

Bibliography of carbohydrate polymers

(2 weeks journals. Search completed at 28th. July 2004)

1. Books, reviews & symposia

Lindeboom N, Chang PR*, Tyler RT// *Agr & Agri-Food Canada, Bioprod & Bioproc Natl Sci Program, 107 Sci Pl, Saskatoon, Saskatchewan, Canada S7N 0X2

Starch 2004 **56** (3-4) 89

Analytical, biochemical and physicochemical aspects of starch granule size, with emphasis on small granule starches: A review

2. Cellulose

Bikova T, Treimanis A*// *State Inst Wood Chem, Dept Cellulose, 27 Dzerbenes St, LV-1006 Riga, Latvia

Carbohydr Polym 2004 **55** (3) 315

UV-absorbance of oxidized xylan and monocarboxyl cellulose in alkaline solutions

Griffin GJ, Shu L// CSIRO/MIT, Fire Sci & Technol Lab, POB 56, Highett, Vic 3190, Australia

J Chem Technol Biotechnol 2004 **79** (5) 505

Solvent extraction and purification of sugars from hemicellulose hydrolysates using boronic acid carriers

Honkanen O, Marvola J, Kanerva H, Lindevall K, Lipponen M, Kekki T, Ahonen A, Marvola M// Univ Helsinki, Fac Pharm, Div Biopharmaceut & Pharmacokinetic, POB 56, FI-00014 Helsinki, Finland

Eur J Pharm Sci 2004 **21** (5) 671

Gamma scintigraphic evaluation of the fate of hydroxypropyl methylcellulose capsules in the human gastrointestinal tract

Huyghebaert N, Vermeire A, Remon JP*// *State Univ Ghent, Pharmaceut Technol Lab, Harelbekestr 72, BE-9000 Ghent, Belgium

Eur J Pharm Sci 2004 **21** (5) 617

Alternative method for enteric coating of HPMC capsules resulting in ready-to-use enteric-coated capsules

Kim UJ, Wada M, Kuga S// Univ Tokyo, Grad Sch Agr & Life Sci, Dept Biomaterials Sci, Yayoi 1-1-1, Bunkyo-ku, Tokyo 113 8657, Japan

Carbohydr Polym 2004 **56** (1) 7

Solubilization of dialdehyde cellulose by hot water

Kongdee A, Bechtold T*// *Leopold Franzens Univ Innsbruck, Inst Textile Chem & Textile Phys, Christian-Doppler Lab Text & Fibre Chem Cellulosics, Hoechststr 73, AT-6850 Dornbirn, Austria

Carbohydr Polym 2004 **56** (1) 47

The complexation of Fe(III)-ions in cellulose fibres: A fundamental property

Romero-Bastida CA, Flores-Huicochea E, Martin-Polo MO, Velazquez G, Torres JA*// *Oregon State Univ, Corvallis, Or 97331, USA

J Agric Food Chem 2004 **52** (8) 2230

Compositional and moisture content effects on the biodegradability of zein/ethylcellulose films

Sun JX, Sun XF, Sun RC*, Su YQ// *Univ Wales, BioComposites Ctr, Bangor LL57 2UW, Wales

Carbohydr Polym 2004 **56** (2) 195

Fractional extraction and structural characterization of sugarcane bagasse hemicelluloses

Sun XF, Sun RC*, Fowler P, Baird MS// *Address as above

Carbohydr Polym 2004 **55** (4) 379

Isolation and characterisation of cellulose obtained by a two-stage treatment with organosolv and cyanamide activated hydrogen peroxide from wheat straw

3. Cellulose-degrading enzymes

Miettinen-Oinonen A, Londesborough J, Joutsjoki V, Lantto R, Vehmaanpera J// VTT Biotechnol, POB 1500, FI-02044 Espoo, Finland

Enzyme Microb Technol 2004 **34** (3-4) 332

Three cellulases from *Melanocarpus albomyces* for textile treatment at neutral pH

4. Chitin/Chitosan

Higuera-Ciapara I, Felix-Valenzuela L, Goycoolea FM, Arguelles-Monal W// Centro Investigacion Alimentacion & Desarrollo AC, Lab Supercritical Extraction, Carretera Victoria km 0.6, AP 1735, MX-83000 Hermosillo, Sonora, Mexico

Carbohydr Polym 2004 **56** (1) 41

Microencapsulation of astaxanthin in a chitosan matrix

Hirano S, Moriyasu T// Tottori Univ, Chitin/Chitosan R&D Ctr, 445 Sakuradani, Tottori 680 0853, Japan

