## CARBOHYDRATE RESEARCH, VOL. 199 (1990)

## **SUBJECT INDEX**

- Acetylation of apiitol, the, in the determination of apiose, 55
- Agarose, conformational changes induced by hydration—dehydration of, 1
- 1-Amino-1-deoxy-D-arabino-hexulose, synthesis of (5S, 8R, 9R, 10S)-8,9,10-trihydroxy-2-thioxo-1,6-dioxa-3-azaspiro[4.5]decane from, 239
- I-Amino-I-deoxy-D-fructose, glycosides of, 139 Aminodeoxy sugars from 1,6-anhydro-3,4-dideoxy-β-D-glycero-hex-2-enopyranose-2-ulose (levoglucosenone), 243
- Amylose, structures of sub-fractions of corn, 207 Analysis of carbohydrates by g.l.c and m.s., Cl
- Anhydro-2,3,6-tri-*O*-benzyl-*a*-D-glucopyranose by *cis* ring-closure of a glycosyl chloride, synthesis of 1,4-, 31
- Apiitol, acetylation in the determination of apiose, 55
- Artocarpus intergrifolia lectin, structure of the carbohydrate chain isolated from, 121
- Barbiturates, synthesis and conformational analysis of C-glycosyl-, 235
- Benzoyl-2-methyl-5-(D-arabino-tetrahydroxybutyl)pyrrole, structure and reactions of 3-, 248
- Biological activities of methyl oligobiosaminide and some deoxy isomers thereof, synthesis and, 37
- Branched-chain sugars from 1,6-anhydro-3,4-dideoxy-β-D-glycero-hex-2-enopyranose-2-ulose (levoglucosenone), 243
- Candida stellatoidea IFO 1397 strain, structure of D-mannan of, 215
- Carrageenans, kappa- and iota-, conformational changes induced by hydration-dehydration of,
- Chemical shifts of proton and carbon, assignments of, for 1-kestose, from two-dimensional n.m.r.-spectral measurements, 11
- Chondroitin 4- and 6-sulfate, syntheses of the methyl glycosides of the repeating units of, 153
- Comparison of the structures of the fractions of normal and high-amylose pea-seed starches prepared by precipitation with concanavalin A, 195
- Concanavalin A, a comparison of the structures of the fractions of normal and high-amylose

- pea-seed starches prepared by precipitation with 175
- Corn amylose, structures of sub-fractions of, 207 Crystal structure and synthesis of methyl 3,6-dideoxy-3-C-methoxycarbonyl-3-C-nitro-α-L-galacto-hexopyranoside, 129
- 1,6-Dioxa-3-azaspiro[4.5]decane from 1-amino-1-deoxy-D-*arabino*-hexulose, synthesis of (5S, 8R, 9R, 10S)-8,9,10 trihydroxy-2-thioxo-, 239
- Effects of reduced maltooligosaccharides on the thermal stability of pullulanase from *Bacillus* acidopullulyticas, 83
- Exopolysaccharide of *Pseudomonas marginalis* strains PF-05-2 and PM-LB-1, the structure of the acidic, 77
- Formation of 5-(hydroxymethyl)-2-furaldehyde from p-fructose and sucrose, mechanism of, 91 p-Fructose, glycosides of 1-amino-1-deoxy-139
- Glycans, O- and N-linked, splitting from N,O-glycoproteins of, 67
- β-D-Glycero-hex-2-enopyranose-2-ulose, 1,6-anhydro-3,4-dideoxy, new branched-chain and aminodeoxysugars from, 243
- Glycohydrolases, synthesis of trehalose-containing trisaccharides by use of, 227
- N,O-Glycoproteins, splitting of O- and N-linked glycans from, 67
- Glycosides of 1-amino-1-deoxy-p-fructose, 139 C-Glycosylbarbiturates, synthesis and conformational analysis of, 235
- Hydration-dehydration, conformational changes of agarose, and kappa- and iota- carrageenans induced by, 1
- (Hydroxymethyl)-2-furaldehyde from D-fructose and sucrose, mechanism of formation of 5-, 91
- Inositols, synthesis of norbornanepentols, analogues of, 19
- Jacalin lectin, structure of the carbohydrate chain isolated from. 121
- Jackfruit lectin, jacalin, structure of the carbohydrate chain isolated from, 121

