

BIBLIOGRAPHY ON CARBOHYDRATE POLYMERS

1 Books, Reviews and Symposia

Pizzi A (Ed)

Wood Adhesives, Vol 2 - Chemistry and Technology

Marcel Dekker (New York), 1989, 416pp, \$89.75, Hardbound, ISBN: 0-8247-8052-3

Includes chapters on: Phenol-formaldehyde structures in relation to their adhesion to wood cellulose (A Pizzi & R Smit); Lignin formaldehyde wood adhesives (GH Vanderklashorst)

Wise DL (Ed)

International Biosystems

Vol II

CRC Press, 1989, 288pp, £100.50, ISBN: 0-8493-4852-8

Includes the chapter: Acid hydrolysis of cellulose as a pretreatment for bio-conversion

Vol III

CRC Press, 1989, 256pp, £100.50, ISBN: 0-8493-4853-6

Includes the chapter: Ethanol production from lignocellulosic wastes

Beyrich T, Wagener J//Univ Greifswald, Sect Pharm, Friedrich Ludwig Jahn Str 17, DDR-2200 Greifswald, Ger Dem Rep

PHARMAZIE 1989, 44 (7) 448

Cyclodextrin in analysis (Review) (German, English Abstract)

Kobayashi S//Minist Agr Forestry & Fisheries, Natl Food Res Inst, Tsukuba, Ibaraki 305, Japan
J JPN SOC FOOD SCI TECHNOL 1989, 36 (8) 685

Development and application of novel cyclodextrins (Review) (Japanese, English Abstract)

ARQ BIOL TECNOL 1989, 32 (1) 117

Carbohydrates and glycoconjugates section contains several abstracts on carbohydrate polymers from the XVIII Annual Meeting of the Brazilian Society of Biochemistry and Molecular Biology, Caxambu, Brazil, May 1989

Risch SJ, Reineccius GA (Eds)

Flavor Encapsulation (ACS Symposium Series Vol 370)

Symposium on Flavor Encapsulation at the 194th Meeting of the American Chem Soc, New Orleans, 1987

Am Chem Soc (Washington), 1988, 202pp, \$54.95, (\$65.95 outside USA and Canada), ISBN: 0-8412-1482-4

Contains several papers on the use of carbohydrate polymers

Balogopalan C, Padmaja G, Nanda SK, Moorthy SN

Cassava in Food, Feed, and Industry

CRC Press, 1988, 224pp, £114.50, ISBN: 0-8493-4560-X

Contains chapters on: Cassava starch; Cassava starch based industries

Kempf W//Address not available

STARCH 1989, 41 (7) 279

40th Starch Convention 1989 of the Arbeitsgemeinschaft Getreideforschung at Detmold (Report) (German, English Abstract)

Seow CC, Teng TT, Quah CH (Eds)

Food Preservation by Moisture Control

Elsevier Science Publishers, 1988, 278pp, £36.00, ISBN: 1-85166-261-8

Includes: Problems associated with traditional Malaysian starch-based intermediate moisture foods

2 Cellulose

Plisko YA, Nudga LA, Petropavlovskii GA//Acad Sci USSR, Inst Macromolec Cpds, Leningrad, USSR

VYSOKOMOL SOEDIN SER B SSSR 1989, 31 (7) 514

Graft polymerization of vinyl acetate to allylcarboxymethyl cellulose in aqueous medium (Russian)

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.

Niemela K, Sjostrom E//Helsinki Univ Technol, Wood Chem Lab, SF-02150 Espoo, Finland
POLYM COMMUN 1989, 30 (8) 254

Characterization of hardwood-derived carboxymethylcellulose by gas-liquid chromatography and mass spectrometry

Ufimtsev YV, Glukhikh AS, Kovaliov GV, Sinit-syn AP, Bugaenko LT//MV Lomonosov State Univ, Dept Enzymol, Moscow 117234, USSR
VESTN MOSK UNIV KHIM SSSR 1989
30 (3) 288

A comparative study of destruction of the Na salt of carboxymethylcellulose in the course of acid hydrolysis under the action of gamma-irradiation

Bhat KM, McCrae SI, Wood TM**//Rowett Res Inst, Bucksburn AB2 9SB, Aberdeen, Scotland
CARBOHYD RES 1989, 190 (2) 279

