

Carbohydrate Polymers

Papers Published in Volumes 12 and 13

CONTENTS OF VOLUME 12

Number 1

Guar Gum Derivatives. II. Foaming Properties of Hydroxyalkyl Derivatives	1
H. PRABHANJAN, M. M. GHARIA & H. C. SRIVASTAVA (India)	
Studies on Apple Protopectin: I. Extraction of Insoluble Pectin by Chemical Means	9
C. M. G. C. RENARD (France), A. G. J. VORAGEN (The Netherlands), J. F. THIBAUT (France) & W. PILNIK (The Netherlands)	
The Use of NIR Spectrophotometry to Estimate the Pectic Substances in Fruit and Fruit Products	27
A. POLESELLO, R. GIANGIACOMO, E. FORNI & F. BRAGA (Italy)	
The Determination of the Molecular Weight Distribution of Pectins by Calibrated GPC Part I. Calibration by Light Scattering and Membrane Osmometry	39
G. BERTH, H. DAUTZENBERG, D. LEXOW & ROTHER (GDR)	
Insight into the Structure of Pectin by High Performance Chromatographic Methods	61
G. BRIGAND, A. DENIS, M. GRALL & D. LECACHEUX (France)	
Industrial Pectins: Sources, Production and Applications	79
COLIN D. MAY (UK)	
Summaries of UK Patent Applications	101
News and Views	104
Bibliography on Carbohydrate Polymers	106
Book Reviews	121
Announcement	124

Contents of Volumes 12 and 13

Number 2

Review Paper

- Polysaccharides from Cyanobacteria 127
 CLAUDIA BERTOCCHI, LUCIANO NAVARINI, ATTILIO CESÀRO
 & MAURIZIO ANASTASIO (Italy)

Papers

- Development of a Biotechnological Process for the Modification of
 Galactomannan Polymers with Plant α -Galactosidase 155
 P. V. BULPIN, M. J. GIDLEY R. JEFFCOAT & D. R. UNDERWOOD
 (UK)
- Rheology of Aqueous Solutions of an Extracellular Polysaccharide from
Cyanospira capsulata 169
 LUCIANO NAVARINI, CLAUDIA BERTOCCHI, ATTILIO CESÀRO,
 ROMANO LAPASIN & VITTORIO CRESCENZI (Italy)
- Composition and Properties of Mucilaginous Polysaccharide from Native and
 Fermented Black Gram Flour 189
 G. CHANGALA REDDY, N. S. SUSHEELAMMA &
 R. N. THARANATHAN (India)
- Rheological Properties of Galactomannan-Based Gels. Part 1 — Guar and
 Hydroxypropylguar Gels in Alkaline Media 203
 O. NOBLE, T. TURQUOIS & F. R. TARAVEL (France)

Research Note

- The Vacuum Ultraviolet Circular Dichroism of Carrageenans
 EUGENE S. STEVENS (USA) & EDWIN R. MORRIS (UK) 219
- News and Views 225
- Bibliography on Carbohydrate Polymers 226
- Book Reviews 241

Number 3

- Thermodynamic Parameters of the Junction Zones in Thermoreversible
 Maltodextrin Gels. 245
 F. SCHIERBAUM, F. REUTHER (GDR), E. E. BRAUDO,
 I. G. PLASCHINA & V. S. TOLSTOGUZOV (Russia)
- Role of the Molecular Weight on the Mechanical Properties of Kappa
 Carrageenan Gels 255
 C. ROCHAS, M. RINAUDO & S. LANDRY (France)
- Isolation and Chemical Characterization of Water-soluble Arabinoxylans in
 Rye Grain 267
 S. BENGTSSON & P. ÅMAN (Sweden)
- Rheological Properties of Galactomannan-Based Gels. Part 2 — Ion
 Cross-Linked Galactomannan Gels 279
 O. NOBLE & F. R. TARAVEL (France)

