## SUBJECT INDEX

- Acarviosine (the pseudo-disaccharide moiety of acarbose) and other inhibitors of alpha-amy-lases, molecular modelling of, 351
- Action patterns of amylolytic enzymes as determined by the [1-14C]malto-oligosaccharide mapping method, 215
- ADPglucose pyrophosphorylase from a starchdeficient mutant of *Arabidopsis thaliana* (L.), characterization of, 227
- Alditol acetates, the detection and quantification of apiose by capillary gas chromatography of its, 365
- Amylase from *Chalara paradoxa*, heterogeneity of the glucoamylase components of the rawstarch-degesting, 385
- Amylase, iso-, substrate specificity of, 331
- Amylase of *Pseudomonas stutzeri* as a probe of the structure of amylopectin, c1
- Amylases, the action on linear maltodextrins of germinated barley alpha-, 301
- Amylolytic enzymes, action patterns determined by the [1-14C]malto-oligosaccharide mapping method, 215
- Amylose and amylopectin fractions of starches from maize genotypes, structural changes during development, 85
- Amylose, examination of the structure by tritium labelling of the reducing terminal, 113
- Amylose, the influence of chain length on the hydrodynamic behaviour of, 73
- Apiose, detection and quantification by capillary gas chromatography of its alditol acetates, 365 Apo-glycogenin, preparation of, 331
- Arabidopsis thaliana (L.), characterization of ADPglucose pyrophosphorylase from a starch-deficient mutant of, 227
- Arabinose, conformation of 3-O-β-D-galactopyranosyl-L-, and a comparison with its α-linked isomer, 371
- Arabinoxylan-rhamnogalacturonan complex from cell walls of Zea shoots, structural characterization of an, 315
- Aromatic side chains, role in the binding of substrates, inhibitors, and cyclomalto-oligosaccharides to the glucoamylase from Aspergillus niger, 29
- Barley alpha-amylases, the action on linear maltodextrins of germinated, 301
- Barley-starch granules, granule residues and "ghosts" remaining after heating in water, 121
- Binding of substrates, inhibitors, and cyclomaltooligosaccharides to the glucoamylase from Aspergillus niger, roles of the aromatic side chains in the, 29

- Borohydride reduction of carbohydrates, a reinvestigation, 375
- Branched starch polysaccharides, characterisation of Q-enzyme (starch-branching enzyme) by *in vitro* synthesis of, 171
- Candida albicans, monitoring polysaccharide synthesis in, 195
- Carbohydrates, a re-investigation of the borohydride reduction of, 375
- Cellobiohydrolase I from *Trichoderma reesei* QM 9414, action on cello-oligosaccharides, 19
- Cellulase of the anaerobic bacterium *Clostridium* thermocellum, isolation, dissociation, and reassociation of the cellulosome, 293
- Cereal flours, measurement of the content of limitdextrinase in, 257
- Clostridium thermocellum, isolation, dissociation, and reassociation of the cellulosome of the cellulase system of, 293
- Conformation of 3-O-β-D-galactopyranosyl-Larabinose and a comparison with its α-linked isomer. 371
- Crystalline and molecular order during starch gelatinisation, loss of, and origin of the enthalpic transition, 103
- Cyclomaltohexaose and soluble starch, effect of modification of the tryptophan residues of cyclodextrin glucanotransferase on the enzymecatalysed hydrolysis of, 285
- Dextrinase, measurement of the content in cereal flours of limit-, 257
- Enzyme-catalysed hydrolysis of soluble starch and cyclomaltohexaose, effect of modification of the tryptophan residues of cyclodextrin glucanotransferase on the, 285
- Enzymic hydrolysis of starch granules, a method for the study of the, 269
- Fine structure of oyster glycogen, 183
- 3-O-D-Galactopyranosyl-L-arabinose, conformational comparison with its α-linked isomer, 371
- Gas chromatography of alditol acetates, the detection and quantification of apiose by capillary, 365
- Gelatinisation of starch, loss of crystalline and molecular order, and origin of the enthalpic transition, 103
- Gelatinization and retrogradation, the strucure of four waxy starches related to, 131

