

Bibliography of carbohydrate polymers

(Four weeks journals. Search completed at 13th Dec 1995)

1 BOOKS, REVIEWS & SYMPOSIA

Lineback D, Dreher M, De Vries J, Slavin J, Stephen A, Gordon D, Prosky L, Scarborough E, Henderson G, Lee S *et al*// Univ Idaho, Moscow, Id 83843, USA

Nutr Rev 1995 53 (7) 186

Complex carbohydrates: The science and the label

Tharanathan RN// Cent Food Technol Res Inst, Dept Biochem & Nutr, Mysore 570013, Karnataka, India

J Sci Ind Res India 1995 54 (9) 512

Polysaccharide gums of industrial importance: A review

2 CELLULOSE

Bhaduri SK, Ghosh IN, Sarkar NLD// ICAR Res Complex, Jute Technol Res Labs, Div Chem & Microbiol, 12 Regent Pk, Calcutta 700040, West Bengal, India

Ind Crops Products 1995 4 (2) 79

Ramie hemicellulose as beater additive in paper making from jute-stick kraft pulp

Cousins SK, Brown RM// *Univ Texas, Dept Bot, Austin, Tx 78713, USA

Polymer 1995 36 (20) 3885

Cellulose I microfibril assembly: Computational molecular mechanics energy analysis favours bonding by Van der Waals forces as the initial step in crystallization

Delker G, Chen C, Miller RB// *Fujisawa USA Inc, 2045 Nth Cornell Ave, Melrose Pk, Il 60160, USA

Chromatographia 1995 41 (5-6) 263

Size exclusion chromatographic determination of hydroxypropyl methyl cellulose and polyethylene glycol 400 in an ophthalmic solution

Dressman JB, Derbin GM, Ismailos G, Jarvis C, Ozturk A, Palsson BO, Wheatley TA// Univ Frankfurt, Biozentrum, Inst Pharmazeut Technol, Marie Curie Str 9, D-60439 Frankfurt, Germany

J Control Release 1995 36 (3) 251

Circumvention of pH-dependent release from ethylcellulose-coated pellets

Frazier CE, Glasser WG// Virginia Polytech Inst & State Univ, Dept Wood Sci & Forest Prod, Blacksburg, Va 24061, USA

J Appl Polym Sci 1995 58 (6) 1063

Intramolecular effects in cellulose mixed benzyl ethers blended with poly (ε-caprolactone)

Kovalenko VI// Kazan State Technol Univ, 68 ul Karl Marx, Kazan 420015, Russia

Usp Khim 1995 64 (8) 803

Non-uniformity of molecular structure of cellulose nitrates (Russian)

Krasovskii AN, Polyakov DN, Mhatsakanov SS// St Petersburg Inst Cinematog & Televis, ul Pravdy 13, St Petersburg 191126, Russia

Vysokomol Soedin 1995 37 (9) 1551

The effect of the ratio between nonsubstituted primary and secondary hydroxyl groups on the viscosity of cellulose acetate solutions (Russian, English Abstract)

Lavrenko PN, Okatova OV, Strelina IA, Kutsenko LI// Russian Acad Sci, Inst Macromolec Cpds, Bolshoi pr 31, St Petersburg 199004, Russia

Vysokomol Soedin 1995 37 (8) 1326

Hydrodynamic properties and conformational characteristics of cyanoethyl hydroxypropyl cellulose (Russian, English Abstract)

Lavrenko PN, Melnikov AB// Russian Acad Sci, Inst Macromolec Cpds,

Bolshoi pr 31, St Petersburg 199004, Russia

Vysokomol Soedin 1995 37 (8) 1339

Sedimentation analysis of the molecular heterogeneity of hydroxypropyl cellulose derivatives (Russian, English Abstract)

Li JT, Nagai K, Nakagawa T*, Wang S// *Meiji Univ, Dept Ind Chem, Tama ku, Kawasaki, Kanagawa 214, Japan

J Appl Polym Sci 1995 58 (9) 1455

Preparation of polyethyleneglycol (PEG) and cellulose acetate (CA) blend membranes and their gas permeabilities

Padukone N, Evans KW, McMillan JD, Wyman CE// Natl Renewable Energy Lab, Div Alternat Fuels, Golden, Co 80401, USA

Appl Microbiol Biotechnol 1995 43 (5) 850

Characterization of recombinant *E. coli* ATCC 11303 (pLOI 297) in the conversion of cellulose and xylose to ethanol

Ramirez MG, Cavaille JY*, Dufresne A, Tekely P// *Univ Grenoble 1, CNRS, BP 53, Ctr Rech Macromolec Vegetales, F-38041 Grenoble 9, France

J Polym Sci B-Polym Phys 1995 33 (15) 2109

Cellulose-polyamide 66 blends. II. Mechanical behavior

Sanopoulou M, Roussis PP, Petropoulos JH// Democritos Natl Res Ctr, Inst Phys Chem, GR-15310 Athens, Greece

J Polym Sci B-Polym Phys 1995 33 (15) 2125

A detailed study of the viscoelastic nature of vapor sorption and transport in a cellulosic polymer. II. Sorption and longitudinal swelling kinetic correlations

Sheskey PJ, Robb RT, Moore RD, Boyce BM// Dow Chem Co USA, Larkin Lab, Midland, Mi 48674, USA

Drug Develop Ind Pharm 1995 21 (19) 2151

Effects of lubricant level, method of mixing, and duration of mixing on a controlled-release matrix tablet containing hydroxypropyl methylcellulose

Shtennikova IN, Kolbina GF// Russian Acad Sci, Inst Macromolec Cpds, Bolshoi pr 31, St Petersburg 199004, Russia

Vysokomol Soedin 1995 37 (8) 1314

Flow birefringence of hydroxypropyl cellulose molecules in aqueous and organic solvents (Russian, English Abstract)

Shtennikova IN, Lavrenko PN, Korneeva EV, Kolbina GF, Strelina IA, Shibaev VP// Address as above.

