

BIBLIOGRAPHY ON CARBOHYDRATE POLYMERS

1. Books, Reviews and Symposia

ACTA OTO-LARYNGOL 1987 Suppl 442
Minisymposium on hyaluronan and its use in clinical otology (Uppsala, Sweden, December 1986)

HOLZFORSCHUNG 1987 41 (6) 377
International seminar on lignin enzymic and microbial degradation, Paris (Congress Report)

Tien M//Penn State Univ, Dept Mol & Cell Biol, University Park, Pa 16802, USA
CRC CRIT REV MICROBIOL 1987 15 (2) 141
Properties of ligninase from *Phanerochaete chrysosporium* and their possible applications (Review)

Blanko FF, Deryabin VV, Pimenov AA, Bovina EV//No address available
ANTIBIOT MED BIOTEK 1987 32 (12) 925
Isolation, structure and biological activity of yeast mannans (Review; Russian, English Abstract)

King RD, Cheetham PSJ
Food Biotechnology - 1
Elsevier Applied Science Publishers Ltd (Essex)
1987 321 pp \$75.75 Hardbound
ISBN 1-85166-029-1
Contains the chapter: New and modified polysaccharides (by Morris VJ)

Ono S//Univ Osaka Prefecture, Sakai, Osaka 591, Japan
NIPPON NOGEIKAGAKU KAISHI 1987 61 (11) 1401
Development of physicochemical methods in starch science (Japanese; Review)

Papers:

2. Cellulose

Brown W, Rymden R//Univ Uppsala, Inst Phys Chem, S-75121 Uppsala, Sweden
MACROMOLECULES 1987 20 (11) 2867
Interaction of (carboxymethyl)cellulose with latex spheres studied by dynamic light scattering

Bagga PS, Sandhu DK**/*Guru Nanak Dev Univ, Dept Biol, Amritsar 143005 Punjab, India
J FERMENT TECHNOL 1987 65 (6) 635
Cellulase formation by *Aspergillus nidulans*

Farkas V, Sestak S, Gresik M, Kolarova N, Labudova I, Bauer S//Slovak Acad Sci, Ctr Chem Res, Inst Chem, CS-84238 Bratislava, Czechoslovakia
ACTA BIOTECHNOL 1987 7 (5) 425
Induction of cellulase in *Trichoderma reesei* grown on lactose

Jain P, Wilkins ES//Univ New Mexico, Dept Chem & Nucl Engn, Albuquerque, NM 87131, USA
BIOTECHNOL BIOENG 1987 30 (9) 1057
Cellulase immobilized on modified nylon for saccharification of cellulose

Nakai R, Horinouchi S, Uozumi T, Beppu T//Univ Tokyo, Fac Agr, Dept Agr Chem, Bunkyo ku, Tokyo 113, Japan
AGR BIOL CHEM TOKYO 1987 51 (11) 3061
Purification and properties of cellulases from an alkalophilic *Streptomyces* strain

Panajotov CA, Atev AP, Stojanov IM, Peev PA//Univ Sofia, Fac Biol, 8 Dragan Tsankov Blvd, BU-1421 Sofia, Bulgaria
ACTA BIOTECHNOL 1987 7 (5) 461
A cellulase enzymic product: Industrial processing and possible applications

As a service to subscribers, each issue of the Journal contains a bibliography of newly published material in the field of carbohydrate polymers. The bibliography is divided into six sections: 1. Books, Reviews and Symposia; 2. Cellulose; 3. Lignin; 4. Polysaccharides; 5. Starch; 6. Others. Within each section, articles are listed in alphabetical order with respect to the subject. When there are no publications to appear under one of these headings, that section will be omitted.

- Pobedimskij DG, Mukmenev IE, Savdur VI, Liakumovic AG, Agadganjan SI//Kazan Chem Ind Inst, K Marks St 68, Kazan 420015, USSR
 ACTA BIOTECHNOL 1987 7 (5) 455
 Utilization of cellulosic wastes with biosynthesis of cellulase (German, English Abstract)
- Sahasradubhe NA, Lachke AH*, Ranjekar PK//Natl Chem Lab, Div Biochem Sci, Poona 411008, Maharashtra, India
 BIOTECHNOL LETT 1987 9 (12) 881
 Characterization of the purified multifunctional cellulase component of *Penicillium funiculosum*
- Son KH, Jang JJ, Kim JH*//Korea Adv Inst Sci & Technol, dept Biol Sci & Engn, POB 150, Seoul 131, South Korea
 BIOTECHNOL LETT 1987 9 (12) 821
 Effect of temperature on plasmid stability and expression of cloned cellulase in the recombinant *Bacillus megaterium*
- Tamada M, Kasai N, Kaetsu I//Japan Atom Energy Res Inst, Takasaki Radiat Chem Res Estab, Watanuki machi 1233, Takasaki, Gunma 37012, Japan
 J FERMENT TECHNOL 1987 65 (6) 707
 Effects of gamma-ray irradiation on cellulase secretion of *Trichoderma reesei*
- Williamson BN, Stutzenberger FJ//Clemson Univ, Dept Microbiol, Clemson, SC 29634, USA
 LETT APPL MICROBIOL 5 (5) 101
 Adsorption of *Thermomonospora curvata* cellulases on insoluble substrates
- Biermann CJ, Narayan R//Purdue Univ, Renewable Resources Engn Lab, W Lafayette, IN 47907, USA
 POLYMER 1987 28 (13) 2176
 Grafting of partially hydrolysed poly(methyl methacrylate) onto mesylated cellulose acetate
- Bindschaedler C, Gurny R, Doelker E//Univ Geneva, Sch Pharm, CH-1211 Geneva 4, Switzerland
 J APPL POLYM SCI 1987 34 (8) 2631
 Influence of emulsifiers on film formation from cellulose acetate latexes. Experimental study of phase separation phenomena due to sodium dodecyl sulfate. I.
- Bonischova S, Pokorna J//Vyzkumny Ustav Rosstlinne Vyroby, Drnovska 507, CS-16106 Praha 6, Czechoslovakia
 ROSTL VYROBA 1987 33 (11) 1189
 A method for determining cellulose decomposition as an indicator of biotechnological processes (Czech, English Abstract)
- Buchanan CM, Hyatt JA, Lowman DW//Eastman Kodak Co, Eastman Chem Div, Res Labs, POB 1972, Kingsport, TN 37662, USA
 MACROMOLECULES 1987 20 (11) 2750
 Two-dimensional NMR of polysaccharides: Spectral assignments of cellulose triesters
- Chalykh AY, Popova YD, Popov AN//Acad Sci USSR, Inst Phys Chem, Moscow V-71, USSR
 VYSOKOMOL SOEDIN SER B SSSR 1987 29 (11) 841
 Structural transformations of cellulose nitrate during sorption of solvent vapors (Russian)
- Hatakeyama T, Ikeda Y, Hatakeyama H//Res Inst Polymers & Text, 1-1-4 Yatabe Higashi, Tsukuba, Ibaraki 305, Japan
 MAKROMOL CHEM-MACRO CHEM PHYS 1987 188 (8) 1875
 Effect of bound water on structural change of regenerated cellulose
- Horii F, Yamamoto H, Kitamaru R, Tanahashi M, Higuchi T//Kyoto Univ, Inst Chem Res, Uji, Kyoto 611, Japan
 MACROMOLECULES 1987 20 (11) 2946
 Transformation of native cellulose crystals induced by saturated steam at high temperatures
- Kaghazchi T//Tehran Polytech Univ, Dept Chem Engn, Tehran 15, Iran
 AFINIDAD 1987 44 (411) 438
 Two phase nitration of cellulose extracted from bagasse
- Kaur B, Jain RK, Gur IS, Bhatnagar HL*, Schulten HR//Kurukshetra Univ, Dept Chem, Kurukshetra 132119, Harayana, India
 J ANAL APPL PYROL 1987 11 (OCT) 465
 Studies on the flame-retardant properties of transition metal complexes of cellulose ammonium phosphate
- Kunihisa KS, Ogawa H//Natl Chem Lab Ind, Tsukuba Res Ctr, Yatabe, Ibaraki 305, Japan
 THERMOCHIM ACTA 1988 123 (JAN) 255
 Differential scanning calorimetry in the saccharification of cellulose