Contents of Volumes 12 and 13

Improvement of the Gelation Properties of Sugarbeet Pectin following Treatment with an Enzyme Preparation Derived from <i>Aspergillus niger</i> — Comparison with a Chemical Modification	295
JENNIFER A. MATTHEW, STEVEN J. HOWSON, MICHAEL H. J. KEENAN & PETER S. BELTON (UK)	
A Suitable Method for a Rapid Estimation of Sulphated Positions in Polysaccharides of Pharmacological Interest	307
JOSE KOVENSKY, JAVIER A. COVIÁN & ALICIA FERNANDEZ CIRELLI (Argentina)	
X-Ray Fiber Diffraction Studies of a Variant of Xanthan Gum in which the Sidechain Terminal Mannose Unit is Absent	315
R. P. MILLANE & T. V. NARASIAH (USA)	
Grafting of Poly(ethylenimine) onto Mesylated Cellulose Acetate, Poly(methyl methacrylate) and Poly(vinyl chloride)	323
CHRISTOPHER J. BIERMANN & RAMANI NARAYAN (USA)	
Research Note	
Rheology of a Xanthan Broth at Low Stresses and Strains	329
MARIA M. SANTORE & ROBERT K. PRUD'HOMME (USA)	
Summaries of UK Patent Applications	337
Bibliography on Carbohydrate Polymers	338
Book Reviews	351

Number 4

Oxidative Cross-Linking of Chemically and Enzymatically Modified Sugar-Beet Pectin	353
FABIENNE GUILLON & JEAN-FRANÇOIS THIBAUT (France)	
The Cyclodextrins and their Applications in Biotechnology	375
J. SZEJTLI (Hungary)	
Formolysis of a Potent Antitumor (1 → 6)-β-D-Glucan-Protein Complex from <i>Agaricus blazei</i> Fruiting Bodies and Antitumor Activity of the Resulting Products	393
H. KAWAGISHI, T. KANAO, R. INAGAKI, T. MIZUNO, K. SHIMURA, H. ITO, T. HAGIWARA & T. NAKAMURA (Japan)	
Alkaline N-Deacetylation of Chitin Enhanced by Flash Treatments. Reaction Kinetics and Structure Modifications	405
B. FOCHER, P. L. BELTRAME, A. NAGGI & G. TORRI (Italy)	
Studies on the Chemical Stability of Propylene Glycol Alginate Esters	419
C. J. GRAY, A. J. GRIFFITHS, D. L. STEVENSON & J. F. KENNEDY (UK)	
The Influence of Calcium Ions, Acetate and L-Glycerate Groups in the Gellan Double-Helix	431
R. CHANDRASEKARAN & V. G. THAILAMBAL (USA)	

Contents of Volumes 12 and 13

Viscometric of Spectroscopic Studies on the Solution Behaviour of Hydrophobically Modified Cellulosic Polymers. R. TANAKA (Japan), J. MEADOWS, G. O. PHILLIPS & P. A. WILLIAMS (UK)	443
News and Views	461
Bibliography on Carbohydrate Polymers	462
Book Reviews	478

CONTENTS OF VOLUME 13

Number 1

Studies on Enzymic Hydrolysis of Polysaccharides in Sugar Beet Pulp JEAN-FRANÇOIS THIBAUT & XAVIER ROUAU (France)	1
Studies on Isolation and Characterization of Starch from Pearl Millet (<i>Pennisetum americanum</i> (L.) Leeke) Grains D. B. WANKHEDE, S. S. RATHI, B. B. GUNJAL, H. B. PATIL, S. G. WALDE, A. B. RODGE & A. R. SAWATE (India)	17
Shear Induced Changes in the Viscoelastic Behaviour of Heat Treated Potato Starch Dispersions KARIN SVEGMARK & ANNE-MARIE HERMANSSON (Sweden)	29
Behaviour of Xanthan in Cadoxen MICHEL MILAS & BERNARD TINLAND (France)	47
A Cellulose-Like Conformation Accessible to the Xanthan Backbone and Implications for Xanthan Synergism R. P. MILLANE & BOWEI WANG (USA)	57
Microstructural Changes during the Twin-Screw Extrusion Cooking of Maize Grits A.-L. OLLETT, R. PARKER, A. C. SMITH, M. J. MILES & V. J. MORRIS (UK)	69
Shear-Thinning of 'Random Coil' Polysaccharides: Characterisation by Two Parameters from a Simple Linear Plot EDWIN R. MORRIS (UK)	85
Summaries of UK Patent Applications	97
Bibliography on Carbohydrate Polymers	100
Book Review	116