The endo-(1-4)-beta-D-glucanase system of *Penicillium pinophilum* cellulase: isolation, purification, and characterization of five major endoglucanase components

Chan M, Breuil C*, Schwald W, Saddler JN**//Forintek Canada Corp, Dept Biotechnol & Chem, 800 Montreal Rd, Ottawa, Ontario, Canada K1G 3Z5
APPL MICROBIOL BIOTECHNOL 1989, 31 (4) 413

Comparison of methods for quantifying the hydrolytic potential of cellulase enzymes

Halliwel G, Halliwel N//Univ Coll Swansea, Sch Biol Sci, Swansea SA2 8PP, W Glam, Wales
BIOCHIM BIOPHYS ACTA 1989, 992
Cellulolytic enzyme components of the cellulase complex of *Clostridium thermocellum*

Heredia A, Fernandez-Bolanos J, Guillen R//CSIC, Inst Grasa & Derivados, Apartado 1078, E-41012 Seville, Spain
Z LEBENSMITTEL-UNTERSUCH FORS 1989, 189 (3) 216

Inhibitors of cellulolytic activity in olive fruits (*Olea europaea*, *Hojiblanca* var.)

Hrmova M, Biely P*, Vrsanska M**//Slovak Acad Sci, Ctr Chem Res, Inst Chem, Dubravská Cesta 9, CS-84238 Bratislava, Czechoslovakia
ENZIME MICROB TECHNOL 1989, 11 (9) 610

Cellulose- and xylan-degrading enzymes of *Aspergillus terreus* and *Aspergillus niger*

Lee NE, Woodward J**//Oak Ridge Natl Lab, Div Chem Technol, Oak Ridge, Tn 37831, USA
J BIOTECHNOL 1989, 11 (1) 75

Kinetics of the adsorption of *Trichoderma reesei* C30 cellulase to DEAE-Macrosorb

Stutzenberger F//Clemson Univ, Dept Microbiol, Clemson, SC 29634, USA
J APPL BACTERIOL 1989, 67 (1) 87

A note on the inhibition of cellulase binding to protein-extracted lucerne fibre by denatured enzyme

Sukan SS, Guray A, Vardar-Sukan F//Aegean Univ, Dept Food Engr, Bornova 35100, Bornova, Turkey
J CHEM TECHNOL BIOTECHNOL 1989, 46 (3) 179

Effects of natural oils and surfactants on cellulase production and activity

Tucker MP, Mohagheghi A, Grohmann K, Himmel ME**//Solar Energy Res Inst, Div Solar Fuels Res, Biotechnol Res Branch, Appl Biol Sci Sect, Golden, Co 80401, USA
BIO-TECHNOLOGY 1989, 7 (8) 817

Ultra-thermostable cellulases from *Acidothermus cellulolyticus* - comparison of temperature optima with previously reported cellulases

Ahmad N, Khan I, Saeed A//Univ Peshawar, Natl Ctr Excellence Phys Chem, Peshawar, Pakistan
J CHEM SOC PAKISTAN 1989, 11 (1) 20
Shear viscosities of cellulose acetate-polymer

Al-Abdulla IH, Mellor GW, Childerstone MS, Sidki AM, Smith DS//St Bartholomews Hosp, Dept Chem Pathol, London EC1A 7BE, England
J IMMUNOL METHOD 1989, 122 (2) 253

Comparison of three different activation methods for coupling antibodies to magnetisable cellulose particles

Anders H, Malsch G, Paul D//Acad Sci GDR, Inst Polymerenchem Erich Correns, Kantstr 55, DDR-1530 Teltow, Ger Dem Rep
ACTA POLYM 1989, 40 (6) 418
Determination of the accessibility at cellulose surface by infrared spectroscopy (German, English Abstract)

Baehr M, Fuhrer C//Inst Pharmazeut Technol,

Mendelssohnstr 1, D-3300 Brunswick, Fed Rep Ger

PHARMAZIE 1989, 44 (7) 473

Investigations on the colloid-crystallographic structure of powdered cellulose (German, English Abstract)

Balakina MN, Atamanenko ID, Bryk MT//Acad Sci UkSSR, Inst Colloid Chem & Water Chem, Kiev, Ukraine, USSR

UKR KHIM ZH SSSR 1989, 55 (7) 767

Effect of solvent nature on the porous structure of acetate cellulose films (Russian)