Vysokomol Soedin 1995 37 (8) 1368

Hydrodynamic properties of hydroxypropyl cellulose in water and ethanol (Russian, English Abstract)

Simittis J, Karagiannis K, Zoumpoulakis L// Natl Tech Univ Athens, Dept Chem Engn, Special Chem Technol Lab, 9 Heroon Polytechniou Str, GR-15780 Athens, Greece

Polym Int 1995 38 (2) 183

Curing of novolac-lignocellulosic composites

Soisson AP, Quetell G, Maxwell GL, Carlson JW, Pretorius RG// West Virginia Univ, Med Ctr, Dept Obstet & Gynecol, 4601 HSN, POB 9186, Morgantown, WV 26505, USA

J Gynecol Surg 1995 11 (3) 173

Oxidized cellulose as an adjunct to permanent mesh in the repair of large incisional hernias (Case Report)

Stewart GJ, Wang YQ, Niewiarowski S// Temple Univ, Sch Med, Sol Sherry Thrombosis Res Ctr, 3400 Nth Broad St, Philadelphia, Pa 19140, USA

Biotechniques 1995 19 (4) 598

Methylcellulose protects the ability of anchorage-dependent cells to adhere following isolation and holding in suspension

Thioun O, Fessi H*, Wouessidjewe D, Devissaguet JP, Puisieux F//

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 thirteen sections: 1 Books, Reviews & Symposia; 2 Cellulose; 3 Cellulose-degrading Enzymes; 4 Chitin/Chitosan; 5 Cyclodextrins; 6 Lignin; 7 Lipopolysaccharides; 8 Pectin; 9 Starch; 10 Starch-degrading Enzymes; 11 Polysaccharides - Microbial; 12 Polysaccharides - Plant; 13 Polysaccharides - Other. Within each section, articles are listed in alphabetical order with respect to author. When there are no publications to appear under one of these headings, that section will be omitted.

*Univ Lyon 1, ISPB, Lab Galen, Ave Rockefeller, F-69008 Lyon, France
STP Pharma Sciences 1995 **5** (5) 367
 Hydroxypropylmethyl cellulose phthalate aqueous dispersion for coating: Preparation by a nanoprecipitation method

Tsvetkov NV, Kutsenko LI, Didenko SA// Russian Acad Sci, Inst Macromolec Cpds, Bolshoi pr 31, St Petersburg 199004, Russia
Vysokomol Soedin 1995 **37** (8) 1300
 Flow birefringence and electrostatic birefringence of cyanoethylnitrocellulose solutions in cyclohexanone (Russian, English Abstract)

Tsvetkov NV, Khrapunov AK, Astapenko EP, Didenko SA// Address as above.
Vysokomol Soedin 1995 **37** (8) 1306
 Optical and electrooptical properties of cellulose esters with aliphatic side groups (Russian, English Abstract)

Yuguchi Y, Urakawa H, Kitamura S, Ohno S, Kajiura K*// *Kyoto Prefectural Univ, Fac Agr, Sakyo ku, Kyoto 606, Japan
Food Hydrocolloid 1995 **9** (3) 173
 Gelation mechanism of methylhydroxypropylcellulose in aqueous solution

Zhang T, Francotte E*// *Ciba Geigy AG, Pharmaceut Res Dept, K-122P25, CH-4002 Basel, Switzerland
Chirality 1995 **7** (6) 425
 Chromatographic properties of composite chiral stationary phases based on cellulose derivatives

3 CELLULOSE-DEGRADING ENZYMES

Adogla-Bessa T, Owen E*// *AFRC Inst Grassland & Environm Res, Maidenhead SL6 5LR, Berks, England
Anim Feed Sci Tech 1995 **55** (3-4) 335
 Ensiling of whole-crop wheat with cellulase-hemicellulase based enzymes. I. Effect of crop growth stage and enzyme on silage composition and stability

Adogla-Bessa T, Owen E*// *Address as above.
Anim Feed Sci Tech 1995 **55** (3-4) 349
 Ensiling of whole-crop wheat with cellulase-hemicellulase based enzymes. II. Effect of crop growth-stage and enzyme on silage intake, digestibility and live-weight gain by steers

Braccini I, Du Penhoat CH*, Michon V, Goldberg R, Clochard M, Jarvis MC, Huang ZH, Gage DA// *Ecole Normale Super, URA 1679, Dept Chim, 24 rue Lhomond, F-75231 Paris, France
Carbohydr Res 1995 **276** (1) 167
 Structural analysis of cyclamen seed xyloglucan oligosaccharides using cellulase digestion and spectroscopic methods

Gadgil NJ, Dagainawala HF, Chakrabarti T, Khanna P// Natl Environm Engn Res Inst, Nagpur 440020, Maharashtra, India
Enzyme Microb Technol 1995 **17** (10) 942
 Enhanced cellulase production by a mutant of *Trichoderma reesei*

Henriksson H, Jonsson S, Isaksson R, Pettersson G*// *Univ Uppsala, Ctr Biomed, Dept Biochem, POB 576, S-75123 Uppsala, Sweden
Chirality 1995 **7** (6) 415
 Chiral separation based on immobilized intact and fragmented cellobiohydrolase II (CBH II): A comparison with cellobiohydrolase I (CBH I)

Reinikainen T, Henriksson K, Siika-aho M, Teleman O, Poutanen K// VTT, Biotechnol & Food Res, POB 1500, SF-02044 Espoo, Finland
Enzyme Microb Technol 1995 **17** (10) 888
 Low-level endoglucanase contamination in a *Trichoderma reesei* cellobiohydrolase II preparation affects its enzymatic activity on β -glucan

Weinberg ZG, Ashbell G, Hen Y, Azrieli A// Agr Res Org, Volcani Ctr, Dept Stored Prod, Forage Preservat & By-Prod Res Unit, IL-50250 Bet Dagan, Israel
Anim Feed Sci Tech 1995 **55** (3-4) 287
 The effect of cellulase and hemicellulase plus pectinase on the aerobic stability and fibre analysis of peas and wheat silages

4 CHITIN/CHITOSAN

Aoi K, Takasu A, Okada M// Nagoya Univ, Fac Agr Sci, Dept Appl Biol Sci, Chikusa ku, Nagoya, Aichi 46401, Japan
Macromol Rapid Commun 1995 **16** (10) 757
 New chitin-based polymer hybrids. I. Miscibility of poly(vinyl alcohol) with chitin derivatives

Kamst E, Van der Drift KMG, Thomas-Oates JE, Lugtenberg BJJ, Spalink HP// Leiden Univ, Inst Molec Plant Sci, Clusius Lab, Wasenaarseweg 64, 2333 AL Leiden, The Netherlands
J Bacteriol 1995 **177** (21) 6282
 Mass spectrometric analysis of chitin oligosaccharides produced by *Rhizobium* NodC protein in *Escherichia coli*

Lee KY, Ha WS*, Park WH// *Seoul Natl Univ, Coll Engrn, Dept Fiber & Polymer Sci, Seoul 151742, South Korea
Biomaterials 1995 **16** (16) 1211
 Blood compatibility and biodegradability of partially *N*-acylated chitosan derivatives

Yoshioka H, Nonaka K, Fukuda K, Kazama S// Shizuoka Univ, Grad Sch Nutr & Environm Sci, 52-1 Yada, Shizuoka 422, Japan
Biosci Biotechnol Biochem 1995 **59** (10) 1901
 Chitosan-derived polymer-surfactants and their micellar properties