Levesque G, Chiron G, Roux O//Univ Caen, ENSI, CNRS, Chim Composes Thioorgan Lab, 5 rue Edimbourg, F-14032 Caen, France
MAKROMOL CHEM-MACRO CHEM PHYS 1987 188 (7) 1659

Cellulose and chitosan hydrogen phthalates

Lindberg B, Lindquist U, Stenberg O//Univ Stockholm, Arrhenius Lab, Dept Organ Chem, S-10691 Stockholm, Sweden

CARBOHYD RES 1987 170 (2) 207

Distribution of substituents in O-(2-hydroxyethyl)cellulose

Lomakin AI, Popov SG//All Union Res Inst Molec Biol, Koltsovo, USSR

BIOORG KHIM 1987 13 (10) 1358

Automated synthesis of oligodeoxyribonucleotides. 6. Studies of properties of segmental supports based on cellulose (Russian, English Abstract)

McCormick CL, Callais PA//Univ So Mississippi, Dept Polymer Sci, Hattiesburg, Ms 39406, USA

POLYMER 1987 28 (13) 2317

Derivatization of cellulose in lithium chloride and N,N-dimethylacetamide solutions

Nugmanov OK, Pertsin AI, Zabelin LV, Marchenko GN//AN Nesmeyanov Organoelement Cpd Inst, Moscow, USSR

USP KHIM SSSR 1987 56 (8) 1339

Molecular-crystalline structure of cellulose (Russian)

Pawlowski WP, Sankar SS, Gilbert RD, Fornes RE//IBM Corp, Div Syst Technol, Dept U54, Bldg 32-2, Endicott, NY 13760, USA

J POLYM SCI A-POLYM CHEM 25 (12) 3355

Synthesis and solid state ¹³C-NMR studies of some cellulose derivatives

Pizzi A, Bariska M, Eaton NJ//CSIR, Natl Timber Res Inst, POB 395, Pretoria 0001, South Africa

WOOD SCI TECHNOL 1987 21 (4) 317

Theoretical water sorption energies by conformational analysis. Part 2. Amorphous cellulose and the sorption isotherm

Rudman AR, Ereemeev VB, Vengerova NA, El'tsefon BS//All Union Med Polymers Res Inst, Moscow, USSR

VYSOKOMOL SOEDIN SER A SSSR 1987 29 (10) 2167

Effect of interaction of cellulose hydrate with water vapors on properties of its hydrogels (Russian, English Abstract)

Staniforth JN, Baichwal AR, Hart JP//Univ Bath, Sch Pharm & Pharmacol, Particle Engn Res Grp, Bath BA2 7AY, Avon, England

INT J PHARM 1987 40 (3) 267

Interpretation of creep behaviour of microcrystalline cellulose powders and granules during compaction

Tretinnikov ON, Zhbakov RG, Savitskaya TA, Grinshpan DD, Kaputskii FN//Acad Sci BeSSR, Ist Phys, Minsk, Belorussia, USSR

VYSOKOMOL SOEDIN SER A SSSR 1987 29 (9) 1962

Study of the surface of films on the basis of cellulose and its blends with polymethyl methacrylate by IR-spectroscopy of attenuated total reflection method (Russian, English Abstract)

Tsilipotkina MV, Kolmakova LK, Tager AA, Perevalova IA//AM Gorkii State Univ, Sverdlovsk, USSR

VYSOKOMOL SOEDIN SER B SSSR 1987 29 (11) 854

Change in time of porous structure and reactivity of preliminarily loosed cellulose (Russian)

Pouwels AD, Tom A, Eijkel GB, Boon JJ//FOM, Inst Atom & Molec Phys, Mass Spectrometry Macromolec Syst Unit, Kruislaan 407, 1098 SJ Amsterdam, The Netherlands

J ANAL APPL PYROL 1987 11 (OCT) 417

Characterisation of beech wood and its holocellulose and xylan fractions by pyrolysis-gas chromatography-mass spectrometry

Winnik FM//Xerox Res Ctr Canada Ltd, Mississauga, Ontario, Canada L5K 2L1

MACROMOLECULES 1987 20 (11) 2745

Effect of temperature on aqueous solutions of pyrene-labeled (hydroxypropyl)cellulose

Ford JL, Rubinstein MH, McCaul F, Hogan JE, Edgar PJ//Liverpool Polytech, Sch Pharm, Byrom St, Liverpool L3 3AF, England

INT J PHARM 1987 40 (3) 223

Importance of drug type, tablet shape and added diluents on drug release kinetics from hydroxypropylmethylcellulose matrix tablets

MacLaren DD, Hollenbeck RG/Univ Maryland, Sch Pharm, Baltimore, Md 21201, USA

DRUG DEVELOP IND PHARM 1987 13 (12) 2179

A high performance liquid chromatographic method for the determination of the amount of hydroxypropyl methylcellulose applied to tablets during an aqueous film coating operation

Ramachandra M, Crawford DL*, Pometto AL/*Univ Idaho, Inst Molec & Agr Genet Engrn, Dept Bacteriol & Biochem, Moscow, Id 83843, USA

APPL ENVIRON MICROBIOL 1987 53 (12) 2754

Extracellular enzyme activities during lignocellulose degradation by *Streptomyces* spp.: A comparative study of wild-type and genetically manipulated strains