Barbucci R, Casolaro M, Magnani A, Roncolini C, Ferruti P//Univ Siena, Dipartimento Chim, Piano Mantellini 44, I-53100 Siena, Italy

POLYMER 1989, 30 (9) 1751

Vinyl polymers containing amido and carboxylic groups as side substituents: I. Synthesis of N-acryloyl-glycine and N-acryloyl-6-caproic acid and their grafting on cellulose membranes

Beluza YM, Zhorin VA, Bykov VA, Ivanov VV, Ephshtein YV, Yenikolopyan NS//Biotekhnika Sci Ind Assoc, Moscow, USSR

VYSOKOMOL SOEDIN SER B SSSR 1989, 31 (8) 635

Degradation of cellulose under high pressure in the presence of polyethylene and malonic acid additives (Russian)

Csanady G, Narayaman P, Muller K, Wegscheider W, Knapp G*//Graz Tech Univ, Inst Analyt Chem Mikrochem & Radiochem, A-8010 Graz, Austria

ANGEW MAKROMOL CHEM 1989, 170 (JUN) 159

Synthesis of different oxine celluloses for enrichment processes for trace analysis

Gert EV, Torgashov VI, Kaputskii FN//VI Lenin Belorussian State Univ, Physico Chem Problems Res Inst, 220080 Minsk, Belorussia, USSR

J POLYM SCI C-POLYM LETT 1989, 27 (10) 393

Production, properties, and structure of high-substituted cellulose nitrate

Ghali ES, Klinger GH, Schwartz JB//Philadelphia Coll Pharm & Sci, Sch Pharm, Philadelphia, Pa 19104, USA

DRUG DEVELOP IND PHARM 1989, 15 (9) 1455

Modified drug release from beads prepared with combinations of two grades of microcrystalline cellulose

Graczyk T//Pulp & Paper Res Inst, Gdanska 121, PL-90950 Lodz, Poland

J APPL POLYM SCI 1989, 38 (4) 619

Oxidation of cellulose by ceric ion

Jain RK, Lal K, Bhatnagar HL*//Kurukshetra Univ, Dept Chem, Kurukshetra 132119, Haryana, India

POLYM DEGRAD STAB 1989, 26 (2) 101

Thermal degradation of cellulose esters and their tosylated products in air

Kayawake E, Tohya S, Rokudai M, Shimizu Y, Honda S, Tanaka R, Eguchi K//Kubota Lts, Ceram Membrane Project Team, Div Water & Sewage Plant, 2-47 Shikitsuhigashi 1 chome, Osaka 556, Japan

HAKKIKOGAKU KAISHI 1989, 67 (4) 255

Anaerobic digestion of artificial wastewater containing cellulose by a membrane reactor (Japanese, English Abstract)

Larena A, Pinto G//Univ Politecn Madrid, Escuela Tecn Super Ingn Ind, Dept Ingn Quim Ind, Madrid, Spain

J MATER SCI LETT 1989, 8 (8) 925

A simple method for evaluating crystallinity of cellulosic films by spectral scattered light

Lederer M, Schudel M//Univ Lausanne, Inst Police Sci & Criminol, Pl Chateau 3, CH-1005 Lausanne, Switzerland

J CHROMATGR 1989, 475 (JUL) 451

Adsorption chromatography on cellulose. V. A simple chromatographic system for the identification of inks

Maekawa M, Yoshida H, Nango M, Kataoka T//Nara Womens Univ, Dept Clothing Sci, Nara 630, Japan

NIPPON KAGAKU KAISHI 1989, (7) 1178

Surface diffusion of direct dyes in cellulose membranes (Japanese, English Abstract)

Morooka T, Norimoto M, Yamada T//Kyoto Univ, Wood Res Inst, Uji, Kyoto 611, Japan

J APPL POLYM SCI 1989, 38 (5) 849

Periodate oxidation of cellulose by homogeneous reaction

Oza KP, Frank SG//Ohio State Univ, Coll Pharm, Div Pharmaceut & Pharmaceut Chem, Columbus, Oh 43210, USA

J DISPERS SCI TECHNOL 1989, 10 (2) 163

Multiple emulsions stabilized by colloidal microcrystalline cellulose

Oza KP, Frank SG//Ohio State Univ, Coll Pharm, Div Pharmaceut & Pharmaceut Chem, Columbus, Oh 43210, USA