Carbohydr Polym 2004 **55** (3) 245

Some novel *N*-(carboxyacyl)chitosan filaments

Horn SJ, Eijssink GH// Agr Univ Norway, Dept Chem Biotechnol & Food Sci, PO Box 5040, NO-1432 As, Norway

Carbohydr Polym 2004 **56** (1) 35

A reliable reducing end assay for chito-oligosaccharides

Kokubo T, Hanakawa M, Kawashita M*, Minoda M, Beppu T, Miyamoto T, Nakamura T// *Kyoto Univ, Grad Sch Engn, Dept Chem Mat, Nishikyoku, Kyoto 615 8501, Japan

Biomaterials 2004 **25** (18) 4485

Apatite formation on non-woven fabric of carboxymethylated chitin in SBF

Lee JE, Kim KE, Kwon IC, Ahn HJ, Lee SH, Cho HC, Kim HJ, Seong SC, Lee MC*// *Seoul Natl Univ, Coll Med, 28 Yongong dong, Seoul 110 744, South Korea

Biomaterials 2004 **25** (18) 4163

Effects of the controlled-released TGF- β 1 from chitosan microspheres on chondrocytes cultured in a collagen/chitosan/glycosaminoglycan scaffold

Lim SH, Hudson SM*// *Nth Carolina State Univ, Coll Textiles, Fiber & Polymer Science Program, 2401 Research Dr, Box 8301, Raleigh, NC 27695, USA

Carbohydr Polym 2004 **56** (2) 227

Application of a fiber-reactive chitosan derivative to cotton fabric as an antimicrobial textile finish

Liu H, Du Y*, Yang J, Zhu H// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Peoples Rep China

Carbohydr Polym 2004 **55** (3) 291

Structural characterization and antimicrobial activity of chitosan/betaine derivative complex

Liu H, Du Y*, Wang X, Hu Y, Kennedy JF// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Peoples Rep China

Carbohydr Polym 2004 **56** (2) 243

Interaction between chitosan and alkyl β -D-glucopyranoside and its effect on their antimicrobial activity

Mao JS, Cui YL, Wang XH, Sun Y, Yin YJ, Zhao HM, De Yao K*// *Tianjin Univ, Res Inst Polymer Mat, CN-300072 Tianjin, Peoples Rep China

Biomaterials 2004 **25** (18) 3973

A preliminary study on chitosan and gelatin polyelectrolyte complex cyto-

As a service to subscribers of the journal, this bibliography contains 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.

compatibility by cell cycle and apoptosis analysis

Muzzarelli C, Francescangeli O, Tosi G, Muzzarelli RAA*// *Polytech Univ Marche, Fac Med, Inst Biochem, Via Ranieri 67, IT-60100 Ancona, Italy
Carbohydr Polym 2004 **56** (2) 137

Susceptibility of dibutyl chitin and regenerated chitin fibres to deacetylation and depolymerization by lipases

Su WP, Wang SF, Chen GH, Xu GY// Univ Jinan, Sch Chem & Chem Engn, CN-250022 Jinan, Peoples Rep China
Carbohydr Res 2004 **339** (6) 1113

Surface and aggregate properties of an amphiphilic derivative of carboxymethylchitosan

Tamura H, Tsuruta Y, Itoyama K, Worakitkanchanakul W, Rujiravanit R, Tokura S// Kansai Univ & HRC, Fac Engn, 3-3-35 Yamate-cho, Suita, Osaka 564-8680, Japan
Carbohydr Polym 2004 **56** (2) 205

Preparation of chitosan filament applying new coagulation system

Wan MW, Petrisor IG, Lai HT, Kim D, Yen TF*// *Univ Sthn Calif, Dept Civil & Environm Engn, Los Angeles, Ca 90089, USA
Carbohydr Polym 2004 **55** (3) 249

Copper adsorption through chitosan immobilized on sand to demonstrate the feasibility for *in situ* soil decontamination

Wang X, Du Y*, Liu H// *Wuhan Univ, Dept Environm Sci, CN-430072 Wuhan, Peoples Rep China
Carbohydr Polym 2004 **56** (1) 21

Preparation, characterization and antimicrobial activity of chitosan-Zn complex

Wong YC, Szeto YS, Cheung WH, McKay G*// *Hong Kong Univ Sci & Technol, Dept Chem Engn, Clear Water Bay, Kowloon, Hong Kong
Process Biochem 2004 **39** (6) 693

Adsorption of acid dyes on chitosan - Equilibrium isotherm analyses

Yu XW, Li YQ*, Wu D// *Zhejiang Univ, Coll Life Sci, Yuquan Campus, CN-310027 Hangzhou, Peoples Rep China
J Chem Technol Biotechnol 2004 **79** (5) 475