Kercha YY, Shelkovnikova LA, Khailenko LV, Lipatov SY, Charnetskaya AG//Acad Sci UkSSR, Inst Chem Macromolec Cpds, Kiev, Ukraine, USSR

VYSOKOMOL SOEDIN SER A SSSR 1987 29 (9) 1865

On the selective action of methyl cellulose on structurization in segmented polyurethane (Russian, English Abstract)

3. Lignin

Betts WB, Dart RK, Ball MC/Loughborough Univ Technol, Dept Chem, Loughborough LE11 3TU, Leics, England

HOLZFORSCHUNG 1987 41 (6) 337

Scanning electron microscope observations of fungal associations with lignin and insoluble dimeric lignin model compounds

Donaldson LA, Ryan KG//New Zealand Forest Serv, Forest Res Inst, Rotorua, New Zealand

WOOD SCI TECHNOL 1987 21 (4) 303

A comparison of relative lignin concentration as determined by interference microscopy and bromination/EDXA

Faix O, Meier D, Grobe I//Fed Res Ctr Forestry & Forest Prod, Inst Wood Chem & Chem Technol Wood, Leuschnerstr 91, D-2050 Hamburg 80, Fed Rep Ger

J ANAL APPL PYROL 11 (OCT) 403

Studies on isolated lignins and lignins in woody materials by pyrolysis-gas chromatography-mass

spectrometry and off-line pyrolysis-gas chromatography with flame ionization detection

Hyatt JA//Eastman Kodak Co, Eastman Chem Div, Res Labs, Kingsport, Tn 37662, USA

HOLZFORSCHUNG 1987 41 (6) 363

Synthesis of some tetrameric lignin model compounds containing beta-O-4 and 5,5'-interunit linkages

Janson J, Fullerton T//Finnish Pulp & Paper Res Inst, POB 136, SF-00101 Helsinki, Finland

HOLZFORSCHUNG 1987 41 (6) 359

Influence of carbohydrates and related compounds on the alkaline cleavage of the beta-aryl ether linkage in a phenolic lignin model compound

Knapp JS, Harms CL, Volenec JJ//Purdue Univ, Dept Agron, W Lafayette, In 47907, USA

CROP SCI 1987 27 (6) 1201

Growth regulator effects on wheat culm non-structural and structural carbohydrates and lignin

Otjen L, Blanchette R, Effland M, Leatham G//Univ Minnesota, Dept Plant Pathol, St. Paul, Mn 55108, USA

HOLZFORSCHUNG 1987 41 (6) 343

Assessment of 30 white rot Basidiomycetes for selective lignin degradation

Remko M, Tvaroska I//Comenius Univ, Dept Pharmaceut Chem, CS-83232 Bratislava, Czechoslovakia

HOLZFORSCHUNG 1987 41 (6) 371

Molecular orbital investigations on lignin model compounds. XXI. Solvent effect on the stability of beta-aryl ether and beta-aryl ether dimeric units of lignin

Sadakata M, Takahashi K, Saito M, Sakai T//Gunma Univ, Fac Engrn, Dept Chem Engrn, Kiryu, Gunma 376, Japan

FUEL 1987 66 (12) 1667

Production of fuel gas and char from wood, lignin and holocellulose by carbonization

Tanabe H, Kobayashi Y//Govt Ind Res Inst, 2-3-3 Hananomiya cho, Shikoku, Takamatsu 761, Japan

HOLZFORSCHUNG 1987 41 (6) 395

Effect of lignin-carbohydrate complex on maceration of mitsumata (*Edgeworthia*

papyrifera Sieb. et Zucc.) bast by pectinolytic enzymes from *Erwinia carotovora*

Meier zu Kocker H, Nelte A, Manos G, Noack R, Schmelter W//Tech Univ Berlin, Inst Chem Ingn Tech, Fasanenstr 89, D-1000 Berlin 12, Fed Rep Ger

HOLZFORSCHUNG 1987 41 (6) 351

Liquid hydrocarbons from lignocellulosic materials. Part 1. Extractive liquefaction of wood residues (German, English Abstract)

Lussi M, Neytzel-de Wilde FG**/Univ Natal, Dept Chem Engn, Durban 4001, South Africa
WATER SA 1987 13 (4) 225

Quantitative analysis of lignosulphonate using benzethonium chloride - preliminary investigations

4. Polysaccharides

Helleur RJ//Mem Univ Newfoundland, Dept Chem, St Johns, Newfoundland, Canada A1B 3X7

J ANAL APPL PYROL 1987 11 (OCT) 297

Characterization of the saccharide composition of heteropolysaccharides by pyrolysis-capillary gas chromatography-mass spectrometry

Abeck D, Johnson AP*, Ballard RC, Dangor Y, Fontaine EA, Taylor-Robinson D//Clin Res Ctr, MRC, Div Sexually Transmitted Dis, Harrow HA1 3UJ, Middx, England

FEMS MICROBIOL LETT 1987 48 (3) 397

Effect of cultural conditions on the protein and lipopolysaccharide profiles of *Haemophilus ducreyi* analysed by SDS-PAGE

Fontaine EAR, Abeck D, Johnson AP, Taylor-Robinson D//Clin Res Ctr, MRC, Div Sexually Transmitted Dis, Harrow HA1 3UJ, Middx, England

FEMS MICROBIOL LETT 1987 48 (1-2) 111

Nature of the lipopolysaccharide of *Bacteroides ureolyticus*

Uchida K, Mizushima S//Univ Tokyo, Inst Appl Microbiol, Bunkyo ku, Tokyo 113, Japan

AGR BIOL CHEM TOKYO 1987 51 (11) 3107

A simple method for isolation of lipopolysaccharides from *Pseudomonas aeruginosa* and some other bacterial strains

Vinogradov EV, Knirel YA, Lipkind GM,

Shashkov AS, Kochetkov NK, Stanislavsky ES, Kholodkova EV//ND Zelinskii Organ Chem Inst, Moscow, USSR

BIOORG KHIM 1987 13 (10) 1399

Antigenic polysaccharides of bacteria . 24. The structure of the O-specific polysaccharide chain of the *Salmonella arizonae* (Arizona O8) lipopolysaccharide (Russian, English Abstract)

Yokota A, Rodriguez M, Yamada Y, Imai K, Borowiak D, Mayer H**/Max Planck Inst Immunbiol, Stubeweg 51, D-7800 Freiburg, Fed Rep Ger

ARCH MICROBIOL 1987 149 (2) 106

Lipopolysaccharides of *Thiobacillus* species containing lipid A with 2,3-diamino-2,3-dideoxy-glucose