5 CYCLODEXTRINS

Abraham TE// CSIR, Reg Res Lab, Fermentat Sect, Trivandrum 695019, Kerala, India
Biocatal Biotransform 1995 **12** (2) 137
 Immobilized cyclodextrin glycosyl transferase for the continuous production of cyclodextrins

Barczane AB, Bodnarne DG, Barcza I// Eotvos Lorand Tudomanyegyetem Szervetlen & Analit, Pazmany Setany 2, H-1117 Budapest, Hungary
Magy Kem Foly 1995 **101** (9) 377
 Hydroxypropyl- β -cyclodextrins: Correlation between the stability of their inclusion complexes with phenolphthalein and the degree of substitution (Hungarian)

Brewster ME, Anderson WR, Loftsson T, Huang MJ, Bodor N, Pop E// Pharmos Corp, 2 Innovat Dr, Alachua, FL 32615, USA
J Pharm Sci 1995 **84** (10) 1154
 Preparation, characterization, and anesthetic properties of 2-hydroxypropyl- β -cyclodextrin complexes of pregnanolone and pregnenolone in rat and mouse

Gorecka BA, Sanzgiri YD, Bindra DS, Stella VJ*// *Univ Kansas, Dept Pharmaceut Chem, Lawrence, KS 66045, USA
Int J Pharm 1995 **125** (1) 55
 Effect of SBE4- β -CD, a sulfobutyl ether β -cyclodextrin, on the stability and solubility of O-6-benzylguanine (NSC-637037) in aqueous solutions

Guttman A, Brunet S, Jurado C, Cooke N// Beckman Instruments Inc, 2500 Harbor Blvd, C-12-D, Fullerton, CA 92634, USA
Chirality 1995 **7** (6) 409
 Rapid chiral separation methods development by cyclodextrin-mediated capillary electrophoresis for acidic and basic compounds

Marini A, Berbeni V, Bruni G, Massarotti V, Mustarelli P, Villa M// CNR, Dipt Chim Fis, Via Taramelli 16, I-27100 Pavia, Italy
J Chem Phys 1995 **103** (17) 7532
 Dehydration of the cyclodextrins: A model system for the interactions of biomolecules with water

Martin KA, Mortellaro MA, Sweger RW, Fikes LE, Winn DT, Clary S, Johnson MP, Czarnik AW*// *Ohio State Univ, Dept Chem, 120 West 18th Ave, Columbus, OH 43210, USA
J Amer Chem Soc 1995 **117** (42) 10443
 Preassociating α -nucleophiles based on β -cyclodextrin. Their synthesis and reactivity

Sharma US, Balasubramanian SV, Straubinger RM// SUNY Buffalo, Dept Pharmaceut, Amherst, NY 14260, USA
J Pharm Sci 1995 **84** (10) 1223
 Pharmaceutical and physical properties of paclitaxel (taxol) complexes with cyclodextrins

Steiner T, Saenger W// Free Univ Berlin, Inst Kristallog, Takustr 6, D-14195 Berlin, Germany
J Chem Soc Chem Commun 1995 (20) 2087
 Weak polar host-guest interactions stabilizing a molecular cluster in a cyclodextrin cavity: C-H...O and C-H... π contacts in β -cyclodextrin-but-2-yne-1,4-diol heptahydrate

Van Dienst E, Snellink BHM, Von Piekartz I, Gansey MHBG, Venema F, Feiters MC, Nolte RJM, Engbersen JFJ, Reinhoudt DN*// *Univ Twente, Organ Chem Lab, POB 217, 7500 AE Enschede, The Netherlands
J Org Chem 1995 **60** (20) 6537
 Selective functionalization and flexible coupling of cyclodextrins at the

secondary hydroxyl face

Wang J, Warner IM// *Louisiana State Univ, Dept Chem, Baton Rouge, La 70803, USA
J Chromatogr A 1995 711 (2) 297
 Combined polymerized chiral micelle and γ -cyclodextrin for chiral separation in capillary electrophoresis

6 LIGNIN

Britt PF, Buchanan AC, Malcolm EA// Oak Ridge Natl Lab, Div Chem & Analyt Sci, POB 2008, Oak Ridge, Tn 37831, USA
J Org Chem 1995 60 (20) 6523
 Thermolysis of phenethyl phenyl ether: A model for ether linkages in lignin and low rank coal

Feijoo G, Dosoretz C, Lema JM// *Univ Santiago de Compostela, Dept Chem Engrn, Avda Ciencias s/n, E-15706 Santiago de Compostela, Spain
J Biotechnol 1995 42 (3) 247
 Production of lignin peroxidase by *Phanerochaete chrysosporium* in a packed bed bioreactor operated in semi-continuous mode

Kaal EEJ, Field JA*, Joyce TW// *Univ Wageningen, Dept Food Sci, Div Ind Microbiol, POB 8129, 6700 EV Wageningen, The Netherlands
Bioresource Technol 1995 53 (2) 133
 Increasing ligninolytic enzyme activities in several white-rot basidiomycetes by nitrogen-sufficient media

Kleen M, Gellerstedt G// Swedish Pulp & Paper Res Inst, STFI, Box 5604, S-11486 Stockholm, Sweden
J Anal Appl Pyrol 1995 35 (1) 15
 Influence of inorganic species on the formation of polysaccharide and lignin degradation products in the analytical pyrolysis of pulps

Martin F, Del Rio C, Gonzalez-Vila FJ, Verdejo T// CSIC, Inst Recursos Nat & Agrobiol, POB 1052, E-41080 Seville, Spain
J Anal Appl Pyrol 1995 35 (1) 1
 Thermally assisted hydrolysis and alkylation of lignins in the presence of tetra-alkylammonium hydroxides

7 LIPOPOLYSACCHARIDES

Gil-Serrano AM, Gonzalez-Jimenez I, Mateo PT, Bernabe M, Jimenez-Barbero J, Megias M, Romero-Vazquez MJ// Univ Sevilla, Fac Quim, Dept Quim Organ, E-41071 Seville, Spain
Carbohydr Res 1995 275 (2) 285
 Structural analysis of the O-antigen of the lipopolysaccharide of *Rhizobium tropici* CIAT899

Ogawa Y, Lei PS, Kovac P// *NIDDK, 8 Ctr Dr, Bethesda, Md 20892, USA
Bioorg Medicinal Chem Letter 1995 5 (19) 2283
 Synthesis of ligands related to the *Vibrio cholerae* O-specific antigen. IX. A functionalized hexasaccharide precursor of a glycoconjugate vaccine against cholera