J DISPERS SCI TECHNOL 1989, 10 (2) 187

Drug release from emulsions stabilized by colloidal microcrystalline cellulose

Reig M, Toldra F*, Tsai GJ, Jansen NB, Tsao GT//CSIC, Inst Agroquim & Technol Alimentos, Jamie Roig 11, E-46010 Valencia, Spain

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Methane generation from chemically pretreated cellulose by anaerobic fluidized-bed reactors

Schneider G//Chem Landesuntersuchungsanstalt Offenburg, Offenburg, Fed Rep Ger

DEUT LEBENSM-RUNDSCH 1989, 85 (7) 210

Determination and judgement of formaldehyde in cotton fabrics and cellulose fibres

Yagoodin AY, Boldyrev VV//Acad Sci USSR, Inst Solid State Chem & Mineral Ores Proc, Novosibirsk, USSR

KHIM-FARM ZH SSSR 1989, 23 (7) 863

Solution of acetylsalicylic acid in relation to its complexation with cellulose (Russian)

Yeh C-T, Wei JS, Liaw Y-F//Chang Gung Med Coll, Dept Biochem, Taoyuan, Taiwan

CLIN CHEM 1989, 35 (8) 1684

Biliary alkaline phosphatase measured by mini-column chromatography on DEAE-cellulose: application to detection of hepatobiliary diseases

Lippold BH, Sutter BK, Lippold BC//Univ Dusseldorf, Inst Pharmazut Technol, Univ Str 1, D-4000 Dusseldorf 1, Fed Rep Ger

INT J PHARM 1989, 53 (3) 15

Parameters controlling drug release from pellets coated with aqueous ethyl cellulose dispersion

Sato T, Nambu T, Endo T//Tokyo Inst Technol, Resources Utilizat Res Lab, Midori ku, Yokohama, Kanagawa 227, Japan

J POLYM SCI C-POLYM LETT 1989, 27 (9) 289

Incorporation of viologen moiety as redox func-

tion into hydroxypropyl cellulose

Hogan JE//Colorgon Ltd, Murray Rd, Orpington BR5 3QY, Kent, England

DRUG DEVELOP IND PHARM 1989, 15 (6-7) 975

Hydroxypropylmethylcellulose sustained release technology

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

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Analysis of lignocelluloses and lignins from *Arundo donax* L. and *Miscanthus sinensis* Anderss., and hydroliguefaction of *Miscanthus*

Linden T, Hahn-Hagerdal B//Univ Lund, Ctr Chem, Dept Appl Microbiol, POB 124, S-22100 Lund, Sweden

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Fermentation of lignocellulose hydrolysates with yeasts and xylose isomerase

Bernal VM, Stanley DW//Univ Guelph, Dept Food Sci, Guelph, Ontario, Canada N1G 2W1

INT J FOOD SCI TECHNOL 1989, 24 (4) 461

Methylcellulose as a binder for reformed beef

Kaneko H, Yasuoka Y, Gamo K, Namba S//Natl Def Acad, Dept Elect Engr, Yokosuka, Kanagawa 239, Japan

JPN J APPL PHYS PT 1 1989, 28 (4) 716

Self-development properties of nitrocellulose (dependence on ion species)

Kaneko H, Yasuoka Y, Gamo K, Namba S//Natl Def Acad, Dept Elect Engr, Yokosuka, Kanagawa 239, Japan

JPN J APPL PHYS PT 1 1989, 28 (4) 1113

Self-development properties of nitrocellulose (dependence on ion species)

Ye Y, Hunsperger RG//Chengdu Inst Radio Engr, Dept Optoelectr Technol, Chengdu, Peoples R China

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Photodecomposition of nitrocellulose: threshold power density and the effect of temperature

Yamagishi T, Fukuda T, Miyamoto T, Watanabe J//Kyoto Univ, Inst Chem Res, Uji,

Kyoto 611, Japan

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Thermotropic cellulose derivatives with flexible substituents. I. Preparation of tri-o-(beta-methoxyethoxy)ethyl cellulose and its cholesteric mesophase properties

3 Lignin

Bonnet MC, de Laat J, Dore M//Univ Poitiers, Chim Eau & Nuisances Lab, 40 Ave Recteur Pineau, F-86022 Poitiers, France