Microencapsulation of tannase by chitosan-alginate complex coacervate membrane: Synthesis of antioxidant propyl gallate in biphasic media

Yuan Y, Zhang PY, Yang YM, Wang X, Gu XS*// *Nantong Med Coll, Jiangsu Key Lab Neuroregenerat, CN-226001 Nantong, Jiangsu, Peoples Rep China
Biomaterials 2004 **25** (18) 4273

The interaction of Schwann cells with chitosan membranes and fibers *in vitro*

5. Cyclodextrins

Cryan SA, Holohan A, Donohue R, Darcy R, O'Driscoll CM*// *Nat'l Univ Ireland, Univ Coll Cork, Sch Pharm, Biosci Inst, Cork, Rep Ireland
Eur J Pharm Sci 2004 **21** (5) 625

Cell transfection with polycationic cyclodextrin vectors

Giasas P, Eliadou K, Plyta ZF, Yannakopoulou K, Mavridis IM*// Nat'l Ctr Sci Res Demokritos, Inst Phys Chem, GR-15310 Athens, Greece
Carbohydr Res 2004 **339** (6) 1189

X-ray crystallography and solution NMR spectroscopy characterization of heptakis(2,3-di-O-acetyl-6-bromo-6-deoxy) cyclomaltoheptaose

6. Lignin

Gosselink RJA, Abacherli A, Semke H, Malherbe R, Kauper P, Nadif A, Van Dam JEG// Wageningen UR, Agrotechnol & Food Innovat, Bornsesteeg 59, NL-6708 PD Wageningen, The Netherlands
Ind Crops Products 2004 **19** (3) 271

Analytical protocols for characterisation of sulphur-free lignin

Van Dam JEG, Van den Oever MJA, Teunissen W, Keijsers ERP, Peralta AG// Agrotechnol & Food Innovat A&F BV, POB 17, NL-6700 AA Wageningen, The Netherlands
Ind Crops Products 2004 **19** (3) 207

Process for production of high density/high performance binderless boards from whole coconut husk - Part 1: Lignin as intrinsic thermosetting binder resin

7. Lipopolysaccharides

Moule AL, Galbraith L, Cox AD, Wilkinson SG*// *185 Beverley Rd, Kirkella, Hull HU10 7AG, England
Carbohydr Res 2004 **339** (6) 1185

Characterisation of a tetrasaccharide released on mild acid hydrolysis of LPS from two rough strains of *Shewanella* species representing different DNA homology groups

8. Pectin

Calafell M, Garriga P// UPC, ETSEIT, Dept Chem Engn, C Colon 2, ES-08222 Terrassa Barcelona, Spain

Enzyme Microb Technol 2004 **34** (3-4) 326

Effect of some process parameters in the enzymatic scouring of cotton using an acid pectinase

Choi JK, Lee BH, Chae CH, Shin W*// *Seoul Nat'l Univ, Sch Chem, Seoul 151 742, South Korea
Proteins 2004 **55** (1) 22

Computer modeling of the rhamnogalacturonase-“hairy” pectin complex

Giannouli P, Richardson RK, Morris ER*// *Univ Coll Cork, Dept Food & Nutr Sci, Cork, Rep Ireland
Carbohydr Polym 2004 **55** (4) 343

Effect of polymeric cosolutes on calcium pectinate gelation. Part 1. Galactomannans in comparison with partially depolymerised starches

Giannouli P, Richardson RK, Morris ER*// *Address as above
Carbohydr Res 2004 **55** (4) 357

Effect of polymeric cosolutes on calcium pectinate gelation. Part 2. Dextran and inulin

Giannouli P, Richardson RK, Morris ER*// *Address as above
Carbohydr Polym 2004 **55** (4) 367

Effect of polymeric cosolutes on calcium pectinate gelation. Part 3. Gum arabic and overview

Habibi Y, Heyraud A, Mahrouz M, Vignon MR*// *CNRS, Ctr Rech Macromol Vegetales, BP 53X, FR-38041 Grenoble 9, France
Carbohydr Res 2004 **339** (6) 1119

Structural features of pectic polysaccharides from the skin of *Opuntia ficus-indica* prickly pear fruits

Huisman MMH, Oosterveld A, Schols HA*// *Wageningen Univ, Dept Agrotechnol & Food Sci, Lab Food Chem, PO Box 8129, NL-6700 EV Wageningen, The Netherlands
Food Hydrocolloid 2004 **18** (4) 665

Fast determination of the degree of methyl esterification of pectins by head-space GC