Parlesak A, Bode C// Univ Hohenheim, Fruwirthstr 12, D-70593 Stuttgart, Germany
J Chromatogr A 1995 711 (2) 277
 Lipopolysaccharide determination by reversed-phase high-performance liquid chromatography after fluorescence labeling

Rau H, Seydel U, Freudenberg M, Weckesser J, Mayer H// *Max Planck Inst Immunbiol, Stubeweg 51, D-79108 Freiburg, Germany
Arch Microbiol 1995 164 (4) 280
 Lipopolysaccharide of *Rhodospirillum salinarum* 40: Structural studies on the core and lipid A region

Staaf M, Widmalm G*, Weintraub A, Nataro JP// *Univ Stockholm, Arrhenius Lab, Dept Organ Chem, S-10691 Stockholm, Sweden
Eur J Biochem 1995 233 (2) 473
 Structural elucidation of the O-antigenic polysaccharide from *Escherichia coli* O44:H18

Vinogradov EV, Bock K, Holst O*, Brade H// *Forschungsinstitut Borstel, Inst Exptl Biol & Med, Parkalle 22, D-23845 Borstel, Germany
Eur J Biochem 1995 233 (1) 152
 The structure of the lipid A-core region of the lipopolysaccharides from *Vibrio cholerae* O1 smooth strain 569B (Inaba) and rough mutant strain 95R (Ogawa)

8 PECTIN

Acuna-Arguelles ME, Gutierrez-Rojas M, Viniegra-Gonzalez G, Favela-Torres E// *Univ Autonoma Metropolitana Iztapalapa, Dept Biotechnol, Unidad Iztapalapa, Mexico City 09340, DF, Mexico
Appl Microbiol Biotechnol 1995 43 (5) 808
 Production and properties of three pectinolytic activities produced by *Aspergillus niger* in submerged and solid state fermentation

Brasil IM, Maia GA, De Figueiredo RW// Univ Fed Ceara, Caixa Postal 12168, BR-60356-000 Fortaleza, Ceara, Brazil
Pesquisa Agr Brasil 1995 30 (6) 855
 Production of clarified guava juice using pectinolytic enzymes and fining agents

Camperi SA, Auday RM, Navarro del Canizo AN, Cascone O// *Catedra Microbiol Ind & Biotechnol, Fac Farm & Bioquim, Junin 956, RA-1113 Buenos Aires, DF, Argentina
Process Biochem 1995 31 (1) 81
 Study of variables involved in a fungal pectic enzyme fractionation by immobilized metal ion affinity chromatography

Da Silva JAL, Rao MA// *Cornell Univ, Dept Food Sci & Technol, Geneva, NY 14456, USA
Food Technol 1995 49 (10) 70
 Rheology of structure development in high-methoxyl pectin/sugar systems

Schols HA, Vierhuis E, Bakx EJ, Voragen AGJ// *Agr Univ Wageningen, Dept Food Sci, Bomenweg 2, 6703 HD Wageningen, The Netherlands
Carbohydr Res 1995 275 (2) 343
 Different populations of pectic hairy regions occur in apple cell walls

Tyagi R, Gupta MN// *Indian Inst Technol, Dept Chem, Delhi Hauz Khaz, New Delhi 110016, India
Biocatal Biotransform 1995 12 (4) 293
 Purification and immobilization of *Aspergillus niger* pectinase on magnetic latex beads

9 STARCH

Bhatnagar S, Hanna MA// Univ Nebraska, Ctr Ind Agr Prod, Lincoln, Ne 68583, USA
Ind Crops Products 1995 4 (2) 71
 Properties of extruded starch-based plastic foam

Compagno C, Porro D*, Smeraldi C, Ranzi BM// *Univ Milan, Dipt Fisiol & Biochim Gen, Div Biochim Comparata, Via Celoria 26, I-20133 Milan, Italy
Appl Microbiol Biotechnol 1995 43 (5) 822
 Fermentation of whey and starch by transformed *Saccharomyces cerevisiae* cells

Eerlingen RC, Delcour JA// *Katholieke Univ Leuven, Food Chem Res Unit, B-3001 Heverlee, Belgium
J Cereal Sci 1995 22 (2) 129
 Formation, analysis, structure and properties of type III enzyme resistant starch

Govindasamy S, Campanella OH, Oates CG// *Natl Univ Singapore, Fac Med, Dept Biochem, 10 Kent Ridge Crescent, Singapore 0511, Rep Singapore
Food Chem 1995 54 (3) 289
 Influence of extrusion variables on subsequent saccharification behaviour of sago starch

Hanselmann R, Ehrat M, Widmer HM// Univ Freiburg, Inst Makromolek Chem, Sonnenstr 5, D-79104 Freiburg, Germany
Starch 1995 47 (9) 345
 Sedimentation field flow fractionation combined with multi-angle laser light scattering applied for characterization of starch polymers

Jauregui B, Munoz ME, Santamaria A// *Univ Basque Country, Fac Chem, Dept Polymer Sci & Technol, Apartado 1072, E-20080 San Sebastian, Spain
Macromol Chem Physics 1995 196 (10) 3133
 Dynamic viscoelastic properties of blends of poly(ethylene-co-vinyl acetate) and a modified starch

Lee JJ, Syracuse NY, Uebersax MA, Zabik ME, Steffe JF// Borden Inc, Gail Borden Res Ctr, 1 Gail Borden Dr, Syracuse, NY 13204, USA
Starch 1995 47 (9) 329
 Gelatinization properties of navy bean starch