Aaberge IS, Heier HE, Groeng EC//Natl Inst Publ Hlth, Dept Immunol, Geitmyrsvn 75, N-0462 Oslo 4, Norway

ACTA PATHOL MICROBIOL IMMUN C 1987 95 (5) 221

IgA response to pneumococcal polysaccharide vaccine in individuals splenectomized because of trauma

Crescenzi V, Dentini M, Coviello T, Paoletti S, Cesaro A, Delben F//Univ Rome La Sapienza, Dipartimento Chim, A Moro 2, I-00185 Rome, Italy

GAZZ CHIM ITAL 1987 117 (10) 611

On the solution and gelling behaviour of some bacterial polysaccharides

Dutton GGS, Parolis H, Parolis LAS//Univ British Columbia, Dept Chem, Vancouver, BC Canada V6T 1Y6

CARBOHYD RES 1987 170 (2) 193

The structure of the neuraminic acid-containing capsular polysaccharide of *Escherichia coli* serotype K9

Granoff DM, Osterholm MT//Washington Univ, Sch Med, Edward Mallinckrodt Dept Pediat, St Louis, Md 63110, USA

PEDIATRICS 1987 80 (4) 590

Safety and efficacy of *Haemophilus influenzae* type-b polysaccharide vaccine

Kaca W, Knirel YA, Vinogradov EV, Kotelko K//Univ Lodz, Inst Microbiol, Banacha 12-16, PL-90237 Lodz, Poland

ARCH IMMUNOL THER EXP 1987 35 (3) 431
Structure of the O-specific polysaccharide of

Proteus mirabilis S 1959

Kaplan D, Christiaen D, Arad S//Ben Gurion Univ Negev, Jacob Blaustein Desert Res Inst, IL-84993 Sede Bager, Israel

APPL ENVIRON MICROBIOL 1987 53 (12) 2953

Chelating properties of extracellular polysaccharides from *Chlorella* spp.

Khusbaktova ZA, Syrov VN, Dzhukharova MK, Rakhimov DA//Acad Sci UZSSR, Inst Chem Plant Subst, Tashkent, Uzbekistan, USSR

KHIM-FARM ZH SSSR 1987 21 (11) 1348

Study of hypolipidemic properties of polysaccharides isolated from plants growing in middle Asia (Russian)

Lennholm H, Lindberg B, Lindquist U*, Lindh F, Nilsson B//Natl Bacteriol Lab, Dept Vaccine Prod, S-10521 Stockholm, Sweden

GLYCOCONJUGATE 1987 4 (4) 313

N-deacetylation of 2-acetamido-2-deoxy-hexose-containing oligosaccharides and polysaccharides by calcium in liquid ammonia

Lvov VL, Musina LY, Shashkov AS, Ermakov GP, Dmitriev BA//NF Gamaleya Epidemiol & Microbiol Inst, Moscow, USSR

BIOORG KHIM 1987 13 (9) 1245

Bacterial antigenic polysaccharides of *Shigella* - Structure of the polysaccharide chain of the *Shigella boydii* type-9 lipopolysaccharide and detection of an unusual high-molecular weight glycolipid (Russian, English Abstract)

Lvov VL, Yakolev AP, Pluzhnikova GN, Lapina EB, Shashkov AS, Dmitriev BA//NF Gamaleya Epidemiol & Microbiol Inst, Moscow, USSR

BIOORG KHIM 1987 13 (9) 1256

Bacterial antigenic polysaccharides - The structure of the polysaccharide chain of the *Shigella boydii* type-14 lipopolysaccharide (Russian, English Abstract)

Naberezhnikh GA, Khomenko VA, Isakov VV, Elkin YN, Solovjeva TF, Ovodov YS//Acad Sci USSR, Far E Sci Ctr, Pacific Oceanol Inst, Vladivostok, USSR

BIOORG KHIM 1987 13 (10) 1428

3-(3-hydroxy-2,3-dimethyl-5-oxopropyl)amino-3,6-dideoxy-D-glucose - A novel amino sugar of the antigenic polysaccharide from *Pseudomonas fluorescens* (Russian, English Abstract)

Nakashima H, Yoshida O, Tochikura TS, Yoshida T, Mimura T, Kido Y, Motoki Y, Kaneko Y, Uryu T, Yamamoto N//Yamaguchi Univ, Sch Med, Dept Virol & Parasitol, Ube, Yamaguchi 755, Japan

JPN J CANCER RES 1987 78 (11) 1164

Sulfation of polysaccharides generates potent and selective inhibitors of human immunodeficiency virus infection and replication in vitro

Nishinari K, Watase M//Minist Agr Forestry & Fisheries, Natl Food Res Inst, Instrumentat Res Lab, Tsukuba 305, Japan

AGR BIOL CHEM TOKYO 1987 51 (12) 3231

Effects of polyhydric alcohols on thermal and rheological properties of polysaccharide gels

Panza L, Ronchetti F*, Russo G, Toma L//CNR, Ctr Studio Sostanze Organ Nat, Via Venezian 21, I-20133 Milan, Italy

J CHEM SOC PERKIN TRANS I (12) 2745

Synthesis of the trisaccharide component of the repeating unit of the capsular polysaccharide of *Streptococcus pneumoniae* type 19F

Stack RJ//USDA ARS, No Reg Res Ctr, Peoria, IL 61604, USA

FEMS MICROBIOL LETT 1987 48 (1-2) 83

Identification of L-altrose in the extracellular polysaccharide from *Butyrivibrio fibrisolvens* strain CF3

Takeyama T, Suzuki I, Ohno N, Oikawa S, Sato K, Ohsawa M, Yadomae T//Tokyo Coll Pharm, Hachioji, Tokyo 19203, Japan

J PHARMACOBIO-DYNAM 1987 10 (11) 644

Host-mediated antitumor effect of grifolan NMF-5N, a polysaccharide obtained from *Grifola frondosa*

Vinogradov EV, Knirel YA*, Shashkov AS, Kochetkov NK//ND Zelinskii Organ Chem Inst, Moscow, USSR

CARBOHYD RES 1987 170 (1) C1

Determination of the degree of amidation of 2-deoxy-2-formamido-D-galacturonic acid in O-specific polysaccharides of *Pseudomonas aeruginosa* O4 and related strains

Vinogradov EV, Knirel YA, Lipkind GM, Shashkov AS, Kochetkov NK, Stanislavsky ES, Kholodkova EV//ND Zelinskii Organ Chem Inst, Moscow, USSR

BIOORG KHIM 1987 13 (9) 1275

Antigenic polysaccharides of bacteria. 23. The structure of the O-specific polysaccharide chain of the lipopolysaccharide of *Salmonella arizonae* O59 (Russian, English Abstract)