Kratchanova M, Pavolva E, Panchev I// Bulg Acad Sci, Inst Organ Chem, LBAS, Ctr Phytochem, 95 Vasil Aprilov Blvd, BG-4002 Plovdiv, Bulgaria
Carbohydr Polym 2004 **56** (2) 181

The effect of microwave heating of fresh orange peels on the fruit tissue and quality of extracted pectin

Kratchanova M, Slavov A, Kratchanov C// Address as above
Food Hydrocolloid 2004 **18** (4) 677

Interaction of pectin with amino acids and other amino compounds in aqueous solution

Sato Y, Kawabuchi S, Irimoto Y, Miyawaki O// Kochi Women's Univ, Lab Food Sci & Technol, Eikokuji 5-15, Kochi 780-8515, Japan
Food Hydrocolloid 2004 **18** (4) 527

Effect of water activity and solvent-ordering on intermolecular interaction of high-methoxyl pectins in various sugar solutions

Synytysya A, Copikova J, Marounek M, Mlcochova P, Sihelnikova L, Skoblyva S, Havlatova H, Matejka P, Maryska M, Machovic V// Inst Chem Technol Prague, Dept Analyt Chem & Technol, Technicka 5, CZ-16628 Prague 6, Czech Republic
Carbohydr Polym 2004 **56** (2) 169

N-Octadecylpectinamide, a hydrophobic sorbent based on modification of highly methoxylated citrus pectin

Tromp RH, De Kruif CG, Van Eijk M, Rolin C// NIZO Food Res, PO Box 20, Ede 6710 BA, The Netherlands
Food Hydrocolloid 2004 **18** (4) 565

On the mechanism of stabilisation of acidified milk drinks by pectin

9. Starch

Abu-Jdayil B, Mohameed H, Eassa A// Jordan Univ Sci & Technol, Dept Chem Engn, PO Box 3030, JO-22110 Irbid, Jordan
Carbohydr Polym 2004 **55** (3) 307

Rheology of starch-milk-sugar systems: Effect of heating temperature

Averous L, Boquillon N// ULP/ECPM, LIPHT, 25 rue Becquerel, FR-67087 Strasbourg 2, France
Carbohydr Polym 2004 **56** (2) 111

Biocomposites based on plasticized starch: Thermal and mechanical behaviours

Chen Z, Schols HA, Voragen AGJ*// *Wageningen Univ, Dept Agrotechnol & Food Sci, Lab Food Chem, Bomenweg 2, NL-6703 HD Wageningen, The Netherlands
Carbohydr Polym 2004 **56** (2) 219

