

CONTENTS OF VOLUME 48

Number 1

Papers

- 1 Preparation and characterization of saponified delignified cellulose polyacrylonitrile-graft copolymer
S. FARAG & E. I. AL-AFALEQ (DAMMAM, SAUDI ARABIA)
- 7 Endoglucanase fragmentation of cellulose sulfates derived from different synthesis concepts
B. SAAKE, J. PULS (HAMBURG, GERMANY) & W. WAGENKNECHT (GOLM, GERMANY)
- 15 In vivo and in vitro biodegradation of oxychitin–chitosan and oxypullulan–chitosan complexes
R. A. A. MUZZARELLI, M. MATTIOLI-BELMONTE, M. MILIANI, C. MUZZARELLI, F. GABBANELLI & G. BIAGINI (ANCONA, ITALY)
- 23 Problems of the MMD analysis of cellulose by SEC using DMA/LiCl: A review
T. BIKOVA & A. TREIMANIS (RIGA, LATVIA)
- 29 Isolation and characterization of galactoglucomannan from spruce (*Picea abies*)
J. LUNDQVIST (LUND, SWEDEN), A. TELEMAN (STOCKHOLM, SWEDEN), L. JUNEL, G. ZACCHI (LUND, SWEDEN), O. DAHLMAN (STOCKHOLM, SWEDEN), F. TJERNELD & H. STÅLBRAND (LUND, SWEDEN)
- 41 The crystallinity of amylose and amylopectin films
P. MYLLÄRINEN (ESPoo, FINLAND), A. BULEON (NANTES, FRANCE), R. LAHTINEN & P. FORSELL (ESPoo, FINLAND)
- 49 Physicochemical properties of hydroxypropyl derivative from corn and amaranth starch
J. PAL, R. S. SINGHAL & P. R. KULKARNI (MUMBAI, INDIA)
- 55 Semicarbazone of starch dialdehyde and its complexes with metal ions
A. PARA & S. KAROLCZYK-KOSTUCH (CRACOW, POLAND)
- 61 Drug release from chitosan–alginate complex beads reinforced by a naturally occurring cross-linking agent
F.-L. MI (KAOHSIUNG, TAIWAN, ROC), H.-W. SUNG (HSINCHU, TAIWAN, ROC) & S.-S. SHYU (CHUNG-LI, TAIWAN, ROC)
- 73 Enzymatic modification of pectic polysaccharides obtained from sugar beet pulp
A. OOSTERVELD, G. BELDMAN & A. G. J. VORAGEN (WAGENINGEN, THE NETHERLANDS)
- 83 Calorimetric analysis of the structural relaxation in partially hydrated amorphous polysaccharides. I. Glass transition and fragility
B. BORDE, H. BIZOT (NANTES, FRANCE), G. VIGIER (VILLEURBANNE, FRANCE) & A. BULEON (NANTES, FRANCE)
- 97 Bibliography
- 109 Calendar