- Park PW, Goins RE// Mead Johnson Res Ctr, Mead Johnson Nutr Grp, 2400 West Lloyd Expressway, Evansville, In 47721, USA
J Agr Food Chem 1995 **43** (10) 2580
 Determination of 2-(2'-octenyl)succinic acid in lipophilic modified starch by gas chromatography-mass spectrometry selected ion monitoring
- Patel BK, Patel CP, Trivedi HC*// *Sardar Patel Univ, Dept Chem, Vallabh Vidyanagar 388120, Gujarat, India
J Macromol Sci Pure Appl Chem 1995 **A32** (Suppl 7) 1083
 Effect of degree of substitution on grafting of acrylonitrile onto sodium salt of partially carboxymethylated amylose
- Ragheb AA, El-Thalouth IA, Tawfik S// Natl Res Ctr, Div Text, Cairo, Egypt
Starch 1995 **47** (9) 338
 Gelatinization of starch in aqueous alkaline solutions
- Rajagopalan N, Bhaskar C, Bankar VS, Pokharkar VB, Shukla PG, Regupathy A, Khilar KC*// *Indian Inst Technol, Dept Chem Engr, Bombay 400076, Maharashtra, India
Pestic Sci 1995 **45** (2) 123
 Starch/urea/formaldehyde matrix encapsulation of solid agrochemicals. III. Studies and bioefficacy trials on double encapsulation
- Rani MRS, Bhattacharya KR// Cent Food Technol Res Inst, Discipline Grain Sci & Technol, Mysore 570013, Karnataka, India
Starch 1995 **47** (9) 334
 Microscopy of rice starch granules during cooking
- Richter M// Deutsch Inst Ernahrungsforsch Potsdam Rehbrucke, Scheunert Allee 114-116, D-14558 Bergholz Rehbrucke, Germany
Starch 1995 **47** (9) 350
 Determination of the botanical origin of starches using iodine reaction and fuzzy set theory
- Sagar AD, Merrill EW*// *MIT, Dept Mat Sci & Engr, Rm 66-568, Cambridge, Ma 02139, USA
J Appl Polym Sci 1995 **58** (9) 1647
 Properties of fatty-acid esters of starch
- Schulman AH, Tomooka S, Suzuki A, Myllarinen P, Hizukuri S// Univ Helsinki, Inst Biotechnol, POB 45, Karvaamokuja 3A, SF-00014 Helsinki, Finland
Carbohydr Res 1995 **275** (2) 361
 Structural analysis of starch from normal and *shx* (shrunken endosperm) barley (*Hordeum vulgare* L)
- Sengupta A, Neelakandan M, Tang PP, Horng ML, Quitevis EL*// *Texas Tech Univ, Dept Chem & Biochem, Lubbock, Tx 79409, USA
J Photochem Photobiol A-Chem 1995 **90** (1) 45
 Picosecond polarized pump-probe spectroscopy of amylose-iodine
- Sputtek A, Singbartl G, Langer R, Schleinz W, Henrich HA, Kuhn P// Univ Hamburg, Krankenhaus Eppendorf, Transfus Med & Transplantat Immunol Abt, Martinistr 52, D-20246 Hamburg, Germany
Cryo-Lett 1995 **16** (5) 283
 Cryopreservation of red blood cells with the nonpenetrating cryoprotectant hydroxyethyl starch
- Wilke O, Mischnick P*// *Univ Hamburg, Inst Organ Chem, Martin Luther King Platz 6, D-20146 Hamburg, Germany
Carbohydr Res 1995 **275** (2) 309
 Analysis of cationic starches: Determination of the substitution pattern of O-(2-hydroxy-3-trimethylammonium)propyl ethers
- ## 10 STARCH-DEGRADING ENZYMES
- Fiedurek J, Szczodrak J// Marie Curie Sklodowska Univ, Dept Appl Microbiol, PL-20033 Lublin, Poland
Starch 1995 **47** (5) 196
 Immobilization of *Aspergillus niger* mycelium on seeds for glucoamylase production
- Katoh S, Terashima M, Kouno M// Kyoto Univ, Dept Synth Chem & Biol Chem, Sakyo ku, Yoshida Honmachi, Kyoto 606, Japan
Appl Microbiol Biotechnol 1995 **43** (5) 871
 Purification of recombinant α -amylase by immunoaffinity chromatography with anti-peptide antibody
- Kondo A, Urabe T// Kobe Univ, Dept Sci & Chem Engr, 1-1 Rokko-daicho, Kobe, Hyogo 657, Japan
Appl Microbiol Biotechnol 1995 **43** (5) 801
 Relationships between molecular states (conformation and orientation) and activities of α -amylase adsorbed on ultrafine silica particles
- Lehmann J, Schmidt-Schuchardt M// Univ Freiburg, Inst Organ Chem & Biochem, Albertstr 21, D-79104 Freiburg, Germany
Carbohydr Res 1995 **276** (1) 43
 Spacer-modified oligosaccharides with basic anchoring groups are inhibitors for endo-glycanases: Porcine pancreatic α -amylase as model enzyme
- Navaratnam P, Arasaratnam V*, Mahendran S, Balasubramaniam K// *Univ Jaffna, Fac Med, Dept Biochem, Kokuvil, Sri Lanka
Process Biochem 1995 **31** (1) 77
 Formulation of medium and recycling of biomass for glucoamylase production by *Botryodiplodia theobromae*
- Raheem D// Univ Helsinki, Dept Food Technol, SF-00710 Helsinki 71, Finland
Int J Food Sci Nutr 1995 **46** (3) 189
 Effect of amylase treatment on the consistency of cooked, fermented oat bran porridge
- Ray RR, Jana SC, Nanda G// Bose Inst, Dept Microbiol, Calcutta 700054, West Bengal, India
Folia Microbiol Prague 1994 **39** (6) 567
 β -Amylase from *Bacillus megaterium*
- Tonozuka T, Mogi S, Shimura Y, Ibuka A, Sakai H, Matsuzawa H, Sakano Y, Ohta T*// *Kogakuin Univ, Dept Appl Chem, Shinjuku ku, 1-24-2 Nishi Shinjuku, Tokyo 16391, Japan
BBA-Protein Struct Mol Enzym 1995 **1252** (1) 35
 Comparison of primary structures and substrate specificities of two pullulan-hydrolyzing α -amylases, TVA I and TVA II, from *Thermoactinomyces vulgaris*, R-47
- Uchiyama K, Ohtani T, Morimoto M, Shioya S*, Suga K, Harashima S, Oshima Y// *Osaka Univ, Fac Engr, Dept Biotechnol, Suita, Osaka 565, Japan
Biotechnol Progr 1995 **11** (5) 510
 Optimization of rice α -amylase production using temperature-sensitive mutants of *Saccharomyces cerevisiae* for the PHO regulatory system
- Yamada T, Hisamatsu M, Teranishi K, Katsuro K, Hasegawa N, Hayashi M// Mie Univ, Dept Food Sci, Tsu, Mie 514, Japan
Starch 1995 **47** (9) 358
 Components of the porous maize starch granule prepared by amylase treatment
- ## 11 POLYSACCHARIDES - MICROBIAL
- Baumgardner S, Praznik W// Agr Univ Vienna, Inst Chem, Gregor Mendelstr 33, A-1180 Vienna, Austria
Int J Biol Macromol 1995 **17** (5) 247
 Purification of exo- and endoinulinase from crude inulinase extract for the analysis of fructans
- Boyd A, Chakrabarty AM*// *Univ Illinois, Coll Med, Dept Microbiol & Immunol, M-C 790, 835 Sth Wolcott Ave, Chicago, Il 60612, USA
J Ind Microbiol 1995 **15** (3) 162
Pseudomonas aeruginosa biofilms: Role of the alginate exopolysaccharide
- Cesar T, Mrsa V*// *Univ Zagreb, Fac Food Sci & Biotechnol, Biochem Lab, Pierottijeva 6, Zagreb 10000, Croatia
Croat Chem Acta 1995 **68** (3) 675
 Enzymatic properties of the xylanase preparation from *Thermomyces lanuginosus*
- Cescutti P, Osman SF, Fett WF, Weisleder D// USDA/ARS, Eastern Reg Res Ctr, 600 East Mermaid Lane, Philadelphia, Pa 19118, USA
Carbohydr Res 1995 **275** (2) 371
 The structure of the acidic exopolysaccharide produced by *Pseudomonas "gingeri"* strain Pf9
- Choudhury AK, Ray AK, Roy N*// *Indian Assoc Cultivat Sci, Dept Biol Chem, Calcutta 700032, West Bengal, India
J Carbohydr Chem 1995 **14** (8) 1153
 Synthesis of tetrasaccharide repeating unit of the K-antigen from *Klebsiella* type-16
- Coe EM, Bereman RD*, Monte WT// *Nth Carolina State Univ, Dept Chem, Box 8204, Raleigh, NC 27695, USA
J Inorg Biochem 1995 **60** (2) 149
 An investigation into the size of an iron-dextran complex
- De Nadra MCM, De Saad AMS// Univ Nacl Tucuman, Fac Bioquim Quim & Farm, Chacabuco 145, RA-4000 Tucuman, Argentina
Int J Food Microbiol 1995 **27** (2-3) 101
 Polysaccharide production by *Pediococcus pentosaceus* from wine