- Differently sized granules from acetylated potato and sweet potato starches differ in the acetyl substitutions pattern of their amylose populations
- Fang C, Chinnan MS*// *Univ Georgia, Dept Food Sci & Technol, 1109 Expt St, Griffin, Ga 30223, USA
Lebensm Wiss Technol Food Sci 2004 **37** (3) 345
Kinetics of cowpea starch gelatinization and modeling of starch gelatinization during steaming of intact cowpea seed
- Fang JM, Fowler PA*, Sayers C, Williams PA// *Univ Wales, BioComposites Ctr, Deiniol Rd, Bangor LL57 2UW, Wales
Carbohydr Polym 2004 **55** (3) 283
The chemical modification of a range of starches under aqueous reaction conditions
- Fanta GF, Felker FC, Shogren RL// USDA/ARS, Nat Ctr Agr Utilization Res, Cereal Prod & Food Sci, 1815 Nth University St, Peoria, IL 61604, USA
Carbohydr Polym 2004 **56** (1) 77
Graft polymerization of acrylonitrile onto spherocrystals formed from jet cooked cornstarch
- Ganjyal GM, Hanna MA*// *Univ Nebraska, Dept Biol Syst Engr, Ind Agr Prod Ctr, 208 LW Chase Hall, Lincoln, Ne 68583, USA
Starch 2004 **56** (3-4) 108
Effects of extruder die nozzle dimensions on expansion and micrographic characterization during extrusion of acetylated starch
- Genkina NK, Wasserman LA, Noda T, Tester RF, Yuryev VP*// *Russian Acad Sci, Inst Biochem Phys, Kosygina Str 4, RU-119991 Moscow, Russia
Carbohydr Res 2004 **339** (6) 1093
Effects of annealing on the polymorphic structure of starches from sweet potatoes (Ayamurasaki and Sunnyred cultivars) grown at various soil temperatures
- Guan JJ, Hanna MA*// *Univ Nebraska, Dept Biol Syst Engr, Ind Agr Prod Ctr, 208 LW Chase Hall, Lincoln, Ne 68583, USA
Ind Crops Products 2004 **19** (3) 255
Functional properties of extruded foam composites of starch acetate and corn cob fiber
- Han JA, Lim ST*// *Korea Univ, Grad Sch Life Sci & Biotechnol, Seoul 136-701, South Korea
Carbohydr Polym 2004 **55** (3) 265
Structural changes of corn starches by heating and stirring in DMSO measured by SEC-MALLS-RI system
- Kiseleva VI, Genkina NK, Tester R*, Wasserman LA, Popov AA, Yuryev VP// *Glasgow Caledonian Univ, Dept Biol & Biomed Sci, Food Res Labs, Cowcaddens Rd, City Campus, Glasgow G4 0BA, Scotland
Carbohydr Polym 2004 **56** (2) 157
Annealing of normal, low and high amylose starches extracted from barley cultivars grown under different environmental conditions
- Lu SJ, Lin SB, Yao KD// Tianjin Univ, Sch Sci, CN-300072 Tianjin, Peoples Rep China
Starch 2004 **56** (3-4) 138
Study on the synthesis and application of starch-graft-poly(AM-co-DADMAC) by using a complex initiation system of CS-KPS
- Mali S, Grossmann MVE*, Garcia MA, Martino MN, Zaritzky NE// *Univ Estadual Londrina, Dept Tecnol Alimentos & Medicamentos, Ctr Ciencias Agr, Cx Postal 6001, BR-86051-990 Londrina, PR, Brazil
Carbohydr Polym 2004 **56** (2) 129
Barrier, mechanical and optical properties of plasticized yam starch films
- Matsui KN, Larotonda FDS, Paes SS, Luiz DB, Pires ATN, Laurindo JB*// *Fed Univ Santa Catarina, Dept Chem & Food Engr, CP 476, BR-88040-900 Florianopolis, SC, Brazil
Carbohydr Polym 2004 **55** (3) 237
Cassava bagasse-Kraft paper composites: Analysis of influence of impregnation with starch acetate on tensile strength and water absorption properties
- McGrane SJ, Mainwaring DE, Cornell HJ*, Rix CJ// *RMIT Univ, Dept Appl Chem, GPO Box 2476 V, Melbourne, Vic 3001, Australia
Starch 2004 **56** (3-4) 122
The role of hydrogen bonding in amylose gelation
- Mondragon M, Bello-Perez LA, Agama E, Melo A, Betancur-Ancona D, Pena JL// IPN, Ctr Invest Ciencias Aplicada & Tecnol Avanzada, Carr Tampico-Puerto Industrial km 14.5, MX-89600 Altamira, Tamaulipas, Mexico
Carbohydr Polym 2004 **55** (4) 411
Effect of nixtamalization on the modification of the crystalline structure of maize starch
- Mormann W, Al-Higari M// Univ Siegen, FB 8, Lab Makromol Chem, Adolf Reichwein Str 2, DE-57068 Siegen, Germany
Starch 2004 **56** (3-4) 118
Acylation of starch with vinyl acetate in water
- Mostafa KM, Morsy MS// King Abdel Aziz Univ, Inst Res & Consultations, PO Box 80271, SA-21589 Jeddah, Saudi Arabia
Carbohydr Polym 2004 **55** (3) 323
Utilization of newly tailored modified starch products in easy-care finishing
- Nunez-Santiago MC, Bello-Perez LA, Tecante A//IPN, Ctr Desarrollo Prod Bioticos, Carr Yautepec-Jojutla km 8.5, MX-62731 Yautepec, Morelos, Mexico
Carbohydr Polym 2004 **56** (1) 65
Swelling-solubility characteristics, granule size distribution and rheological behavior of banana (*Musa paradisiaca*) starch
- Ofman MH, Campos CA, Gerschenson LN*// *Univ Buenos Aires, Fac Ciencias Exactas & Nat, Dept Ind, Ciudad Univ, AR-1428 Buenos Aires, DF, Argentina
Lebensm Wiss Technol Food Sci 2004 **37** (3) 355
Effect of preservatives on the functional properties of tapioca starch: Analysis of interactions
- Ojijo NK, Shimoni E*// *Technion - Israel Inst Technol, Dept Biotechnol & Food Engr, IL-32000 Haifa, Israel
Carbohydr Polym 2004 **56** (2) 235
Rheological properties of fermented finger millet (*Eleusine coracana*) thin porridge
- Para A, Karolczyk-Kostuch S, Fiedorowicz M// Univ Agr, Dept Chem, Al Mickiewicza 21, PL-31120 Krakow, Poland
Carbohydr Polym 2004 **56** (2) 187
Dihydrazone of dialdehyde starch and its metal complexes
- Partanen R, Marie V, MacNaughtan W, Forssell P*, Farhat I// *VTT Biotechnol, Prod Engr, Tietotie 2, PO Box 1500, FI-02044 VTT, Espoo, Finland
Carbohydr Polym 2004 **56** (2) 147
¹H NMR study of amylose films plasticized by glycerol and water
- Simkovic I, Hricovini M, Mendichi R, Van Soest JGG// Slovak Acad Sci, Inst Chem, Dubravska cesta 9, SK-84538 Bratislava, Slovak Republic
Carbohydr Polym 2004 **55** (3) 299
Cross-linking of starch with 1,2,3,4-diepoxybutane or 1,2,7,8-diepoxyoctane
- Suh DS, Verhoeven T, Denyer K, Jane JL*// *Iowa State Univ, Dept Food Sci & Human Nutr, Ames, Ia 50011, USA
Carbohydr Polym 2004 **56** (1) 85
Characterization of Nubet and Franubet barley starches
- Torley PJ, Rutgers RPG, D'Arcy B, Bhandari BR// Univ Queensland, Div Chem Engr, Brisbane, Qld 4072, Australia
Lebensm Wiss Technol Food Sci 2004 **37** (2) 161
Effect of honey types and concentration on starch gelatinization
- Wang X, Choi SG, Kerr WL*// *Univ Georgia, Dept Food Sci & Technol, Cedar St, Athens, Ga 30602, USA
Lebensm Wiss Technol Food Sci 2004 **37** (3) 377
Water dynamics in white bread and starch gels as affected by water and gluten content
- Wangsakan A, McClements DJ*, Chinachoti P, Dickinson LC// *Univ Massachusetts, Dept Food Sci, Biopolymers & Colloids Res Grp, Amherst, Ma 01003, USA
Carbohydr Res 2004 **339** (6) 1105
Two-dimensional rotating-frame Overhauser spectroscopy (ROESY) and ¹³C NMR study of the interactions between maltodextrin and an anionic surfactant
- Yao J, Chen WR, Manurung RM, Ganzeveld KJ, Heeres HJ*// *Univ Groningen, Dept Chem Engr, Nijenborgh 4, NL-9747 AG Groningen, The Netherlands
Starch 2004 **56** (3-4) 100
Exploratory studies on the carboxymethylation of cassava starch in water-miscible organic media
- Zhang G, Hamaker BR*// *Purdue Univ, Dept Food Sci & Whistler Ctr Carbohydr Res, Food Sci Bldg, West Lafayette, In 47907, USA
Carbohydr Polym 2004 **55** (4) 419
Starch-free fatty acid complexation in the presence of whey protein

