Preface
Organizing Committee
Advisory Committee
Acknowledgements

Variability in agronomic and compositional characteristics of Jerusalem artichoke p. 1

Characteristics of growth and development of different Jerusalem artichoke cultivars p. 11

Multiannual, multilocational trials of Jerusalem artichoke in the south of Ireland: soil, pH and potassium p. 21

Crop characteristics and inulin production of Jerusalem artichoke and chicory p. 29

Leaf nitrogen, photosynthesis and crop productivity in Jerusalem artichoke (Helianthus tuberosus L.) p. 39

Jerusalem artichoke productivity modelling p. 45

Experiences in cultivation, processing and application of Jerusalem artichoke (Helianthus tuberosus L.) in Yugoslavia p. 51

The effect of long-term storage on the fructo-oligosaccharide profile of Jerusalem artichoke tubers and some observations on processing p. 57

A process for the production of inulin and its hydrolysis products from plant material p. 65

Pilot-scale production of inulin from chicory roots and its use in foodstuffs p. 77

Jerusalem artichoke costs of production in Canada: implications for the production of fuel ethanol p. 85

Separation and quantification of fructan (inulin) oligomers by anion exchange chromatography p. 93

The applicability of enzymatic methods for the quantitative analysis of fructan-containing plant extracts p. 101

 Extraction and purification of preparative amounts of 1-kestose, 6-kestose, neokestose, nystose and inulin-pentasaccharide p. 107

Some colligative properties of fructans: implications for ryegrass (Lolium perenne L.) grown under cool conditions p. 115

Recent advances in the structural chemistry of inulin p. 121

Structure analysis of small inulin oligosaccharides by 1D- and 2D-NMR p. 129

Chemical modification of chicory root inulin p. 135

Cycloinulo-oligosaccharides; structure and enzymatic synthesis p. 143

Hydroxymethylfurfural, a possible basic chemical for industrial intermediates p. 149

Enzymatic synthesis of hydroxymethylfurfural esters p. 161

Unresolved problems in the enzymology of fructan metabolism p. 167

Purification and properties of sucrose:sucrose fructosyltransferases from barley leaves and onion seeds p. 173

Fructan accumulation in cell suspension cultures of Phleum pratense L. p. 185

Fructan polymerization and depolymerization during the growth of chicory (Cichorium intybus L.) plants p. 191

Fructan exohydrolase from Lolium rigidum Gaud p. 199

Regulation of activity and properties of inulinases from roots of Cichorium intybus L. p. 205
Thermostable inulinases from Aspergillus ficuum: biochemical characterization and biotechnological applications  p. 211

Comparative studies of soluble and immobilized inulin-hydrolysing enzymes  p. 217

Immobilization of inulinase in activated carbon for the production of very-high-fructose syrups from Jerusalem artichoke tuber extracts  p. 223

Preparation and characterization of aqueous inulin/exo-inulinase systems  p. 231

Production and localization of inulinase in Kluyveromyces yeast  p. 241

Production of high-fructose-containing syrups from Jerusalem artichoke extracts with fructose enrichment through fermentation  p. 251

Modification of the transfructosylation activity of Bacillus subtilis levansucrase by solvent effect and site-directed mutagenesis  p. 259

A biotechnological and ecophysiological study of thermophilic inulin-degrading clostridia  p. 267

Inulin degradation by Pediococcus pentosaceus  p. 273

In vitro synthesis of inulin by the inulosucrase from Streptococcus mutans  p. 281

The cloned Bacillus subtilis levansucrase gene as a potent system for the exploitation of inulin in biotechnological processes  p. 289

Modelling inulin metabolism  p. 297

The occurrence of fructan in food plants  p. 309

Jerusalem artichoke as a multipurpose raw material for food products of high fructose or inulin content  p. 323

Preparation of pure inulin and various inulin-containing products from Jerusalem artichoke for human consumption and for diagnostic use  p. 341

Production and characteristics of fructo-oligosaccharides  p. 347

Production of fructo-oligosaccharide-rich fructose syrup  p. 355

Potential medicinal and nutritional uses of chicory roots and inulin  p. 359

Valorization of an inulin-rich by-product of chicory  p. 367

Activity of inulinase of some strains of Bifidobacterium and their effects on the consumption of foods containing inulin or other fructans  p. 373

Inulin fermentation in germ-free rats associated with a human intestinal flora from methane or non-methane producers  p. 381

The use of Jerusalem artichoke flour in pig and chicken diets  p. 385

The use of inulin for the determination of renal function: applicability and problems  p. 391

Some aspects of research on inulin and inulin-containing crops in the Ukraine  p. 397

Index  p. 401

Table of Contents provided by Blackwell's Book Services and R.R. Bowker. Used with permission.