

## SUBJECT INDEX

- Acetylation sequences in partially *N*-deacetylated chitins (chitosans),  $^{13}\text{C}$ -n.m.r. studies of the, 19
- Aldoses in water at high temperature: mechanism of formation of 2-furaldehyde from D-xylose, kinetic study of the reactions of ketoses and, 71
- D-Altrotol, crystal and molecular structure of, 1
- Amylose, properties of hot-water-extractable, 251
- Biological response-conformation relationship in (1 $\rightarrow$ 3)- $\beta$ -D-glucans, 181
- Bromide-oxidised potato starch, a  $^1\text{H}$ - and  $^{13}\text{C}$ -n.m.r. study of, 221
- Calcium ion-release activity of D- and L-*myo*-inositol 2,4,5-trisphosphate and D- and L-*chiro*-inositol trisphosphate, synthesis and, 107
- Calorimetric and spectroscopic studies of the interaction of cyclomaltohexaose ( $\alpha$ -cyclodextrin) with alkanols at 25°, 87
- (*R*)-(-)-Carvone, stereoselective reduction with sodium dithionite in the presence of cyclomaltoheptaose ( $\beta$ -cyclodextrin) and its heptakis (2,6-di-*O*-methyl) derivative, 345
- Chitosans (partially *N*-deacetylated chitins),  $^{13}\text{C}$ -n.m.r. studies of the acetylation sequences in, 19
- $^{13}\text{C}$ -N.m.r. studies of the acetylation sequences in partially *N*-deacetylated chitins (chitosans), 19
- Conformational analysis of 1-kestose by molecular mechanics and by n.m.r. spectroscopy, 29
- Conformation-biological response relationship in (1 $\rightarrow$ 3)- $\beta$ -D-glucans, 181
- Crystal structure of D-altrotol, 1
- Crystal structure of cycloinulohexaose produced from inulin by cycloinulo-oligosaccharide fructanotransferase, 7
- Cycloinulohexaose produced from inulin by cycloinulo-oligosaccharide fructanotransferase, crystal structure of, 7
- Cyclomaltoheptaose ( $\beta$ -cyclodextrin) and its heptakis(2,6-di-*O*-methyl) derivative, stereoselective reduction of (*R*)-(-)-carvone with sodium dithionite in the presence of, 245
- Cyclomaltohexaose ( $\alpha$ -cyclodextrin), calorimetric and spectroscopic studies of the interaction with alkanols at 25°, 87
- Degradation of a glycosylated aldose, a potential method for sequencing branched oligosaccharides based on stepwise, 99
- Dermatan sulfate, n.m.r. spectra of, 227
- Dermatan sulfate, separation from heparin of, 227
- 3,6-Dioxaoctanal, 8-hydroxy-, glycosides, synthesis of, 263
- (1,2-Ethandiyl)- $\beta$ -D-mannopyranose in a neighboring-group participation reaction of 2-*O*-(2-hydroxyethyl)-D-mannose, formation of 1,2-*O*-, 237
- Formation of 1,2-*O*-(1,2-ethandiyl)- $\beta$ -D-mannopyranose in a neighboring-group participation reaction of 2-*O*-(2-hydroxyethyl)-D-mannose, 237
- Fructan chemical structure, use of an exohydrolase in studies of, 137
- Fructans from plants, new structural features of, revealed by methylation analysis and  $^{13}\text{C}$ -n.m.r. spectroscopy, 127
- $\alpha$ -D-Galactosidase from taro, conversion of red blood cells group B into group O by, 191
- Glomerella cingulata* Spaulding & von Schrenck, structural investigations of glucans from cultures of the fungus, 153
- Glucans from cultures of *Glomerella cingulata* Spaulding & von Schrenck, structural investigations of, 153
- (1 $\rightarrow$ 3)- $\beta$ -D-Glucans, relationship between conformation and biological response in, 181
- D-Glucofuranurono-6,3-lactone, synthesis of four diastereomeric octofuranoses from, via Grignard reactions, 59
- $\alpha$ -Glucosidase (of rice), synthesis of *p*-nitrophenyl  $\alpha$ -glucobiosides by use of native and immobilized, 255
- Glucosyltransferases, *Streptococcus mutans* 6715, maltodextrin acceptor reactions of, 201
- Glycosylated aldose, a potential method for sequencing branched 8-oligosaccharides based on stepwise degradation of a, 99
- Glycosyloxy-3,6-dioxaoctanal, synthesis of, 263
- Grignard reactions, synthesis of four diastereomeric octofuranoses from D-glucofuranurono-6,3-lactone via, 59
- Heparin, separation from dermatan sulfate of, 227
- Hot-water-extractable amylose, properties of, 251
- 8-Hydroxy-3,6-dioxaoctanal glycosides, synthesis of, 263