10. Starch-degrading enzymes

- Abraham TE, Joseph JR, Bindhu LBV, Jayakumar KK// CSIR Reg Res Lab, Div Polymer, Biochem Proc Sect, IN-695019 Trivandrum, India
Carbohydr Res 2004 **339** (6) 1099
Crosslinked enzyme crystals of glucoamylase as a potent catalyst for biotransformations
- De Alteriis E, Silvestro G, Poletto M, Romano V, Capitanio D, Compagno C, Parascandola P*// *Univ Salerno, Dipt Ingn Chim & Alimentare, Via Ponte Don Melillo, IT-84084 Salerno, Italy
J Biotechnol 2004 **109** (1-2) 83
Kluyveromyces lactis cells entrapped in Ca-alginate beads for the continuous production of a heterologous glucoamylase
- Nebesny E, Rosicka J*, Tkaczyk M// *Tech Univ Lodz, Dept Chem Food Technol, Stefanowski St 4-10, PL-90924 Lodz, Poland
Starch 2004 **56** (3-4) 132
Influence of conditions of maize starch enzymatic hydrolysis on physico-

chemical properties of glucose syrups

Tuovinen L, Peltonen S, Liikola M, Hotakainen M, Lahtela-Kakkonen M, Poso A, Jarvinen K// Univ Kuopio, Dept Pharmaceut, POB 1627, FI-70211 Kuopio, Finland

Biomaterials 2004 **25** (18) 4355

Drug release from starch-acetate microparticles and films with and without incorporated α -amylase

11. Polysaccharides - Microbial

Huang Y, Singh PP, Tang J*, Swanson BG// *Washington State Univ, Dept Biol Systems Engn, Box 646120, Pullman, Wa 99164, USA

Carbohydr Polym 2004 **56** (1) 27

Gelling temperatures of high acyl gellan as affected by monovalent and divalent cations with dynamic rheological analysis

