SEARCH and EXPAND commands in the /CT thesaurus.

| Code | Content | Examples |
|---------|---|---------------------|
| ALL | All Associated Terms (BT, SELF, USE, UF, EXA, TNA, SNA, EC, RT, OLD, NEW, NT, KT) | E FUNGICIDE+ALL/CT |
| AUTO 1) | Automatic Relationship (SELF, USE, UF, OLD, NEW, TNA, SNA, EC) | S FERMENTER+AUTO/CT |
| BT | Broader Terms (also BT1=1st level, BT2=2nd level etc.) | E BENOMYL+BT/CT |
| HIE | Hierarchy Terms (all broader and narrower terms) (BT, SELF, NT) | E PROTEASE+HIE/CT |
| KT | Keyword Terms (KT, SELF) | E ENZYME+KT/CT |
| NT | Narrower Terms (also NT1=1st level, NT2=2nd level etc.) | S FUNGICIDE+NT/CT |
| PFT | Forbidden and Preferred Terms (SELF, USE, UF) | S ANTIFUNGAL+PFT/CT |
| RT | Related Terms (SELF, RT) | E PESTICIDE+RT/CT |
| STD | Standard Terms (BT, SELF, NT, RT) | E DINOSEB+STD/CT |
| USE | Preferred Terms (SELF, USE) | S FERMENTER+USE/CT |

1) Automatic Relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

SELECT, ANALYZE, AND SORT CODES

The SELECT command is used to create E-numbered or L-numbered lists of terms taken from the specified field(s) in an answer set.

The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.

The SORT command is used to rearrange the search results in either alphanumeric (A) or numeric (N) order of the specified field(s).

| Definition | Code | Analyze/ Select 1) | Sort |
|--|-----------|-----------------------|------|
| Abstract | AB | X 2) | - |
| Application Country | AC | X | A |
| Application Date | AD | X | N |
| Accession Number | AN | X | - |
| Application Number 3) | AP (AI) | X | A |
| Author | AU | X | A |
| Application Year | AY | X | N |
| Classification Code (code and/or text) | CC (CCEN) | X | - |
| CODEN | CODEN | - | A |
| Corporate Source | CS | X | A |
| Controlled Term | CT | X | - |
| Document Type | DT | X | A |
| Enzyme Commission Number | EC | X | A |
| International (Standard) Document Number | ISN | X 4) | A |
| Journal Title | JT | X | A |
| Language | LA | X | A |
| Location | LO | X | A |
| Occurrence Count of Hit Terms | OCC | - | N |
| Other Source (DWPI accession number) | OS | X | A |
| Patent Assignee | PA | X | A |

- HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT AU.
- Appends /BI to the terms created by SELECT.
- SELECTed and SORTed application, priority and patent numbers are in the format set by the Messenger SET PATENT command, either DERWENT or STN.
- Selects or analyzes ISSN and CODEN with /ISN appended to the terms created by SELECT.

BIOTECHABS/BIOTECHDS

SELECT, ANALYZE, AND SORT CODES (continued)

| Definition | Code | Analyze/ Select 1) | Sort |
|---------------------|------------|-----------------------|------|
| Patent Country | PC | X | A |
| Publication Date | PD | X | N |
| Patent Number | PN (PI) | X | A |
| Priority Country | PRC | X | A |
| Priority Date | PRD | X | N |
| Priority Date First | PRDF | X | N |
| Priority Number | PRN (PRAI) | X | A |
| Priority Year | PRY | X | N |
| Priority Year First | PRYF | X | N |
| Publication Year | PY | X | N |
| Source | SO | X 5) | - |
| Title | TI | X (default) | A |

- 1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT AU.
- 3) SELECTed and SORTed application, priority and patent numbers are in the format set by the Messenger SET PATENT command, either DERWENT or STN.
- 5) Selects or analyzes ISSN and CODEN with /SO appended to the terms created by SELECT.

SAMPLE RECORDS

DISPLAY ALL

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AN 1997-06228 BIOTECHABS
TI Purification, characterization, and properties of two xylanases from
    Humicola insolens;
    endo-1,4-beta-D-xylanase isoenzyme isolation
AU Dusterhoft E M; Linssen V A J M; Voragen A G J; Beldman G
CS Univ.Wageningen-Agr.
LO Department of Food Chemistry and Microbiology, Wageningen Agricultural
    University, P.O. Box 8129, 6700 EV Wageningen, The Netherlands.
SO Enzyme Microb.Technol.; (1997) 20, 6, 437-45
    CODEN: EMTED2 ISSN: 0141-0229
DT Journal
LA English
AB Two endo-1,4-beta-D-xylanases (EC-3.2.1.8), xyl1 and xyl2, were purified
    from a commercial enzyme preparation derived from Humicola insolens by
    anion-exchange chromatography, size-exclusion chromatography and cation-
    exchange chromatography. The homogenous proteins had a mol.weight of 6,000
    and 21,000, and isoelectric points of 9.0 and 7.7 for xyl1 and xyl2,
    respectively. Both enzymes had similar pH and temperature optima (pH 6-6.5
    and 55-60 deg), but their stability at various pH and temperature differed.
    The molar activity towards beech, birch and larch xylan, and wheat
    arabinoxylans was higher for xyl2. Both enzymes had remarkably lower molar
    activities toward the insoluble fractions of these xylans or toward the
    essentially insoluble beech xylan, but the decrease was less pronounced
    with xyl2. This might be explained by differences in specific adsorption,
    with xyl2 adsorbing strongly on beech xylan. In contrast to xyl1, xyl2 was
    markedly inhibited by a number of metal ions. The reaction products formed
    during hydrolysis of different xylans and the end products were the same
    for both enzymes, but their relative proportions differed slightly. (34
    ref)
CC K BIOCATALYSIS; K1 Isolation and Characterization
CT HUMICOLA INSOLENS ENDO-1,4-BETA-D-XYLANASE ISOENZYME PURIFICATION,
    CHARACTERIZATION FUNGUS ENZYME EC-3.2.1.8 (VOL.16, NO.11)