Wagner H, Stuppner H, Schafer W, Zenk M//Univ Munich, Inst Pharmaceut Biol, Karlstr 29, D-8000 Munich 2, Fed Rep Ger
PHYTOCHEMISTRY 1988 27 (1) 119

Immunologically active polysaccharides of *Echinacea purpurea* cell cultures

Klein J, Herzog D//Gesell Biotechnol Forsch MBH, Mascheroder Weg 1, D-3300 Brunswick, Fed Rep Ger

MAKROMOL CHEM-MACRO CHEM PHYS 1987 188 (6) 1217

Poly(vinylsaccharide)s, 2. Synthesis of some poly(vinylsaccharide)s of the amide type and investigation of their solution properties

5. Starch

Aiba S, Zhang M, Ohnishi M, Koizumi JI//Osaka Univ, Fac Engn, Dept Fermentat Technol, Suita, Osaka 565, Japan

BIOTECHNOL BIOENG 1987 30 (8) 978

Production of alpha-amylase in transformant of *Bacillus stearothermophilus* - Improvement of recombinant plasmid that can be used at higher temperatures

Carvalho LB, Silva MPC, Melo EHM//Univ Fed Pernambuco, Ctr Ciencias Biol, Dept Bioquim, Enzimol Lab, BR-50000 Recife, PE, Brazil

BRAZ J MED BIOL RES 1987 20 (5) 521

Activity of immobilized alpha-amylase

Gogoi BK, Bezbaruah RL, Pillai KR*, Baruah JN//Reg Res Lab, Div Biochem, Assam, India
J APPL BACTERIOL 1987 63 (5) 373

Production, purification and characterization of an alpha-amylase produced by *Saccharomycopsis fibuligera*

Harinder K, Bains GS//Punjab Agr Univ, Dept Food Sci & Technol, Ludhiana 141004, Punjab, India

CEREAL CHEM 1987 64 (6) 359

High alpha-amylase flours: Effect of pH, acid, and salt on paste characteristics

Henis YI, Yaron T, Lamed R, Rishpon J, Sahar E, Katchalski-Katzir E//Tel Aviv Univ, George

S Wise Fac Life Sci, Dept Biochem, IL-69978 Tel Aviv, Israel

BIOPOLYMERS 1988 27 (1) 123

Mobility of enzymes on insoluble substrates: The beta-amylase-starch gel system

Ikura Y, Horikoshi K//Inst Phys & Chem Res, Wako, Saitama 35101, Japan

J FERMENT TECHNOL 1987 65 (6) 707

Effect of amino compounds on alkaline amylase production by alkalophilic *Bacillus* Sp.

Saha BC, Shen GJ, Zeikus JG*//Michigan State Univ, Michigan Biotechnol Inst, E Lansing, MI 48824, USA

ENZYME MICROB TECHNOL 1987 9 (10) 598

Behaviour of a novel thermostable beta-amylase on raw starch

Siggins KW//Univ Leicester, Leicester Bioctr, Univ Rd, Leicester LE1 7RH, England

MOL MICROBIOL 1987 1 (1) 86

Molecular cloning and characterization of the beta-amylase gene from *Bacillus circulans*

Warchalewski JR//Univ Agr Poznan, Inst Microbiol Biochem & Food Anal, 48 Mazowiecka St, PL-60623 Poznan, Poland

NAHRUNG 1987 31 (10) 1015

Purification and characteristics of an endogenous alpha-amylase and trypsin inhibitor from wheat seeds

Hovenkamp-Hermelink JHM, Jacobsen E, Ponstein AS, Visser RGF, Vos-Scheperkeuter GH, Bijmolt EW, de Vries JN, Witholt B, Feenstra WJ//State Univ Groningen, Dept Genet, Kerklaan 30, 9751 NN Haren, The Netherlands

THEOR APPL GENET 1987 75 (1) 217

Isolation of an amylose-free mutant of the potato (*Solanum tuberosum* L.)

Kim HO, Hill RD//Univ Manitoba, Dept Plant Sci, Winnipeg, Manitoba, Canada R3T 2N2

CARBOHYD RES 1987 170 (2) 215

Effect of cyclomaltoheptaose on amylose-lipid complexes during wheat-starch pasting

Largis JK, Katz AR//Amer Cyanamid Co, Div Med Device Res, Anim Surg Res Lab, Pearl River, NY 10965, USA

J BIOMED MATER RES-APPL BIOM 1987

21 (A3 Suppl) 299

Experimental evaluation of amylose succinate absorbable hemostat in a canine model

Tihlarik K, Pasteka M//Slovak Acad Sci, Ctr Chem Res, Inst Chem, CS-84238 Bratislava, Czechoslovakia

CHEM PAP-CHEM ZVESTI 1987 41 (5) 703

Estimation of functional groups and degree of substitution in carboxymethylstarch

Buttner R, Bode R, Birnbaum D//Ernst Moritz Arndt Univ, Sekt Biol, Wissensch Bereich Molek Biol, DDR-2200 Greifswald, Ger Dem Rep

J BASIC MICROB 1987 27 (6) 299

Purification and characterization of the extracellular glucoamylase from the yeast *Trichosporon adeninovorans*

Kleinman MJ, Wilkinson AE, Wright IP, Evans IH*, Bevan EA//Thames Polytech Sch Biol Sci & Environm Hlth, Wellington St, London SE18 6PF, England

BIOCHEM J 1988 249 (1) 163

Purification and properties of an extracellular glucoamylase from a diastatic strain of *Saccharomyces cerevisiae*

Wojcik A, Lobarzewski J*, Blaszczyńska T, Fiedurek J//Marie Curie Skłodowska Univ, Dept Biochem, PL-20031 Lublin, Poland

BIOTECHNOL BIOENG 1987 30 (8) 983

Silica gels activated by BCl₃ and aliphatic diamines as supports for glucoamylase immobilization

Telkova TN, Chlenov MA, Maloletneva OY, Petrov PT, Dombrovsky VA//All Union Blood Substitutes & Hormonal Preparat Technol Res Inst, Moscow, USSR

KHIM-FARM ZH SSSR 1987 21 (11) 1384

Determination of molecular-weight hydroxyethyl starch parameters by high performance exclusion chromatography (Russian)

Yurin OA, Chlenov MA, Dombrovsky VA, Linberg LF, Kochergin PM//All Union Blood Substitutes & Hormonal Preparat Technol Res Inst, Moscow, USSR

KHIM-FARM ZH SSSR 1987 21 (11) 1379

High performance liquid chromatographic analysis of distribution of hydroxyethyl groups in hydroxyethyl starch (Russian)

Bock K//Tech Univ Denmark, Dept Organ Chem, DK-2800 Lyngby, Denmark

PURE APPL CHEM 1987 59 (11) 1447

Carbohydrate-protein interactions: substrate specificity of enzymes used in the degradation of oligosaccharides related to starch and cellulose