- 1-Kestose, proton and carbon chemical-shift assignments for, from two-dimensional n.m.r.spectral measurements, 37
- Levoglucosenone, new branched-chain and aminodeoxysugars from, 243
- Maltooligosaccharides on the thermal stability of pullulanase from *Bacillus acidopullulyticas*, effects of reduced, 83
- D-Mannan of *Candida stellatoidea* IFO 1397 strain, structure of, 215
- Mass spectra, electron-ionization, of monosaccharide O-methyloxime trifluoroacetates, 183
- Mechanism of formation of 5-(hydroxymethyl)-2furaldehyde from p-fructose and sucrose, 91
- Methyl 3,6-dideoxy-3-C-methoxycarbonyl-3-Cnitro-a-D-galacto-hexopyranoside, synthesis and crystal structure of, 129
- Methyl glycosides of the repeating units of chondroitin 4- and 6-sulfate, syntheses of the, 153
- O-Methyloxime trifluoroacetates of monosaccharides, electron ionization mass spectra of, 183
- Model compounds for the reactions of sugars in water at high temperature, three and four-carbon, 111
- Monosaccharide, O-methyloxime trifluoroacetates, electron ionization mass spectra of, 183
- Norbornanepentols: analogues of inositols, synthesis of, 19
- Oligobiosaminide and some deoxy isomers thereof, synthesis and biological activities of methyl, 37
- Pea-seed starches prepared by precipitation with concanavalin A, a comparison of the structures of the fractions of normal and high amylose, 195
- Proton and carbon chemical-shift assignments for 1-kestose, from two-dimensional n.m.r.-spectral measurements, 11
- Pseudomonas marginalis strains PF-05-2 and PM-LB-1, the structure of the acidic exopolysaccharide of, 77
- Pullulanase from *Bacillus acidopullulyticas*, effects of reduced maltooligosaccharides on the thermal stability of, 83
- Pyrrole, structure and reactions of 3-benzoyl-2-methyl-5-(D-*arabino*-tetrahydroxybutyl)pyrrole, 248

- Reactions of sugars in water at high temperatures, three- and four-carbon model compounds for the, 111
- $\beta$ -D-Ribofuranoside,  $\beta$ -D-ribofuranosyl, synthesis of, 116
- $\beta$ -D-Ribofuranose, 1-*O*-acetyl-2,3,5-tri-*O*-benzoyl-, synthesis of  $\beta$ -D-ribofuranosyl  $\beta$ -D-ribofuranose from, 116
- $\beta$ -D-Ribofuranosyl  $\beta$ -D-ribofuranoside, synthesis of, 116
- Ring-closure of a glycosyl chloride, synthesis of 1,4-anhydro-2,3,6-tri-*O*-benzyl-*a*-D-glucopyranose by *cis*, 31
- Sequential splitting of *O* and *N*-linked glycans, from *N*,*O*-glycoproteins, 67
- Structure and reactions of 3-benzoyl-2-methyl-5-(D-arabino-tetrahydroxybutyl)pyrrole, 248
- Structures of sub-fractions of corn amylose, 207
- Structure of the acidic exopolysaccharide of *Pseudomonas marginalis* strains PF-05-2 and PM-LB-1, 77
- Synthesis and biological activities of methyl oligobiosaminide and some deoxy isomers thereof, 37
- Synthesis and conformational analysis of *C*-gly-cosylbarbiturates, 235
- Synthesis and crystal structure of methyl 3,6-dideoxy-3-C-methoxycarbonyl-3-C-nitro-a-Lgalacto-hexopyranoside, 129
- Synthesis of (5*S*, 8*R*, 9*R*, 10*S*)-8,9,10-trihydroxy-2-thioxo-1,6-dioxa-3-azaspiro[4.5]decane from 1-amino-1-deoxy-D-*arabino*-hexulose, 239
- Synthesis of 1,4-anhydro-2,3,6-tri-*O*-benzyl-*a*-D-glucopyranose by *cis* ring-closure of a glycosyl chloride, 31
- Syntheses of the methyl glycosides of the repeating units of chondroitin 4- and 6-sulfate, 153
- Synthesis of norbornanepentols—analogues of inositols, 19
- Three and four-carbon model compounds for the reactions of sugars in water at high temperature, 111
- Trehalose-containing trisaccharides, enzymic synthesis of, 227
- Trisaccharides containing trehalose, enzymic synthesis of, 227
- Yeast D-mannan from *Candida stellatoidea* IFO 1397 strain, structure of, 215