Number 2**Papers**

- 111 Calorimetric analysis of the structural relaxation in partially hydrated amorphous polysaccharides. II. Phenomenological study of physical ageing.
B. BORDE, H. BIZOT (NANTES, FRANCE), G. VIGIER (VILLEURBANNE, FRANCE) & A. BULÉON (NANTES, FRANCE)
- 125 Preparation of starch-g-polystyrene copolymer by emulsion polymerization
C. G. CHO & K. LEE (SEOUL, SOUTH KOREA)
- 131 Order in maize mutant starches revealed by mild acid hydrolysis
C. GÉRARD, P. COLONNA, A. BULÉON & V. PLANCHOT (NANTES, FRANCE)
- 143 Interfacial tension of aqueous mixtures of Na-caseinate and Na-alginate by drop deformation in shear flow
S. GUIDO, M. SIMEONE & A. ALFANI (NAPOLI, ITALY)
- 153 Purification and characterization of heparan sulfate peptidoglycan from bovine liver
M. J. HERNÁIZ, H.-O. YANG, N. SIBEL GUNAY (IOWA CITY, IA, USA), T. TOIDA (CHIBA, JAPAN) & R. J. LINHARDT (IOWA CITY, IA, USA)
- 161 Formation of crystalline aggregates in slowly-cooled starch solutions prepared by steam jet cooking
G. F. FANTA, F. C. FELKER & R. L. SHOGREN (PEORIA, IL, USA)
- 171 Comparative studies on molecular chain parameters of chitosans and poly(diallyldimethylammonium chloride): the stiffness *B*-parameter and the temperature coefficient of intrinsic viscosity
S. TRZCIŃSKI (TORUN, POLAND), K. M. VÅRUM (TRONDHEIM, NORWAY), D. U. STASZEWSKA (TORUN, POLAND), O. SMIDSRØD (TRONDHEIM, NORWAY) & M. BOHDANECKÝ (PRAGUE, CZECH REPUBLIC)
- 179 Thermophysical properties of chitosan, chitosan–starch and chitosan–pullulan films near the glass transition
A. LAZARIDOU & C. G. BILIADERIS (THESSALONIKI, GREECE)
- 191 Dynamic rheological measurements and analysis of starch gels
I. ROSALINA & M. BHATTACHARYA (ST. PAUL, MN, USA)
- 203 Novel *N*-saturated-fatty-acyl derivatives of chitosan soluble in water and in aqueous acid and alkaline solutions
S. HIRANO, Y. YAMAGUCHI & M. KAMIYA (TOTTORI, JAPAN)

Short Communication

- 209 Cell-wall polysaccharides from the fruits of *Limonia acidissima*: isolation, purification and chemical investigation
S. K. MONDAL, B. RAY (BURDWAN, INDIA), J. F. THIBAULT (NANTES, FRANCE) & P. K. GHOSAL (BURDWAN, INDIA)
- 213 Bibliography
- 217 Calendar

Number 3**Review**

- 219 The use of polysaccharides to target drugs to the colon
T. F. VANDAMME, A. LENOURRY (STRASBOURG, FRANCE), C. CHARRUEAU & J. CHAUMEIL (PARIS, FRANCE)

Papers

- 233 Effect of succinylation on the corn and amaranth starch pastes
P. N. BHANDARI & R. S. SINGHAL (MUMBAI, INDIA)

- 241 Aspects of the structural integrity of chondroitin sulphate after laser irradiation
K. JUMEL, S. E. HARDING (SUTTON BONINGTON, UK), E. SOBOL, A. OMEL'CHENKO, A. SVIRIDOV (TROITSK, RUSSIAN FEDERATION) & N. JONES (NOTTINGHAM, UK)
- 247 Synthesis and characterisation of chemically modified chitosan microspheres
K. L. SHANCHA & D. R. K. HARDING (PALMERSTON NORTH, NEW ZEALAND)
- 255 Some studies on starch–urea–acid reaction mechanism
M. I. KHALIL, S. FARAG, A. A. ALY & A. HEBEISH (CAIRO, EGYPT)
- 263 Pectic substances from red beet (*Beta vulgaris* L. var. *conditiva*). Part II. Structural characterisation of rhamnogalacturonan II
G. R. STRASSER & R. AMADÒ (ZURICH, SWITZERLAND)
- 271 Emulsification capacity of chitosan
M. S. RODRÍGUEZ, L. A. ALBERTENGO & E. AGULLÓ (BAHÍA BLANCA, ARGENTINA)
- 277 Dynamic mechanical thermal analysis of cell wall polysaccharides extracted from lyophilised carrot *Daucus carota*
D. M. R. GEORGET, A. C. SMITH & K. W. WALDRON (NORWICH, UK)
- 287 Comparison in glass transition and enthalpy relaxation between native and gelatinized rice starches
H.-J. CHUNG, E.-J. LEE & S.-T. LIM (SEOUL, SOUTH KOREA)
- 299 The effect of moisture content on the crystallinity and glass transition temperature of inulin
J. E. ZIMERI & J. L. KOKINI (NEW BRUNSWICK, NJ, USA)
- 305 Phosphated chitin (P-chitin) exerts protective effects by restoring the deformability of polymorphonuclear neutrophil (PMN) cells
D. R. KHANAL, K. MIYATAKE, Y. OKAMOTO, T. SHINOBU, M. MORIMOTO, H. SAIMOTO, Y. SHIGEMASA (TOTTORI, JAPAN), S. TOKURA (SUITA, JAPAN) & S. MINAMI (TOTTORI, JAPAN)