- (1→4)-α-D-Glucan sythesis by a chloroplastic phosphorylase isolated from spinach leaves is independent of added primer, 241
- α-p-Glucans, synthesis by Streptococcus cricetus AHT, influence of the culture medium, 1
- Glucoamylase components of the raw-starch-digesting amylase from *Chalara paradoxa*, heterogeneity of the, 385
- Glucoamylase from Aspergillus niger, roles of the aromatic side chains in the binding of substrates, inhibitors, and cyclomalto-oligosaccharides to the, 29
- Glycogen, molecular and metabolic aspects of lysosomal, 339
- Glycogen, the fine structure of oyster, 183
- Glycogenin, apo-, preparation of, 331
- Granule residues and "ghosts" remaining after heating A-type barley-starch granules in water, 121
- Heat capacity of starch/water mixtures, a study of the. 203
- Hydrodynamic behaviour of amylose, the influence of chain length on the, 73
- Hydrolysis of starch granules, a method for the study of the enzymic, 269
- Hydrolysis of starch with hydrochloric acid in various alcohols, the formation of new kinds of limit dextrins by, 163
- Influence of chain length on the hydrodynamic behaviour of amylose, 73
- Inhibitors of alpha-amylases, molecular modelling of acarviosine (the pseudo-disaccharide moiety of acarbose) and other, 351
- Isoamylase, action on the surface of starch granules, 379
- Isoamylase, substrate specificity of, 331
- Limit dextrins, the formation of new kinds of, by hydrolysis of starch with hydrochloric acid in various alcohols, 163
- Limit-dextrinase in cereal flours, measurement of the content, 257
- Lupin seeds, the polysaccharides of agricultural, 147
- Lysosomal glycogen, molecular and metabolic aspects of, 339
- Maltodextrins, the action of germinated barley alpha-amylases on linear, 301
- Malto-oligosaccharide mapping method, determination of the action patterns of amylolytic enzymes by the [1-14C]-, 215
- Molecular and metabolic aspects of lysosomal glycogen, 339
- Molecular modelling of acarviosine, the pseudodisaccharide moiety of acarbose, and other inhibitors of alpha-amylases, 351
- Monitoring polysaccharide synthesis in *Candida* albicans, 195

- Oligosaccharides, xyloglucan, containing from seventeen to twenty glycosyl residues, characterization of, 45
- Oyster glycogen, the fine structure of, 183
- Phosphorylase, (1→4)-α-D-glucan synthesis by a chloroplastic, isolated from spinach leaves is independent of added primer, 241
- Polysaccharide synthesis in Candida albicans, monitoring, 195
- Polysaccharides of agricultural lupin seeds, 147 Pseudomonas stutzeri amylase as a probe of the structure of amylopectin, c1
- Q-Enzyme (starch-branching enzyme), characterization by *in vitro* synthesis of branched starch polysaccharides, 171
- Reducing terminal of amylose, examination of structure by tritium labelling of the, 113
- Reduction of carbohydrates with borohydride, a re-investigation, 375
- Retrogradation and gelatinization, the structure of four waxy starches related to, 131
- Seeds of agricultural lupins, the polysaccharides of the. 147
- Starch-deficient mutant of Arabidopsis thaliana (L.), characterization of ADPglucose pyrophosphorylase from a, 227
- Starch-digesting amylase from *Chalara paradoxa*, heterogeneity of the glucoamylase components of the raw, 385
- Starches from maize genotypes, structural changes during development in the amylose and amylopectin fractions, 85
- Starches, the structure of four waxy, related to gelatinization and retrogradation, 131
- Starch gelatinisation, loss of crystalline and molecular order, and origin of the enthalpic transition, 103
- Starch granules, a method for the study of the enzymic hydrolysis of, 269
- Starch granules from barley, granule residues and "ghosts" remaining after heating in water, 121
- Starch granules, modification by hydrolysis with hydrochloric acid in various alcohols and the formation of new kinds of limit dextrins, 163
- Starch granules, the action of isoamylase on the surface of, 379
- Starch polysaccharides, characterisation of Q-enzyme (starch-branching enzyme) by *in vitro* synthesis of branched, 171
- Starch/water mixtures, a study of the heat capacity of, 203
- Streptococcus cricetus AHT, influence of the culture medium on the synthesis of  $\alpha$ -D-glucans by,
- Structural changes during development in the amylose and amylopectin fractions of starches from maize genotypes, 85

- Structural characterization of an arabinoxylanrhamnogalacturonan complex from cell walls of Zea shoots, 315
- Study of the heat capacity of starch/water mixtures, 203
- Surface of starch granules, the action of isoamylase on the, 379
- Synthesis of α-D-glucans by Streptococcus cricetus AHT, influence of the culture medium on the, 1
- Trichoderma reesei QM 9414, action on cello-oligosaccharides of cellobiohydrolase I from, 19 Tritium labelling of the reducing terminal of amylose, examination of structure by, 113
- Tryptophan residues of cyclodextrin glucanotransferase, effect of modification on the enzyme-catalysed hydrolysis of soluble starch and cyclomaltohexaose, 285
- Xyloglucan oligosaccharides containing from seventeen to twenty glycosyl residues, characterization of, 45
- Zea shoots, structural characterization of an arabinoxylan-rhamnogalacturonan complex from cell walls of, 315