- Furuya T, Iwai Y, Tanaka Y, Uchida H, Yamada S, Arai Y// Kyushu Univ, Dept Chem Engr, Higashi ku, 6-10-1 Hakozaki, Fukuoka 812, Japan
Fluid Phase Equilibria 1995 110 (1-2) 115
 Measurement and correlation of partition coefficients of hydrolytic enzymes for dextran + poly (ethylene glycol) + water aqueous two-phase systems at 20°C
- Kobayashi M, Funane K, Oguma T// Nat Foods Res Inst, Tsukuba 305, Japan
Biosci Biotechnol Biochem 1995 59 (10) 1861
 Inhibition of dextran and mutan synthesis by cycloisomaltoligosaccharides
- Okazaki M, Adachi Y, Ohno N, Yadomae T// *Tokyo Univ Pharm & Life Sci, Sch Pharm, Immunopharmacol Microbial Prod Lab, 1432-1 Horiinouchi, Hachioji, Tokyo 19203, Japan
Biol Pharm Bull 1995 18 (10) 1320
 Structure-activity relationship of (1→3)-β-D-glucans in the induction of cytokine production from macrophages, *in vitro*
- Papageorgiou M, Kasapis S// *Cranfield Univ, Silsoe Coll, Dept Food Res & Technol, Bedford MK45 4DT, England
Food Hydrocolloid 1995 9 (3) 211
 The effect of added sucrose and corn syrup on the physical properties of gellan-gelatin mixed gels
- Pavliak V, Uhrin D, Brisson JR, Tzianabos AO, Kasper DL, Jennings HJ// *Natl Res Council Canada, Inst Biol Sci, 100 Sussex Dr, Ottawa, Ontario, Canada K1A 0R6
Carbohydr Res 1995 275 (2) 333
 Structural elucidation of the capsular polysaccharide of *Bacteroides fragilis* strain 23745M1
- Prell A, Lasik J, Konicek J, Sobotka M, Sys J// Acad Sci Czech Republic, Inst Microbiol, Videnska 1083, CR-14220 Prague 4, Czech Republic
Bioprocess Eng 1995 13 (6) 289
 Growth and xanthan production of *Xanthomonas campestris* depending on the N-source concentration
- Robjijn GW, Van den Berg DJC, Haas H, Kamerling JP*, Vliegthart JFG// *Univ Utrecht, Dept Bioorgan Chem, Bijvoet Ctr, POB 80075, 3508 TB Utrecht, The Netherlands
Carbohydr Res 1995 276 (1) 117
 Determination of the structure of the exopolysaccharide produced by *Lactobacillus sake* O-1
- Robjijn GW, Thomas JR, Haas H, Van den Berg DJC, Kamerling JP*, Vliegthart JFG// *Address as above.
Carbohydr Res 1995 276 (1) 137
 The structure of the exopolysaccharide produced by *Lactobacillus helveticus* 766
- Roukas T, Biliaderis CG// *Aristotelian Univ Thessaloniki, Dept Food Sci & Technol, Box 256, GR-54006 Thessaloniki, Greece
Appl Biochem Biotech 1995 55 (1) 27
 Evaluation of carob pod as a substrate for pullulan production by *Aureobasidium pullulans*
- Ruiz-Herrera J, Larriba G// IPN, Ctr Invest & Estudios Avanzados, Dept Genet & Biol Molec, Irapuato, Guanajuato, Mexico
Anton Leeuwenhoek Int J Gen Microbiol 1995 68 (3) 231
 High molecular weight precursors of glucans in *Saccharomyces cerevisiae*
- Sakurai M, Tanaka Y, Nakamura K// Hokkaido Univ, Fac Sci, Div Biol Sci, Sapporo, Hokkaido 060, Japan
Food Hydrocolloid 1995 9 (3) 189
 Viscosities, densities, and sound velocities of dilute aqueous gellan solutions
- Schwarz WH, Bronnenmeier K, Krause B, Lottspeich F, Staudenbauer WL// Tech Univ Munich, Inst Mikrobiol, Acrisstr 21, D-80290 Munich, Germany
Appl Microbiol Biotechnol 1995 43 (5) 856
 Debranching of arabinoxylan: Properties of the thermoactive recombinant α-L-arabinofuranosidase from *Clostridium stercoararium* (ArfB)
- Tuffal G, Ponthus C, Picard C, Riviere M*, Puzo G// *CNRS, Lab Pharmacol & Toxicol Fondamentales, 118 Rte Narbonne, F-31062 Toulouse, France
Eur J Biochem 1995 233 (1) 377
 Structural elucidation of novel methylglucose-containing polysaccharides from *Mycobacterium xenopi*
- Wang Y, McNeil B// *Univ Strathclyde, Dept Biosci & Biotechnol, Royal Coll Bldg, 204 Glasgow St, Glasgow G1 1XW, Scotland
Enzyme Microb Technol 1995 17 (10) 893
 Effect of temperature on scleroglucan synthesis and organic acid production by *Sclerotium glaucum*
- Yamamoto Y, Nunome T, Yamauchi R, Kato K, Sone Y// Takeda Food Prod Ltd, 3-20 Imoji, Itami, Hyogo 663, Japan
Carbohydr Res 1995 275 (2) 319
 Structure of an exocellular polysaccharide of *Lactobacillus helveticus* TN-4, a spontaneous mutant strain of *L. helveticus* TY1-2