Jeong SC, Yang BK, Ra KS, Wilson MA, Cho Y, Gu YA, Song CH// *Daegu Univ, Coll Engr, Dept Biotechnol, Gyungnan, Gyungbuk 712-714, South Korea

Carbohydr Polym 2004 **55** (3) 255

Characteristics of anti-complementary biopolymer extracted from *Coriolus versicolor*

Kim YK, Kitaoka M*, Hayashi K, Kim CH, Cote GL// *Natl Food Res Inst, Enzyme Lab, 2-1-2 Kannondai, Tsukuba, Ibaraki 305 8642, Japan

Carbohydr Res 2004 **339** (6) 1179

Purification and characterization of an intracellular cycloalternan-degrading enzyme from *Bacillus* sp NRRL B-21195

Lee KY, Shim J, Lee HG// *Hanyang Univ, Dept Food Nutr, 17 Haengdang-dong, Seongdong-gu, Seoul 133-791, South Korea

Carbohydr Polym 2004 **56** (2) 251

Mechanical properties of gellan and gelatin composite films

Melegaro A, Edmunds WJ// Hlth Protect Agcy, Ctr Communicable Dis Surveillance, Modelling & Econ Unit, 61 Colindale Ave, London NW9 5EQ, England

Eur J Epidemiol 2004 **19** (4) 353

The 23-valent pneumococcal polysaccharide vaccine. Part I. Efficacy of PPV in the elderly: A comparison of meta-analyses

Melegaro A, Edmunds WJ// Address as above

Eur J Epidemiol 2004 **19** (4) 365

The 23-valent pneumococcal polysaccharide vaccine. Part II. A cost-effectiveness analysis for invasive disease in the elderly in England and Wales

Mondal S, Chakraborty I, Pramanik M, Rout D, Islam SS// *Vidyasagar Univ, Dept Chem & Chem Technol, IN-721102 West Midnapore, West Bengal, India

Carbohydr Res 2004 **339** (6) 1135

Structural studies of water-soluble polysaccharides of an edible mushroom, *Termitomyces eurhizus*. A reinvestigation

Tomati U, Belardinelli M, Galli E, Iori V, Capitani D, Mannina L*, Viel S, Segre A// *CNR, Inst Biol Agroambientale & Forestale, Area Ric Roma, IT-00016 Rome, Italy

Carbohydr Res 2004 **339** (6) 1129

NMR characterization of the polysaccharidic fraction from *Lentinula edodes* grown on olive mill waste waters

Zhang M, Zhang L*, Cheung PCK, Ooi VEC// *Wuhan Univ, Dept Chem, CN-430072 Wuhan, Peoples Rep China

Carbohydr Polym 2004 **56** (2) 123

Molecular weight and anti-tumor activity of the water-soluble polysaccharides isolated by hot water and ultrasonic treatment from the sclerotia and mycelia of *Pleurotus tuber-regium*

12. Polysaccharides - Plant

Bot A, Erle U, Vreeker R, Agterof WGM// Unilever Res & Dev Vlaardingen, Olivier van Noortlaan 120, NL-3133 AT Vlaardingen, The Netherlands

Food Hydrocolloid 2004 **18** (4) 547

Influence of crystallisation conditions on the large deformation rheology of inulin gels

Habibi Y, Mahrouz M, Marais MF, Vignon MR// *CNRS, Ctr Rech Macromol Vegetales, BP 53X, FR-38041 Grenoble 9, France

Carbohydr Res 2004 **339** (6) 1201

An arabinogalactan from the skin of *Opuntia ficus-indica* prickly pear fruits

Haug JJ, Draet KI, Smidsrod O// Norwegian Univ Sci & Technol, Dept Biotechnol, Norwegian Biopolym Lab, Sem Soelandsvei 6/8, NO-7491 Trondheim, Norway

Carbohydr Polym 2004 **56** (1) 11

Physical behaviour of fish gelatin- κ -carrageenan mixtures

Koyama K, Seki M// *Univ Tokyo, Sch Engr, Dept Chem & Biotechnol,

7-3-1 Hongo, Bunkyo ku, Tokyo 113 8656, Japan

J Biosci Bioeng 2004 **97** (2) 111

Cultivation of yeast and plant cells entrapped in the low-viscous liquid-core of an alginate membrane capsule prepared using polyethylene glycol

Le-Tien C, Millette M, Lacroix M, Mateescu MA// *Univ Quebec, Dept Chim & Biochim, CP 8888, Succ Ctr Ville, Montreal, Quebec, Canada H3C 3P8