ENVIRON TECHNOL LETT 1989, 10 (6) 577

Identification of ozonation by-products of lignin and of carbohydrates in water

Chen C-S, Tien L-L, Yoshiyama A, Nonaka T, Choo T-C//Tokyo Inst Technol, Dept Electr Chem, 4259 Nagatsuta, Midori ku, Yokohama, Kanagawa 227, Japan

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Anodic degradation of lignins. V. Degradation of a Taiwanese bagasse lignin in an undivided cell

Gross B, Gallois A, Spinnier H-E, Langlois D//INRA, Genie Procedes Biotechnol Agro-alimentaires Lab, F-78850 Thiverval Grignon, France

J BIOTECHNOL 1989, 10 (3-4) 303

Volatile compounds produced by the ligninolytic fungus *Phlebia radiata* Fr. (Basidiomycetes) and influence of the strain specificity on the odour profile

Meshgini M, Sarkanen KV//Columbia Coll, 6037 Marlborough Ave, Burnaby, BC, Canada V5H 3L6

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Synthesis and kinetics of acid-catalyzed hydrolysis of some alpha-aryl ether lignin model compounds

Nada AMA, El-Diwany AI, Elshafei AM//Natl Res Ctr, Cellulose & Paper Lab, Cairo, Egypt

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Infrared and antimicrobial studies on different lignins

Neumann MG, Machado AEH//Univ Sao Paulo, Inst Fis & Quim Sao Carlos, Caixa Postal 369, BR-13560 Sao Carlos, SP, Brazil

J PHOTOCHEM PHOTOBIOLOG B-BIOL 1989, 3 (4) 473

The role of oxygen in the photodegradation of

lignin in solution

Perestelo F, Falcon MA, Perez ML, Roig EC, Martin GD//Univ La Laguna, Dept Microbiol & Cellular Biol, La Laguna, Spain

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Bioalteration of kraft pine lignin by *Bacillus megaterium* isolated from compost piles

Puech J-L, Robert A, Mouttet B//INRA, Polymers & Tech Phys Chim Lab, Pl Viala, F-34060 Montpellier, France

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Evolution of oak wood lignin subjected to flash hydrolysis

Salo S, Niemela S, Elomaa M, Lindberg JJ//Univ Helsinki, Dept Wood & Polymer Chem, Meritullinkatu 1A, SF-00170 Helsinki 17, Finland

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Identification of lignins by pyrolytical methods

Schwarz PB, Youngs VL, Shelton DR//N Dakota State Univ, Dept Cereal Sci & Food Technol, Fargo, ND 58105, USA

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Isolation and characterization of lignin from hard red spring wheat bran

Smith C, Utley JHP, Petrescu M, Viertler H//Univ London Queen Mary Coll, Dept Chem, London E1 4NS, England

J APPL ELECTROCHEM 1989, 19 (4) 535

Biomass electrochemistry: anodic oxidation of an organo-solv lignin in the presence of nitroaromatics

Wariishi H, Valli K, Renganathan V, Gold MH**//Oregon Grad Ctr, Dept Chem & Biol Sci, 19600 NW Vonneumann Dr, Beaverton, Or 97006, USA

J BIOL CHEM 1989, 264 (24) 14185

Thiol-mediated oxidation of nonphenolic lignin model compounds by manganese peroxidase of *Phanerochaete chrysosporium*

4 Polysaccharides

Hollingsworth RI, Lill-Elghanian DA//Michigan State Univ, Dept Biochem, E Lansing, MI 48824, USA

J BIOL CHEM 1989, 264 (24) 14039

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lipopolysaccharide component, 2-amino-2-deoxy-2-N-(27-hydroxyoctacosanoyl)-3-O-(3-hydroxy-tetradecanoyl)-gluco-hexuronic acid, and its de-O-acylation product from the free lipid A of *Rhizobium trifolii* ANU 843

Kol O, Montreuil J, Fournet B*, Zakisz R, Smets P/**Univ Lille 1, Chim Biol Lab, CNRS, UA 217, F-59655 Villeneuve Dascq, France
J CHROMATGR 1989, 474 (2) 452

Separation of high-performance liquid chromatography of oligosaccharides obtained after mild acid hydrolysis of *Klebsiella pneumoniae* O1K2 (NCTC 5055) lipopolysaccharides

Kondo S, Hisatsune K**/Josai Univ, Sch Pharmaceut Sci, Dept Microbiol, Sakado, Saitama 35002, Japan