Glennie CW, McDonald AML, Stark JR//Herriot Watt Univ, Dept Brewing & Biol Sci, Edinburgh EH1 1HX, Midlothian, Scotland

CARBOHYD RES 1987 170 (2) 263

Some observations on damage in commercial starch preparations

Hansen LM, Paukstelis JV, Setser CS//Kansas State Univ Agr & Appl Sci, Dept Foods & Nutr, Manhattan, Ks 66506, USA

CEREAL CHEM 1987 64 (6) 449

¹³C Nuclear magnetic resonance spectroscopic methods for investigating sucrose-starch interactions with increasing temperature

Laakso T, Sjöholm I//Natl Board Hlth & Welf, Div Pharm, Box 607, S-75125 Uppsala, Sweden

J PHARM SCI 1987 76 (12) 935

Biodegradable microspheres X: Some properties of polyacryl starch microparticles prepared from acrylic acid-esterified starch

Paton D//Agr Canada, Food Res Ctr, Ottawa, Ontario, Canada K1A 0C6

CEREAL CHEM 1987 64 (6) 394

Differential scanning calorimetry of oat starch pastes

Pruzinec J, Hola O//Slovak Tech Univ, Fac Chem Technol, CS-81237 Bratislava, Czechoslovakia

J RADIOANAL NUCL CHEM LETT 1987 118 (6) 427

Starch degradation by irradiation

Yiu SH, Wood PJ, Weisz J//Agr Canada, Food Res Ctr, Ottawa, Ontario, Canada K1A 0C6

CEREAL CHEM 1987 64 (6) 373

Effects of cooking on starch and beta-glucan of rolled oats

6. Others

Olsson S, Bergman B, Bergman M//Umea Univ, Fac Odontol, Dept Dent Mat, S-90187 Umea, Sweden

SWED DENT J 1987 11 (4) 169

Agar impression materials, dimensional stability and surface detail sharpness following treatment with disinfectant solutions

Camp CE, Sofer SS//New Jersey Inst Technol, Biotechnol Res Lab, Newark, NJ 07102, USA

ENZYME MICROB TECHNOL 1987 9 (11) 685

Calcium alginate-immobilized hepatic microsomes: Effect of NADPH cofactor on oxidation rates

Lauer BA, Masters HB//Univ Colorado, Sch Med, Dept Pediat, Denver, Co 80262, USA

J CLIN MICROBIOL 1988 26 (1) 54

Toxic effect of calcium alginate swabs on *Neisseria gonorrhoeae*

Stevenson WTK, Sefton MV//Univ Toronto, Dept Chem Engn & Appl Chem, Toronto, Ontario, Canada M5S 1A4

BIOMATERIALS 1987 8 (6) 449

Graft copolymer emulsions of sodium alginate with hydroxyalkyl methacrylates for microencapsulation

Ramachandran K, Das K*, Sharma DK//Indian Inst Technol, Dept Chem Engn, New Dehli 110029, India

RESOUR CONSERV 1987 15 (4) 291

Fermentable sugars from biopolymers of bagasse

Austen KRJ, Goodall DM, Norton IT//Sittingbourne Res Ctr, Shell Biosci Lab, Sittingbourne ME9 8AG, Kent, England

BIOPOLYMERS 1988 27 (1) 139

Anion effects on equilibria and kinetics of the disorder-order transition of kappa-carrageenan

Precht D, Peters KH, Peterson J//Bundesanstalt Milchwforsch, Inst Chem & Phys, Kiel, Fed Rep Ger

MILCHWISSENSCHAFT 1987 42 (10) 635

Improvement of quality of whipping cream by adding carrageenan and milk constituents. 1. Influence of additives on the plug formation in pasteurized, unhomogenized cream (German, English Abstract)

Sundheim L//Norwegian Plant Protect Inst, Div Plant Pathol, N-1432 AS NLH, Norway

J AGR SCI FINLAND 1987 59 (3) 209

Cloning and conjugational transfer of chitinase

encoding genes

Oelsner G, Graebe RA, Pan SB, Haseltine FP, Barnea ER, Fakih H, De Cherney AH//Yale Univ, Sch Med, Dept Obstet & Gynecol, 333 Cedar St, New Haven, Ct 06510, USA

J REPROD MED 1987 32 (11) 812

Chondroitin sulphate: A new intraperitoneal treatment for postoperative adhesion prevention

Hernandez A, Alonso-Lopez M, Martin-Lomas M, Pascuel C, Penades S//CSIC, Inst Quim Organ, Juan Cierva 3, E-28006 Madrid, Spain

TETRAHEDRON 1987 43 (22) 5457

Synthesis, NMR, and preliminary binding studies of a new chiral macrocycle from beta-cyclodextrin

Higashi M, Yamaguchi H, Machiguchi T//ibaraki Univ, Coll Technol, 4-12-1 Nakanarusawa, Hitachi 316, Japan

SPECTROCHIM ACTA PT A-MOL SPE 1987 43 (11) 1427

The circular dichroism spectra of the cyclodextrin complex with tropone

Koehler JE, Saenger W*, van Gunsteren WF//Free Univ Berlin, Inst Kristallog, Takustr 6, D-1000 Berlin 33, Fed Rep Ger

EUR BIOPHYS J 1987 15 (3) 197

A molecular dynamics simulation of crystalline alpha-cyclodextrin hexahydrate

Koehler JE, Saenger W*, van Gunsteren WF//Free Univ Berlin, Inst Kristallog, Takustr 6, D-1000 Berlin 33, Fed Rep Ger

EUR BIOPHYS J 1987 15 (3) 211

Molecular dynamics simulation of crystalline beta-cyclodextrin dodecahydrate at 293K

Luu SN, Leinot M, Pourrat A//Fac Pharm Clermont Ferrand, Pharm Galen Lab, F-63001 Clermont Ferrand, France

PHARM ACTA HELV 1987 62 (12) 336

Enhancement of pharmacological activity of CERM 3726 with a ground mixture of beta-cyclodextrin in mice

Nakai Y, Yamamoto K, Terada K, Watanabe D//Chiba Univ, Fac Pharmaceut Sci, 1-33 Yayoicho, Chiba 260, Japan

CHEM PHARM BULL TOKYO 1987 35 (11) 4609

New methods for preparing cyclodextrin

inclusion compounds. I. Heating in a sealed container

Sebille B, Thuaud N, Piquion J, Behar N//Univ Paris 12, CNRS, Unite 27, Phys Chim Biopolymeres Lab, 2-8 rue Henri Dunant, F-94320 Thiais, France

J CHROMATOGR 1987 409 (NOV) 61

Determination of association constants of beta-cyclodextrin and beta-cyclodextrin-bearing polymers with drugs by high-performance liquid chromatography