12 POLYSACCHARIDES - PLANT

- Bhatty RS// Univ Saskatchewan, Ctr Crop Dev, Saskatoon, Saskatchewan, Canada S7N 5A8
J Cereal Sci 1995 22 (2) 163
 Laboratory and pilot plant extraction and purification of β-glucans from hull-less barley and oat brans
- Bourgougnon N// Fac Pharm Nantes SMAB, ISOMER, Nantes, France
Cryptog Algal 1995 16 (3) 149
 Antiviral and antiproliferative activity *in vitro* of sulfated polysaccharide from *Schizymenia dubyi* (Rhodophyta, Gigartinales (French, English Abstract)
- Chirapart A, Ohno M, Ukeda H, Sawamura M, Kusunose H// *Kochi Univ, Fac Agr, Dept Bioresources Sci, B200 Monobe, Nankoku, Kochi 783, Japan
J Appl Phycol 1995 7 (4) 359
 Chemical composition of agars from a newly reported Japanese agarophyte, *Gracilariopsis lemaneiformis*
- Cleemput G, Bleukx W, Van Oort M, Hessing M, Delcour JA// TNO, Nutr & Food Res Inst, POB 360, 3700 AJ Zeist, The Netherlands
J Cereal Sci 1995 22 (2) 139
 Evidence for the presence of arabinoxylan hydrolysing enzymes in European wheat flours
- Falshaw R, Furneaux RH// Ind Res Ltd, POB 31310, Lower Hutt, New Zealand
Carbohydr Res 1995 276 (1) 155
 Carrageenans from the tetrasporic stages of *Gigartina clavifera* and *G. alveata* (Gigartinales, Rhodophyta)
- Fournet I// Univ Bretagne Occidentale, Fac Sci, Lab Ecophysiol & Biochim Algues Marines, 6 Ave Gorgeu, F-29200 Brest, France
Cryptog Algal 1995 16 (3) 150
 Synthesis and degradation of polysaccharides of the red alga *Solieria chordalis* as a function of culture conditions (French, English Abstract)
- Glasser WG, Ravindran G, Jain RK, Samaranyake G, Todd J// Virginia Tech, Dept Wood Sci & Forest Prod, Blacksburg, Va 24061, USA
Biotechnol Progr 1995 11 (5) 552
 Comparative enzyme biodegradability of xylan, cellulose, and starch derivatives
- Goycoolea FM, Richardson RK, Morris ER*, Gidley MJ// *Cranfield Univ, Silsoe Coll, Dept Food Res & Technol, Silsoe MK45 4DT, Beds, England
Biopolymers 1995 36 (5) 643
 Effect of locust bean gum and konjac glucomannan on the conformation and rheology of agarose and κ-carrageenan
- Hasui M, Matsuda M, Okutani K, Shigeta S// Kagawa Univ, Fac Agr, Kagawa 76107, Japan
Int J Biol Macromol 1995 17 (5) 293
In vitro antiviral activities of sulfated polysaccharides from a marine microalga (*Cochlodinium polykrikoides*) against human immunodeficiency virus and other enveloped viruses
- Jurd KM, Rogers DJ*, Blunden G, McLellan DS// *Univ Portsmouth, Sch Pharm & Biomed Sci, King Henry I St, Portsmouth PO1 2DZ, England
J Appl Phycol 1995 7 (4) 339
 Anticoagulant properties of sulphated polysaccharides and a proteoglycan from *Codium fragile* ssp *atlanticum*
- Lewis CE, Walker JRL*, Lancaster JE// *Univ Canterbury, Dept Plant & Microbial Sci, Christchurch, New Zealand
Food Chem 1995 54 (3) 315
 Effect of polysaccharides on the colour of anthocyanins
- Lopez-Bautista J, Kapraun DF// *Univ Nth Carolina, Ctr Marine Sci Res, 7205 Wrightsville Ave, Wilmington, NC 28403, USA

J Appl Phycol 1995 7 (4) 351

Agar analysis, nuclear genome quantification and characterization of four agarophytes (Gracilaria) from the Mexican Gulf Coast

Manghi P, Vernazza F, Ferrarini O, Cagnasso P, Salvadori C, Fockedey J// Parmalat SpA, Div Res, Castellaro Sala Baganza, Italy

Eur J Clin Nutr 1995 49 (Suppl 3) S296

Analytical method for the determination of inulin in yoghurt enriched with soluble fibre

Mhinzi GS, Mrosso HDJ// Univ Dar es Salaam, Chem Dept, POB 35061, Dar es Salaam, Tanzania

Food Chem 1995 54 (3) 261

Studies on Tanzanian *Acacia* gums. Part III. Some properties of gum exudates from the series *Vulgaris* and *Gummiferae*

Naran R, Ebringerova A*, Hromadkova Z, Patoprsty V// *Slovak Acad Sci, Inst Chem, Dubravska Cesta 9, Bratislava 84238, Slovakia

Phytochemistry 1995 40 (3) 709

Carbohydrate polymers from underground parts of *Cistanche deserticola*

Nishinari K, Watase M, Miyoshi E, Takaya T, Oakenfull D// Osaka City Univ, Fac Human Life Sci, Dept Food & Nutr, Osaka 558, Japan

Food Technol 1995 49 (10) 90

Effects of sugar on the gel-sol transition of agarose and κ -carrageenan

Pizzoferrato L// Ist Nazi Nutr, Via Ardeatina 546, I-00178 Rome, Italy

Eur J Clin Nutr 1995 49 (Suppl 3) S229

X-ray and enzymic studies on amorphous cellulose of the macroalga *Ulva*

Steffan W, Kovac P, Albersheim P, Darvill AG, Hahn MG// *Univ Georgia, Complex Carbohydrate Res Ctr, 220 Riverbend Rd, Athens, Ga 30602, USA

Carbohydr Res 1995 275 (2) 295

Characterization of a monoclonal antibody that recognizes an arabinosylated (1 $\rightarrow$ 6)- β -D-galactan epitope in plant complex carbohydrates

Turquois T, Rochas C, Taravel FR, Doublier JL, Axelos MAV// *INRA, BP 1627, Lab Physicochem Macromolec, F-44316 Nantes 03, France

Biopolymers 1995 36 (5) 559

Small-angle X-ray scattering of κ -carrageenan based systems: Sols, gels, and blends with carob galactomannan

Yoshizawa Y, Ametani A, Tsunehiro J, Nomura K, Itoh M, Fukui F, Kaminogawa S// Showa Sangyo Co Ltd, Ctr Res & Dev, 2-20-2 Hinode, Funabashi, Chiba 273, Japan