- myo*-Inositol 2,4,5-trisphosphates (D- and L-) and *chiro*-inositol 1,3,4-trisphosphates (D- and L-), synthesis and  $\text{Ca}^{2+}$ -release activity, 107
- Interaction of cyclomaltotriose ( $\alpha$ -cyclodextrin) with alkanols at 25°, calorimetric and spectroscopic studies of the, 87
- Kestose and neokestose, proton and carbon chemical-shift assignments from two-dimensional n.m.r. measurements, for, 43
- Ketoses and aldoses in water at high temperature: mechanism of formation of 2-furaldehyde from D-xylose, kinetic study of the reactions of, 71
- Kinetic parameters for maltotriose and higher malto-oligosaccharides in the reactions catalyzed by  $\alpha$ -D-glucan phosphorylase from potato, 213
- Kinetic study of the reactions of ketoses and aldoses in water at high temperature: mechanism of formation of 2-furaldehyde from D-xylose, 71
- Klebsiella pneumoniae* OK2 lipopolysaccharide, structure of O-specific polysaccharide chain of, 117
- Lipopolysaccharide of *Klebsiella pneumoniae* OK2, structure of O-specific polysaccharide chain of, 117
- Maltodextrin acceptor reaction of *Streptococcus mutans* 6715 glucosyltransferases, 201
- Maltotriose and higher malto-oligosaccharides, kinetic parameters for the reactions catalyzed by  $\alpha$ -D-glucan, phosphorylase from potato, 213
- Molecular mechanics, conformational analysis of 1-kestose by, and by n.m.r. spectroscopy, 29
- Molecular structure of D-altitol, 1
- Neighboring-group participation reaction of 2-O-(2-hydroxyethyl)-D-mannose, formation of 1,2-O-(1,2-ethandiyl)- $\beta$ -D-mannopyranose in a, 237
- Neokestose and 6-kestose, proton and carbon chemical-shift assignments from two-dimensional n.m.r. measurements, for, 43
- p-Nitrophenyl  $\alpha$ -glucobiosides, enzymic synthesis by use of native and immobilized rice  $\alpha$ -glucosidase, 255
- N.m.r. measurements, two-dimensional, proton and carbon chemical-shift assignments for 6-kestose and neokestose from, 43
- N.m.r. spectroscopy, conformational analysis of 1-kestose by molecular mechanics and by, 29
- N.m.r. study of bromine-oxidised potato starch, a  $^1\text{H}$ - and  $^{13}\text{C}$ -, 221
- Octofuranoses, synthesis of four diastereomeric, from D-glucofuranurono-6,3-lactone via Grignard reactions, 59
- Phosphorylase,  $\alpha$ -D-glucan, from potato, kinetic parameters for reactions of maltotriose and higher malto-oligosaccharides catalyzed by, 213
- Plant-fructan structure, new features revealed by methylation analysis and  $^{13}\text{C}$ -n.m.r. spectroscopy, 127
- Plant-fructan structure, use of an exohydrolase in studies of, 137
- Polysaccharide from *Streptococcus pneumoniae* type 7B, structure of the capsular, 171
- Polysaccharide isolated from the green seaweed *Chaetomorpha antennina*, structural studies of a, 163
- Properties of hot-water-extractable amylose, 251
- Red blood cells group B, conversion into group O by  $\alpha$ -D-galactosidase from taro, 191
- Seaweed *Chaetomorpha antennina*, structural studies of a polysaccharide isolated from the green, 163
- O-Specific polysaccharide chain of lipopolysaccharide of *Klebsiella pneumoniae* OK2, structure of, 117
- Starch, a  $^1\text{H}$ - and  $^{13}\text{C}$ -n.m.r. study of bromine-oxidised potato, 221
- Stepwise degradation of a glycosylated aldose: a potential method for sequencing branched oligosaccharides, 99
- Stereoselective reduction of (R)-(-)-carvone with sodium dithionite in the presence of cyclomaltotriose ( $\beta$ -cyclodextrin) and its heptakis (2,6-di-O-methyl) derivative, 245
- Streptococcus pneumoniae* type 7B, structure of the capsular polysaccharide from, 171
- Structural investigations of glucans from cultures of *Glomerella cingulata* Spaulding & von Schrenck, 153
- Structural studies of a polysaccharide isolated from the green seaweed *Chaetomorpha antennina*, 163
- Structure of the capsular polysaccharide from *Streptococcus pneumoniae* type 7B, 171
- Structure of cyclonulohexaose produced from inulin by cyclonulohexaose fructanotransferase, the crystal, 7
- Synthesis of four diastereomeric octofuranoses from D-glucofuranurono-6,3-lactone via Grignard reactions, 59
- Taro (*Colocasia esculenta*), conversion of red blood cells group B into group O by  $\alpha$ -D-galactosidase from, 191
- l-Thiotrehaloses, hydrogen fluoride-mediated synthesis of, 51
- l-Thiotrehaloses, synthesis by reaction of D-glucose with hydrogen sulfide of, 51
- Trehaloses, l-thio-, synthesis of, 51