Seo T, Kajihara T, Iijima T//Tokyo Inst Technol, Dept Polymer Sci, Meguro ku, Tokyo 152, Japan

MAKROMOL CHEM-MACRO CHEM PHYS 1987 188 (6) 1295

Hydrolysis of phenyl esters in cyclodextrin-polymer systems

Edsman K, Sundelof LO//Univ Uppsala, Ctr Biomed, Fac Pharm, Inst Phys & Inorgan Pharmaceut Chem, Box 574, S-75123 Uppsala, Sweden

POLYMER 1987 28 (13) 2267

Determination of thermodynamic interaction in mixed polymer solutions by a rapid and precise osmotic method. The system dextran/polyvinylpyrrolidone/water

Kikuchi Y, Kubota N, Maruo K, Goto Y//Oita Univ, Fac Engn, Dept Environm Chem & Engn, Oita 87011, Japan

MAKROMOL CHEM-MACRO CHEM PHYS 1987 188 (11) 2631

Properties of membranes from polyelectrolyte complexes consisting of methyl glycol chitosan, [2-(diethylamino)-ethyl]dextran, and poly(potassium vinyl sulfate)

Martinez JF, Dona G, Ribeiro A//Univ Pavia, Dept Int Med & Med Therapy, Div Gerontol & Geriatr, I-27100 Pavia, Italy

CLIN TRIALS J 1987 24 (5) 351

Long-term treatment of hyperlipidaemia in the aged: A study of diethylaminoethyl-dextran (Deae-D)

Mastroianni A//Via Super 27-7, I-33100 Udine, Italy

PANMINERVA MED 1987 29 (4) 325

Sympathetic regional blocks with guanethidine diluted in 10% dextran 40

Wikstrom P, Flygare S, Grondalen A, Larsson PO//Univ Lund, Ctr Chem, Dept Pure & Appl Biochem, POB 124, S-22100 Lund, Sweden

ANAL BIOCHEM 1987 167 (2) 331

Magnetic aqueous two-phase separation: A new technique to increase rate of phase-separation, using dextran-ferrofluid or larger iron oxide particles

Moss C, Taylor AEM*, Shuster S//Univ Newcastle upon Tyne, Royal Victoria Infirm, Dept Dermatol, Newcastle upon Tyne NE1 4LP, Tyne & Wear, England

CLIN EXP DERMATOL 1987 12 (6) 413

Comparison of cadexomer iodine and dextranomer for chronic venous ulcers

Debondgnie P, Mestdagh M*, Rinaudo M//Catholic Univ Louvain, Unite Chim Interfaces, Pl Croix Sud 1, B-1348 Louvain La Neuve, Belgium

CARBOHYD RES 1987 170 (2) 137

An e.p.r. and potentiometric study of the complexation of copper ions by galacturonic acid and galacturonans

Almdahl SM, Seljelid R//Univ Tromso Hosp, Dept Surg, N-9012 Tromso, Norway

RES EXP MED 1987 187 (5) 369

Semisoluble aminated glucan: Long-term efficacy against an intraperitoneal E. coli challenge and its effect on formation of abdominal adhesions

Bhatty RS//Univ Saskatchewan, Ctr Crop Dev, Dept Crop Sci & Plant Ecol, Saskatoon, Saskatchewan, Canada S7N 0W0

CAN J PLANT SCI 1987 67 (4) 997

Relationship between acid extract viscosity and total, soluble and insoluble beta-glucan contents of hulled and hullless barley

Linton JD, Evans M, Jones DS, Gouldney DN//Koninklijke Shell Lab, Badhuisweg 3, 1003 AA Amsterdam, The Netherlands

J GEN MICROBIOL 1987 133 (11) 2961

Exocellular succinoglucon production by Agrobacterium radiobacter NCIB 11883

Narui T, Iwata S, Takahashi K, Shibata S//Meiji Coll Pharm, Nozawa 1-35-23, Setagaya ku, Tokyo 154, Japan

CARBOHYD RES 1987 170 (2) 269

Partial hydrolysis of alpha-D-glucans with acid in the presence of 1,1,3,3-tetramethylurea

Thompson IM, Spence CR, Lamm DL, Diluzio NR//Brooke Army Med Ctr, Dept Surg, Urol Serv, Ft Sam Houston, Tx 78234, USA
AMER J MED SCI 1987 294 (5) 294

Immunotherapy of bladder carcinoma with glucan and cyclophosphamide

Courtois JE//No address available
BULL ACAD NATL MED 1987 171 (6) 693

A filtration enzyme with dominant beta-glucanase activity, produced by *Disporotrichum dimorphosporum*, for use in beer making (French, English abstract)

Elwinger K, Saterby B//Swedish Univ Agr Sci, Dept Anim Nutr & Management, Funbo Lovsta, S-75590 Uppsala, Sweden
SWED J AGR RES 1987 17 (3) 133

The use of beta-glucanase in practical broiler diets containing barley or oats

Lee DS, Pack MY//Korea Adv Inst Sci & Technol, Dept Biol Sci & Engr, POB 150, Seoul 131, South Korea
ENZYME MICROB TECHNOL 1987 9 (10) 594

Use of bacilli for overproduction of exocellular endo-beta-1,4-glucanase encoded by cloned gene

Sharma P, Gupta JK, Vadhra DV, Dube DK//Punjab Univ, Dept Microbiol, Chandigarh 160014, India
ENZYME MICROB TECHNOL 1987 9 (10) 602

Molecular cloning and expression in *Escherichia coli* of a thermophilic *Bacillus* sp. PDV endo-beta-1,4-glucanase gene

Hirayama C, Ihara H, Shiba M, Nakamura M, Motozato Y//Kumamoto Univ, Fac Engr, Dept Appl Chem, Kumamoto 860, Japan
J CHROMATOGR 1987 409 (NOV) 175

Macroporous glucomannan spheres for the size-exclusion separation of aqueous macromolecules

Yamada H, Kiyohara H, Otsuka Y//Kitasato Inst, Oriental Med Res Ctr, Minato ku, Tokyo 108, Japan

CARBOHYD RES 1987 170 (2) 181

Further structural studies of an anti-complementary acidic heteroglycan from the leaves of *Artemisia princeps*

Katona G//Hosp Gen, Dept Rheumatol, Dr

Balmis 148, Mexico City 06720, DF, Mexico
CURR MED RES OPIN 1987 10 (9) 625

A clinical trial of glycosaminoglycan-peptide complex ('Rumalon') in patients with osteoarthritis of the knee

Annefeld M, Erne B//Robapharm Ltd, Dept Exptl Med, CH-4006 Basle, Switzerland
CLIN RHEUMATOL 1987 6 (3) 340