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BIOTECHABS/BIOTECHDS

DISPLAY IBIB

ACCESSION NUMBER: 2001-00753 BIOTECHABS
TITLE: Microalgae: a green source of renewable H₂;
recent advances in algal hydrogen production using e.g.
Chlamydomonas reinhardtii; a review
AUTHOR: Ghirardi M L; Zhang L; Lee J W; Flynn T; Seibert M; Greenbaum
E; *Melis A
CORPORATE SOURCE: Nat.Renewable-Energy-Lab.Colorado; Univ.California;
Oak-Ridge-Nat.Lab.
LOCATION: University of California, Berkeley, CA 94720-3102, USA.
Email: melis@nature.berkeley.edu
SOURCE: Trends Biotechnol.; (2000) 18, 12, 506-11
CODEN: TRBIDM
ISSN: 0167-9430
DOCUMENT TYPE: Journal
LANGUAGE: English

DISPLAY ALL FAM (Derwent format)

AN 1997-04239 BIOTECHABS
TI Crystallization of macromolecules;
e.g. nucleic acid crystallization method
AU Fibi M
PA Behringwerke
LO Marburg, Germany.
PI EP----757057 5 Feb 1997
AI 1996EP-0110784 4 Jul 1996
PRAI 1995DE-1028507 3 Aug 1995
DT Patent
LA German
OS WPI: 1997-121141 [12]
AB Macromolecules such as glycoproteins and nucleic acids are crystallized in
the presence of a 4-(1-18C alkyl)-umbelliferone salt (A). In a preferred
process, (A) is 4-methylumbelliferone sodium salt. A solution containing
the macromolecule at 0.1-10,000 ug/ml is mixed at a ratio of 1000:1 to
1:1000 with a solution of 0.1-1,000 mM (A), and the mixture is incubated at
0-25 deg. The macromolecule solution is preferably a phosphate buffer
solution (pH 3-9) containing 1-500 mM (A), provided that the concentration
of (A) in the macromolecule solution is less than that in the
crystallization solution. The crystallized macromolecules may be used for
X-ray structural analysis, as a pharmaceutical or as seed crystals. (4pp)
CC A GENETIC ENGINEERING AND FERMENTATION; A1 Nucleic Acid Technology
CT MACROMOLECULE E.G. NUCLEIC ACID CRYSTALLIZATION METHOD (VOL.16, NO.8)
PI EP-----757057 A2 19970205 (199712)* DE 4[0]
DE----19528507 A1 19970206 (199712) DE 4[0]
AU----9660863 A 19970206 (199714) EN
CA----2182635 A 19970204 (199723) EN
JP----09118597 A 19970506 (199728) JA 4[0]
EP-----757057 A3 19970528 (199732) EN
KR----97010790 A 19970327 (199814) KO
ADT EP-----757057 A2 1996EP-000110784 19960704; DE----19528507 A1
1995DE-100028507 19950803; EP-----757057 A3 1996EP-000110784 19960704;
AU----9660863 A 1996AU-000060863 19960801; CA----2182635 A
1996CA-002182635 19960802; JP----09118597 A 1996JP-000204353 19960802;
KR----97010790 A 1996KR-000032382 19960802
PRAI 1995DE-100028507 19950803

EXPAND in CT THESAURUS

=> e fungicide+all/ct

E1 15381 BT1 ANTIBIOTIC/CT
E2 932 BT2 AGRICULTURE/CT
E3 9736 BT1 pesticide/CT
E4 4165 --> FUNGICIDE/CT
E5 22 UF antifungal/CT

BIOTECHABS/BIOTECHDS

| | | | |
|-----|-----|-----|-------------------------|
| E6 | 591 | UF | antimicrobial/CT |
| E7 | 5 | UF | antimycotic/CT |
| E8 | 3 | UF | fungistatic/CT |
| E9 | 53 | NT1 | AMPHOTERICIN/CT |
| E10 | 13 | NT1 | AZASERINE/CT |
| E11 | 17 | NT1 | BAFILOMYCIN/CT |
| E12 | 53 | NT1 | BENOMYL/CT |
| E13 | 12 | NT1 | BLASTICIDIN-S/CT |
| E14 | 3 | NT1 | BUTALACTIN/CT |
| E15 | 2 | NT1 | DAPIRAMYCIN/CT |
| E16 | 1 | NT1 | DEHYDROIVAXILLIN/CT |
| E17 | 15 | NT1 | DINOSEB/CT |
| E18 | 17 | NT1 | EMODIN/CT |
| E19 | 18 | NT1 | GRISEOFULVIN/CT |
| E20 | 62 | NT1 | ITURIN/CT |
| E21 | 4 | NT1 | LYDICAMYCIN/CT |
| E22 | 8 | NT1 | METALAXYL/CT |
| E23 | 79 | NT1 | NIKKOMYCIN/CT |
| E24 | 1 | NT1 | NITROSO FUNGIN/CT |
| E25 | 54 | NT1 | NYSTATIN/CT |
| E26 | 32 | NT1 | OLIGOMYCIN/CT |
| E27 | 450 | NT1 | PENTACHLOROPHENOL/CT |
| E28 | 13 | NT1 | SINE FUNGIN/CT |
| E29 | 0 | NT1 | VIRIDOFULVIN/CT |
| E30 | 0 | KT | FUNGICIDE RESISTANCE/CT |

***** END *****