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Kosma P, Schulz G, Unger FM, Brade H//Agr Univ Vienna, Inst Chem, A-1180 Vienna, Austria

CARBOHYD RES 1989, 190 (2) 191

Synthesis of trisaccharides containing 3-deoxy-D-manno-2-octulosonic acid residues related to the KDO-region of enterobacterial lipopolysaccharides

Paulsen H, Heitmann AC//Univ Hamburg, Inst Organ Chem, Martin Luther King Pl 6, D-2000 Hamburg 13, Fed Rep Ger

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Building units of oligosaccharides. 92. Synthesis of trisaccharide units of the inner core region of lipopolysaccharides (German, English Abstract)

Radziejewska-Labrecht J, Mayer H**/Max Planck Inst Immunbiol, Stubweg 51, D-7800 Freiburg, Fed Rep Ger

EUR J BIOCHEM 1989, 183 (3) 573

The core region of *Proteus mirabilis* R110/1959 lipopolysaccharide

Weintraub A, Zahringer U, Wollenweber H-W, Seydel U, Rietschel ET**/Forschungsinst Borstel, Inst Exptl Biol & Med, Parkallee 22, D-2061 Borstel, Fed Rep Ger

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Christensen BE//Norwegian Inst Technol, Inst Biotechnol, N-7034 Trondheim, Norway

J BIOTECHNOL 1989, 10 (3-4) 181

The role of extracellular polysaccharides in biofilms

Itamura H, Fukushima T, Kitamura T//Shimane Univ, Fac Agr, 1060 Nishikawazu cho, Matsue, Shimane 690, Japan

J JPN SOC FOOD SCI TECHNOL 1989, 36 (8) 647

Changes in cell wall polysaccharide composition during fruit softening of Japanese persimmon (*Dispyros kaki* Thub. var. *hiratanenashi*) (Japanese, English Abstract)

Kobayashi K, Sumitomo H, Takahashi M//Nagoya Univ, Fac Agr, Chikusa ku, Nagoya, Aichi 464, Japan

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Regioselectively modified stereoregular polysaccharides XIV. Synthesis of a C-methylated linear dextran 3-C-methyl-3-O-methyl-(1-6)-alpha-D-glycopyranan

Marchant CD, Band E, Froeschle JE, McVerry PH//St Boniface Gen Hosp, Dept Pediat, Winnipeg, Manitoba, Canada R2H 2A6

PEDIAT INF DIS J 1989, 8 (8) 508

Depression of anticapsular antibody after immunization with *Haemophilus influenzae* type b polysaccharide-diphtheria conjugate vaccine

Morvan C, Abdul-Hafez A, Morvan O, Jauneau A, Demarty M//Fac Sci Rouen, Scueor, CNRS, UA 203, BP 118, F-76134 Mt St Aignan, France

PLANT PHYSIOL BIOCHEM 1989, 27 (3) 451

Physical and biochemical studies of polysaccharides solubilized from underretted flax (French, English Abstract)

Noda H, Amano H, Arashima K, Hashimoto S, Nisizawa K//Mie Univ, Fac Bioresources, Marine Bioch Lab, Tsu, Mie 514, Japan

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Antitumour activity of polysaccharides and lipids from marine algae

Olsen RL//Utah State Univ, Dept Nutr & Food Sci, Logan, Ut 84322, USA

J DAIRY SCI 1989, 72 (7) 1695

Effects of polysaccharides on rennet coagulation of skim milk proteins

Sarkar AK, Ray AK, Roy N*//Indian Assoc Cultivat Sci, Dept Biol Chem, Calcutta 700032, W Bengal, India

CARBOHYD RES 1989, 190 (2) 181

Synthesis of a di- and a tri-saccharide related to the K-antigen of Klebsiella type 10 and a study of their inhibition in the precipitin reaction

Tsai C-M, Frasch CE, Rivera E, Hochstein HD//US FDA, Ctr Biol Evaluat & Res, 8800 Rockville Pike, Bethesda, Md 20892, USA
J BIOL STAND 1989, 17 (3) 249

Measurements of lipopolysaccharide (endotoxin) in meningococcal protein and polysaccharide preparations for vaccine usage

White AR, Elmore HW, Watson MB, Gill JP//N Dakota State Univ, Dept Bot, Fargo, ND 58105, USA