The mode of action of a glycosaminoglycan-peptide complex (Rumalon) on articular cartilage of the rat in vivo

Kerzberg EM, Roldan EJA, Castelli G, Huberman ED//JM Ramos Mejia Hosp, Dept Med, Div C, Buenos Aires, Argentina
SCAND J RHEUMATOL 1987 16 (5) 377

Combination of glycosaminoglycans and acetylsalicylic acid in knee osteoarthritis

Patel SP, Patel RG, Patel VS//Sardar Patel Univ, Dept Chem, Vallabh Vidyanagar 388120, Gujarat, India
INT J BIOL MACROMOL 1987 9 (6) 314

Rheological properties of guar gum and hydroxyethyl guar gum in aqueous solution

Ofosu FA, Modi GJ, Blajchman MA, Buchanan MR, Johnson EA//Canadian Red Cross Soc, Blood Transfus Serv, Hamilton, Ontario, Canada L8N 1H8
BIOCHEM J 1987 248 (3) 889

Increased sulphation improves the anticoagulant activities of heparan sulphate and dermatan sulphate

Agnelli G//Univ Perugia, Montelucre Policlin, 1st Semeiot Med, I-06100 Perugia, Italy
MED-RIV ENC MED ITAL 1987 7 (3) 318

Evaluation of the antithrombotic and haemorrhagic effect of standard heparin and heparin fractions with high and low affinity for antithrombin III (Italian, English Abstract)

Arnander C, Bagger-Sjoberg D, Frebelius S, Larsson S, Swedenborg J//Karolinska Inst, Dept Exptl Surg, S-10401 Stockholm 60, Sweden
BIOMATERIALS 1987 8 (6) 496

Long-term stability in vivo of a thromboresistant heparinized surface

Barradas MA, Mikhailidis DP, Epemolu O, Jeremy JY, Fonseca V, Dandona P//Royal Free Hosp, Sch Med, Dept Chem Pathol &

Human Metab, Metab Unit, London NW3 2QG, England

BRIT J HAEMATOL 1987 67 (4) 451

Comparison of the platelet pro-aggregatory effect of conventional unfractionated heparins and a low molecular weight heparin fraction (CY 222)

Morndal O, Linderaronson A, McWilliam J, Linderaronson S//Karolinska Inst, Sch Dent, Dept Orthodont, Box 4064, S-14104 Huddinge, Sweden

EUR J ORTHODONT 1987 9 (4) 283

Bone formation with heparinized plastic implants in rats - A methodological study

Mulloy B, Johnson EA//Natl Inst Biol Stand & Control, Blanche Lane, S Mimms, Potters Bar EN6 3QG, Herts, England

CARBOHYD RES 1987 170 (2) 151

Assignment of the ^1H -n.m.r. spectra of heparin and heparan sulphate

Gernat C, Reuther F, Damaschun G, Schierbaum F//Acad Sci GDR, Cent Inst Mol Biol, DDR-1115 Berlin, Ger Dem Rep

ACTA POLYM 1987 38 (11) 603

Real structure of a partially crystalline maltodextrin gel as revealed by wide-angle X-ray scattering

Aguilar G, Huitron C//Natl Univ Mexico, Ctr Nitrogen Fixation Res, Biotechnol Sect, AP 565-A, Cuernavaca, Morelos, Mexico

ENZYME MICROBIOL TECHNOL 1987 9 (11) 690

Simulation of the production of extracellular pectinolytic activities of *Aspergillus* sp. by galacturonic acid and glucose addition

Lozano P, Manjon A, Romojaro F, Canovas M, Iborra JL// Address not available

BIOTECHNOL LETT 1987 9 (12) 875

A cross-flow reactor with immobilized pectolytic enzymes for juice clarification

Hermersdorfer H, Leuchtenberger A, Wardsack C, Ruttloff H//Akad Wissensch DDR, Zent Inst Ernährung, Forschungsbereich Biowissenschaft & Med, DDR-1505 Bergholz Rehbruc, Ger Dem Rep

J BASIC MICROB 1987 27 (6) 309

Influence of culture conditions on mycelial structure and polygalacturoase synthesis of *Aspergillus niger*

Seymour GB, Lasslett Y, Tucker GA//AFRC, Inst Food Res, Norwich Lab, Colney Lane, Norwich NR4 7UA, Norfolk, England

PHYTOCHEMISTRY 1987 26 (12) 3137

Differential effects of pectolytic enzymes on tomato polyuronides in vivo and in vitro

Hatakenaka K, Liu W, Norisuye T//Osaka Univ, Dept Macromolec Sci, Toyonaka, Osaka 560, Japan

INT J BIOL MACROMOL 1987 9 (6) 346

Stability of xanthan in aqueous sodium chloride at elevated temperature

Jones SA, Goodall DM*, Cutler AN, Norton IT//*Univ York, Dept Chem, York YO1 5DD, N Yorkshire, England

EUR BIOPHYS J 1987 15 (3) 185

Application of conductivity studies and polyelectrolyte theory to the conformation and order-disorder transition of xanthan polysaccharide

Sutherland IW//Univ Edinburgh, Dept Microbiol, W Mains Rd, Edinburgh EH9 3JG, Midlothian, Scotland

J GEN MICROBIOL 1987 133 (11) 3129

Xanthan lyases - Novel enzymes found in various bacterial species

Tako M, Nakamura S//Univ Ryukyus, Coll Agr, Dept Agr Chem, Nishihara, Okinawa 90301, Japan

AGR BIOL CHEM TOKYO 1987 51 (11) 2919

Rheological properties of Ca salt of xanthan in aqueous media

Zhang L, Takematsu T, Norisuye T*//*Osaka Univ, Dept Macromolec Sci, Toyonaka, Osaka 560, Japan

MACROMOLECULES 1987 20 (11) 2882

Potentiometric titration of xanthan

Hamamoto T, Horikoshi K//Riken Inst, Wako, Saitama 35101, Japan

AGR BIOL CHEM TOKYO 1987 51 (11) 3133

Alkalophilic *Bacillus xylanase* A, a secretable protein through outer membrane of *Escherichia coli*

Khan AW, Lamb LA, Forgie MA//Natl Res Council Canada, Div Biol Sci, Ottawa, Ontario, Canada K1A 0R6

BIOMASS 1987 13 (2) 135

Formation of esterase, xylanase and xylosidase
by cellulolytic anaerobes

Mitsuishi Y, Yamanobe T, Yagisawa M,
Takasaki Y//Minist Int Trade & Ind, Agcy Ind
Sci & Technol, Fermentat Res Inst, 1-1-3
Higashi, Yatabe, Ibaraki 305, Japan

AGR BIOL CHEM TOKYO 1987 51 (12) 3207

Purification and properties of thermostable
xylanases from mesophilic fungus strain Y-94