Short Communication

- 313 Swelling studies of chitosan/cashew nut gum physical gels
H. C. B. PAULA, F. J. S. GOMES & R. C. M. DE PAULA (FORTALEZA, BRAZIL)
- 319 Evaluation of acid methanolysis for analysis of wood hemicelluloses and pectins
F. BERTAUD, A. SUNDBERG & B. HOLMBOM (TURKU/ÅBO, FINLAND)
- 325 Bibliography
- 331 Calendar

Number 4

Editorial

- iii Expansion of *Carbohydrate Polymers*
J. F. KENNEDY, J. R. MITCHELL & P. SANDFORD

Papers

- 333 Anti-grifolan antibody reacts with the cell wall β -glucan and the extracellular mannoprotein- β -glucan complex of *C. albicans*
M. UCHIYAMA, N. OHNO, N. N. MIURA, Y. ADACHI & T. YADOMAE (TOKYO, JAPAN)
- 341 The influence of carrageenan on molecular mobility in low moisture amorphous sugars
H. KUMAGAI (FUJISAWA-SHI, JAPAN), W. MACNAUGHTAN, I. A. FARHAT & J. R. MITCHELL (SUTTON BONINGTON, UK)
- 351 Modification of pectin with UV-absorbing substituents and its effect on the structural and hydrodynamic properties of the water-soluble derivatives
G. A. MORRIS (SUTTON BONINGTON, UK), Z. HROMÁDKOVÁ, A. EBRINGEROVÁ, A. MALOVÍKOVÁ, J. ALFÖLDI (BRATISLAVA, SLOVAKIA) & S. E. HARDING (SUTTON BONINGTON, UK)

- 361 A hydrodynamic study of the depolymerisation of a high methoxy pectin at elevated temperatures
G. A. MORRIS (SUTTON BONINGTON, UK), T. J. FOSTER (SHARNBROOK, UK) & S. E. HARDING (SUTTON BONINGTON, UK)
- 369 Enhanced healing of cartilaginous injuries by glucosamine hydrochloride
Y. TAMAI, K. MIYATAKE, Y. OKAMOTO (TOTTORI, JAPAN), Y. TAKAMORI, H. SAKAMOTO (TOKYO, JAPAN) & S. MINAMI (TOTTORI, JAPAN)
- 379 Distribution analysis of cellulose acetate phthalate by ion-exclusion-moderated size exclusion chromatography
B. PORSCH (PRAGUE, CZECH REPUBLIC), I. HILLANG, A. KARLSSON & L.-O. SUNDELÖF (UPPSALA, SWEDEN)
- 385 Pustulan and branched β -galactofuranan from the phytopathogenic fungus *Guignardia citricarpa*, excreted from media containing glucose and sucrose
G. L. SASSAKI, J. C. FERREIRA, C. GLIENKE-BLANCO (PARANÁ, BRAZIL), G. TORRI (MILAN, ITALY), F. DE TONI, P. A. J. GORIN & M. IACOMINI (PARANÁ, BRAZIL)
- 391 Three phase partitioning of carbohydrate polymers: separation and purification of alginates
A. SHARMA & M. N. GUPTA (NEW DELHI, INDIA)
- 397 Gelatinization mechanism of potato starch
M. TAKO (OKINAWA, JAPAN) & S. HIZUKURI (KAGOSHIMA, JAPAN)
- 403 $\text{HNO}_3/\text{H}_3\text{PO}_4-\text{NANO}_2$
mediated oxidation of cellulose — preparation and characterization of bioabsorbable oxidized celluloses in high yields and with different levels of oxidation
V. KUMAR & T. YANG (IOWA CITY, IA, USA)
- 413 Response time and electrorheology of semidiluted gellan, xanthan and cellulose suspensions
L. REJÓN (CUERNAVACA, MEXICO), A. RAMÍREZ, F. PAZ, F. M. GOYCOOLEA & M. A. VALDEZ (HERMOSILLO, MEXICO)
- 423 Calendar
- 425 Volume Contents