Biotechnol Appl Biochem 2004 **39** (2) 189

Modified alginate matrices for the immobilization of bioactive agents

Manuel AR, Coimbra A, Domingues P, Ferrer-Correia AJ, Domingues MRM// *Univ Aveiro, Dept Quim, PT-3810-193 Aveiro, Portugal

Carbohydr Polym 2004 **55** (4) 401

Fragmentation pattern of underivatized xylo-oligosaccharides and their alditol derivatives by electrospray tandem mass spectrometry

Rhim JW// Mokpo Natl Univ, Dept Food Engr, 61 Dorim-ri, Choongnam 534 729, South Korea

Lebensm Wiss Technol Food Sci 2004 **37** (3) 323

Physical and mechanical properties of water resistant sodium alginate films

Ribeiro CC, Barrias CC, Barbosa MA// Inst Biomed Engr, Lab Biomat, Rua Campo Alegre 823, PT-4150-180 Oporto, Portugal

Biomaterials 2004 **25** (18) 4363

Calcium phosphate-alginate microspheres as enzyme delivery matrices

Stober P, Benet S, Hischenhuber C// Nestle Res Ctr, Vers-chez-les-Blanc, CH-1000 Lausanne 26, Switzerland

J Agric Food Chem 2004 **52** (8) 2137

Simplified enzymatic high-performance anion exchange chromatographic determination of total fructans in food and pet food - Limitations and measurement uncertainty

Tosh SM, Wood PJ, Wang Q, Weisz J// Agr & Agri-Food Canada, Food Res Branch, 93 Stone Rd West, Guelph, Ontario, Canada N1G 5C9

Carbohydr Polym 2004 **55** (4) 425

Structural characteristics and rheological properties of partially hydrolyzed oat β -glucan: The effects of molecular weight and hydrolysis method

Ververis C, Georghiou K, Christodoulakis N, Santas P, Santas R// Univ Athens, Fac Biol, Dept Bot, GR-15784 Athens, Greece

Ind Crops Products 2004 **19** (3) 245

Fiber dimensions, lignin and cellulose content of various plant materials and their suitability for paper production

13. Polysaccharides - Other

Galgali P, Puntambekar US, Gokhale DV, Varma AJ// *Nat Chem Lab, Chem Engr Div, Polymer Sci & Engr Grp, Dr Homi Bhabha Rd, IN-411008 Pune, India

Carbohydr Polym 2004 **55** (4) 393

Fungal degradation of carbohydrate-linked polystyrenes

Gu GF, Wei GH, Du YG// *Chinese Acad Sci, Ecoenvironm Sci Res Ctr, POB 2871, CN-100085 Beijing, Peoples Rep China

Carbohydr Res 2004 **339** (6) 1155

Synthesis of a 6^V-sulfated mannopentasaccharide analogue related to PI-88

Kim D, Petrisor IG, Yen TF// *Univ Sthn Calif, Dept Civil & Environm Engr, Kap 210, 3620 Sth Vermont Ave, Los Angeles, Ca 90089, USA

Carbohydr Polym 2004 **56** (2) 213

Geopolymerization of biopolymers: A preliminary inquiry

Maccari F, Tripodi F, Volpi N// *Univ Modena & Reggio Emilia, Dept Biol Animale, Via Campi 213/d, IT-41100 Modena, Italy

Carbohydr Polym 2004 **56** (1) 55

High-performance capillary electrophoresis separation of hyaluronan oligosaccharides produced by *Streptomyces hyalurolyticus* hyaluronate lyase

Magnin D, Lefebvre J, Chornet E, Dumitriu S// *Sherbrooke Univ, Dept Chem Engr, 2500 Blvd Univ, Sherbrooke, Quebec, Canada J1K 2R1

Carbohydr Polym 2004 **55** (4) 437

Physicochemical and structural characterization of a polyionic matrix of interest in biotechnology, in the pharmaceutical and biomedical fields

Teramoto N, Arai Y, Shibasaki Y, Shibata M// *Chiba Institute Technol, Fac Engineering, Dept Ind Chem, 2-17-1 Tsudanuma, Narashino, Chiba 275 0016, Japan

Carbohydr Polym 2004 **56** (1) 1

A facile synthesis of a novel polyacetal containing trehalose residue in the main chain

Volpi N// Univ Modena & Reggio Emilia, Dept Biol Animale, Via Campi 213D, IT-41100 Modena, Italy

Carbohydr Polym 2004 **55** (3) 273

Disaccharide mapping of chondroitin sulfate of different origins by high-performance capillary electrophoresis and high-performance liquid chromatography