Contents of Volumes 12 and 13

Number 2

Structure and Properties of Xanthan Versus Fermentation Time in an Emulsion System	119
M. MILAS (France) & H. VIEHWEG & A. WEISS (FRG)	
Acid Hydrolysis and High-Performance Liquid Chromatography of Xanthan	133
M. I. TAIT, I. W. SUTHERLAND & A. J. CLARKE-STURMAN (UK)	
Degradation of Flax Polysaccharides with Purified Endo-Polygalacturonase	149
CLAUDINE MORVAN, ALAIN JAUNEAU, ARMELLE FLAMAN, JACQUES MILLET & MAURICE DEMARTY (France)	
Gelation of Members of a Family of Branched Anionic Heteropolysaccharides Produced by Certain Strains of <i>Rhizobium leguminosarum</i>	165
V. J. MORRIS, G. J. BROWNSEY, G. R. CHILVERS, J. E. HARRIS, A. P. GUNNING, M. J. RIDOUT & B. J. H. STEVENS (UK)	
On the Supramolecular Structure and Metastability of Glycerol Monostearate-Amylose Complex	185
C. G. BILIADERIS & H. D. SENEVIRATNE (Canada)	
Special Analysis of Glucan Produced by Wild-Type and Mutant <i>Saccharomyces cerevisiae</i>	207
S. JAMAS, Y.-C. J. CHEN, C. H. VON DER ÖSTEN, A. J. SINSKEY & C. K. RHA (USA)	
Research Note	
Gelation of the Extracellular Polysaccharide Produced by <i>Agrobacterium rhizogenes</i>	221
V. J. MORRIS, G. J. BROWNSEY, A. P. GUNNING & J. E. HARRIS (UK)	
Bibliography on Carbohydrate Polymers	227

Number 3

Review Paper	
Polysaccharide Research in Trondheim	239
BJØRN E. CHRISTENSEN, MENTZ INDERGAARD & OLAV SMIDSRØD (Norway)	
Papers	
Interactions between Agarose and κ -Carrageenans in Aqueous Solutions	257
J. ZHANG & C. ROCHAS (France)	
Carboxymethyl-Chitin as a Drug Carrier of Sustained Release	273
S. TOKURA, S. BABA, Y. URAKI, Y. MIURA, N. NISHI & O. HASEGAWA (Japan)	
Interaction of Alginates and Pectins with Cationic Polypeptides	283
S. BYSTRICKÝ, A. MALOVÍKOVÁ & T. STICZAY (Czechoslovakia)	

Contents of Volumes 12 and 13

Retrogradation of Amylopectin and the Effects of Amylose and Added Surfactants/Emulsifiers	295
M. GUDMUNDSSON & A.-C. ELIASSON (Sweden)	
Phase Equilibria for Xanthan Gum in Ethanol-Water Solutions	317
R. GONZALES, M. R. JOHNS, P. F. GREENFIELD & G. W. PACE (Australia)	
News and Views	335
Bibliography on Carbohydrate Polymers	336
Book Review	349

Number 4

Microscopic and Chemical Studies of a Gelling Polysaccharide from <i>Lactobacillus hilgardii</i>	351
M. PIDOUX (France), G. A. DE RUITER (The Netherlands), B. E. BROOKER, I. J. COLQUHOUN & V. J. MORRIS (UK)	
Preparation of Alcohol-Soluble Chitin Derivatives and Radical Induction by Photo-Irradiation	363
S. TOKURA, Y. URAKI, K. OHMIYA, A. TSUTSUMI & H. SASHIWA (Japan)	
Solution Properties of Gum Exudates from <i>Sterculia urens</i> (Karaya Gum)	375
D. LE CERF, F. IRINEI & G. MULLER (France)	
Gelation of Sugarbeet and Citrus Pectins using Enzymes Extracted from Orange Peel	387
GARY WILLIAMSON, CRAIG B. FAULDS, JENNIFER A. MATTHEW, DAVID B. ARCHER, VICTOR J. MORRIS, GEOFFREY, J. BROWNSEY & MICHAEL J. RIDOUT (UK)	
Productivity of Four α -D-Glucosyltransferases Released by <i>Streptococcus sobrinus</i> under Defined Conditions in Continuous Culture	399
GWEN J. WALKER, NORMAN W. H. CHEETHAM, CATHERINE TAYLOR, BARBARA J. PEARCE (Australia) & MOREY E. SLODKI (USA)	
Action of <i>Endo</i> -(1 $\rightarrow$ 6)- α -D-Glucanases on the Soluble Dextrans Produced by Three Extracellular α -D-Glucosyltransferases of <i>Streptococcus sobrinus</i>	423
CATHERINE TAYLOR, NORMAN W. H. CHEETHAM (Australia), MOREY E. SLODKI (USA) & GWEN J. WALKER (Australia)	
News and Views	435
Bibliography on Carbohydrate Polymers	437
Book Reviews	453