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Purification and partial characterization of polysaccharides from coconut milk

Yasin M, Holland SJ, Jolly AM, Tighe BJ*//Univ Aston, Dept Chem Engr & Appl Chem, Special Polymers Grp, Aston Triangle, Birmingham B4 7ET, W Midlands, England

BIOMATERIALS 1989, 10 (6) 400

Polymers for biodegradable medical devices. VI. Hydroxybutyrate-hydroxyvalerate copolymers: accelerated degradation of blends with polysaccharides

5 Starch

Galloway GI, Biliaderis CG, Stanley DW//Gen Foods Ltd, 520 William St, Cobourg, Ontario, Canada K9A 4L4

J FOOD SCI 1989, 54 (4) 950

Properties and structure of amylose-glycerol monostearate complexes formed in solution or on extrusion of wheat flour

Maciejewska W, Kaczmarek M//Acad Agr Poznan, Dept Phys, Wojska Polskiego 38-42, PL-60637 Poznan, Poland

J RAMAN SPECTROSC 1989, 20 (7) 419

Raman and optical rotatory dispersion study of amylose in water-ethanol mixtures

Hui Y, Zou W//Chinese Acad Sci, Shanghai Inst Organ Chem, 345 Lingling Lu, Shanghai,

Peoples Rep China

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Wohlford JG//Lawnwood Reg Med Ctr, POB 188, Ft Pierce, FL 34954, USA

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Clarification of visual compatibility of heta-starch and ranitidine hydrochloride (Letter)

Boki K, Hasegawa M, Ohno S//Kinki Univ, Fac Pharmaceut Sci, 3-4-1 Kowakae, Higashiosaka, Osaka 577, Japan

J FOOD HYG SOC JPN 1989, 30 (4) 324

Estimation of kudzu starch content in kudzu starch products by a methyl orange adsorption method (Japanese, English Abstract)

Bornet FRJ, Fontvieille A-M, Rizkalla S, Blayo A, Mercier C, Slama G//INRA, Technol Appliquee Nutr Lab, BP 527, F-44026 Nantes 03, France

AMER J CLIN NUTR 1989, 50 (2) 315

Insulin and glycemic responses in healthy humans to native starches processed in different ways: correlation with in vitro alpha-amylase hydrolysis

Brown GA, Volenec JJ*//Purdue Univ, Dept Agron, W Lafayette, IN 47907, USA

STARCH 1989, 41 (7) 247

Isolation and molecular composition of starch from roots of Medicago sativa L.

Cone JW, Cline-Theil W, Malestein A, van 't Klooster AT//State Univ Utrecht, Fac Vet, Dept Anim Care & Nutr, Yalelaan 16, 3584 CL Utrecht, The Netherlands

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Degradation of starch by incubation with rumen fluid. A comparison of different starch sources

Ellis HS, Ring SG, Whittam MA*//AFRC, Inst Food Res, Norwich Lab, Colney Lane, Norwich NR4 7UA, Norfolk, England

J CEREAL SCI 1989, 10 (1) 33

A comparison of the viscous behaviour of wheat and maize starch pastes

Goldner WR, Boyer CD*//Penn State Univ, Dept Hort, University Pk, Pa 16802, USA

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Starch granule-bound proteins and polypeptides: the influence of the waxy mutations

Kasai H, Nakayama M, Toda N, Yamaizumi Z, Oikawa J, Nishimura S//Natl Canc Ctr, Res Inst, Div Biol, Chuo ku, Tokyo 104, Japan

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Kovacs E, Keresztes A//Cent Food Res Inst, Dept Microbiol, Herman Otto U 15, H-1022 Budapest, Hungary

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Langton M, Hermansson AM//Swedish Inst Food Res, SIK, POB 5401, S-40229 Gothenburg, Sweden

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Microstructural changes in wheat starch dispersions during heating and cooling

Moresi M, Medici R//Univ Basilicata, Fac Agr Sci, IMTF, Via Nazario Sauro 85, I-85100 Potenza, Italy

BIOPROCESS ENG 1989, 4 (5) 201

Kinetics of potato starch fermentation by *Schwanniomyces castellii*

Nebesny E//Tech Univ Lodz, Inst Lebensmittel-technol, Stefanowski Str 4-10, PL-90924 Lodz, Poland

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