Biosci Biotechnol Biochem 1995 59 (10) 1933

Macrophage stimulation activity of the polysaccharide fraction from a marine alga (*Porphyra yezoensis*): Structure-function relationships and improved solubility

13 POLYSACCHARIDES - OTHER

Albasini M, Ludwig A// *Univ Instelling Antwerp, Dept Farmaceut Wetenschappen, Universiteitsplein 1, B-2610 Wilrijk, Belgium

Farmaco 1995 50 (9) 633

Evaluation of polysaccharides intended for ophthalmic use in ocular dosage forms

Audebrand M, Doublier JL, Durand D, Emery JR// INRA, rue Geraudiere, F-44026 Nantes, France

Food Hydrocolloid 1995 9 (3) 195

Investigation of gelation phenomena of some polysaccharides by ultrasonic spectroscopy

Brosio E// Univ Roma La Sapienza, Dipt Chim, Piazzale Aldo Moro 5, I-00185 Rome, Italy

Eur J Clin Nutr 1995 49 (Suppl 3) S63

Physical properties of polysaccharides in food

Casu B, Guerrini M, Naggi A, Torri G, De Ambrosi L, Boveri G, Gonella S// G Ronzoni Inst Chem & Biochem Res, G Colombo 81, Milan, Italy

Thromb Haemost 1995 74 (4) 1205

Differentiation of beef and pig mucosal heparins by NMR spectroscopy (Letter)

Dan A, Ito Y*, Ogawa T// *Inst Phys & Chem Res, 2-1 Hirosawa, Wako, Saitama 35101, Japan

Tetrahedron Lett 1995 36 (41) 7487

Stereocontrolled synthesis of the pentasaccharide core structure of asparagine-linked glycoprotein oligosaccharide based on a highly convergent strategy

Di Marco C, Letizia GA// Univ Palermo, Policlin, Ortoped & Traumatol

Clin, Cattedra Med Fis & Riabilitaz, I-90127 Palermo, Italy

Clin Drug Invest 1995 10 (4) 191

Hyaluronic acid in the treatment of pain due to knee joint immobilisation: A controlled clinical study

Fraser C, Grubbs RH// *Calif Inst Technol, Arnold & Mabel Beckman Labs Chem Synthesis, Div Chem & Chem Engr, Pasadena, Ca 91125, USA

Macromolecules 1995 28 (21) 7248

Synthesis of glycopolymers of controlled molecular weight by ring-opening metathesis polymerization using well-defined functional group tolerant ruthenium carbene catalysts

Furukawa T, Nishi N, Tokura S, Nishimura SI// *Hokkaido Univ, Grad Sch Sci, Div Biol Sci, Sapporo, Hokkaido 060, Japan

Macromolecules 1995 28 (21) 7241

Synthetic glycoconjugates. VI. Preparation and biochemical evaluation of novel cluster-type glycopolymers containing gal β (1 $\rightarrow$ 4)GlcNAc (*N*-acetylglucosamine) residue

Griffin CC, Linhardt RJ*, Van Gorp CL, Toida T, Hileman RE, Schubert RL, Brown SE// *Miami Univ, Dept Chem, Oxford, Oh 45056, USA

Carbohydr Res 1995 276 (1) 183

Isolation and characterization of heparan sulfate from crude porcine intestinal mucosal peptidoglycan heparin

Johann S, Zoller C, Haas S, Blumel G, Lipp M, Forster R// *Max Delbrück Ctr Molec Med, Robert Rossle Str 10, D-13122 Berlin, Germany

Thromb Haemost 1995 74 (4) 998

Sulfated polysaccharide anticoagulants suppress natural killer cell activity *in vitro*

Kragten EA, Bergwerff AA, Van Oostrum J*, Muller DR, Richter WJ// *Ciba Geigy AG, Core Drug Discovery Technol, CH-4002 Basel, Switzerland

J Mass Spectrom 1995 30 (12) 1679

Site-specific analysis of the *N*-glycans on murine polymeric immunoglobulin A using liquid chromatography/electrospray mass spectrometry

MacFarlane GT, MacFarlane S, Gibson GR// MRC Dunn Clin Nutr Ctr, Hills Rd, Cambridge CB2 2DH, England

Anaerobe 1995 1 (5) 275

Co-culture of *Bifidobacterium adolescentis* and *Bacteroides thetaiotaomicron* in arabinogalactan-limited chemostats: Effects of dilution rate and pH

Marsh R, Wetton R// Rheometr Sci Ltd, Jubilee Dr, Belton Pk, Loughborough LE11 0XS, England

Amer Lab 1995 27 (12) 15

Dielectric relaxation spectroscopy: Applications in polymer and food science

Mascellani G, Liverani L, Prete A, Bergonzini GL, Bianchini P, Silvestro L, Torri G, Bisio A, Guerrini M, Casu B// Opocrin SpA, R&D Labs, Modena, Italy

J Carbohydr Chem 1995 14 (8) 1165

Active sites of dermatan sulfate for heparin cofactor II. Isolation of a nonasaccharide fragment containing four disaccharide sequences [α -L-iduronic acid 2-O-sulfate (1,3)- β -D-N-acetylglucosamine 4-sulfate]

Ramos-Sanchez MC, Barrio-Arredondo MT, De Andres-Santos AI, Martin-Gil J, Martin-Gil FJ// ETS Ingen Ind, Quim Biomat Lab, Paseo Cauces/n, E-47011 Valladolid, Spain

Thermochim Acta 1995 262 109

Thermal analysis of aqueous solutions of heparins

Reck F, Meinjohanns E, Tan J, Grey AA, Paulsen H, Schachter H// *Hosp Sick Children, Res Inst, 555 Univ Ave, Toronto, Ontario, Canada M5G 1X8

Carbohydr Res 1995 275 (2) 221

Synthesis of pentasaccharide analogues of the *N*-glycan substrates of *N*-acetylglucosaminyltransferases III, IV and V using tetrasaccharide precursors and recombinant β -(1 $\rightarrow$ 2)-*N*-acetylglucosaminyltransferase II

Tokita Y, Sakashita H, Okamoto A// Denki Kagaku Kogyo Co Ltd, Res Ctr, 3-5-1 Asahimachi, Machida, Tokyo 194, Japan

Polym Int 1995 38 (2) 161

Kinetic study of a radical scavenging effect of hyaluronic acid

Wessel HP, Minder R, Englert G// F Hoffmann La Roche & Co Ltd, Div Pharma, CH-4002 Basel, Switzerland

J Carbohydr Chem 1995 14 (8) 1101

Synthetic α , β -(1 $\rightarrow$ 4)-glucan oligosaccharides as models for heparan sulfate