Subject Index

Acknowledgment of reviewers, vi
Additives, effect on flour-water dough mixographs (Lang et al), 587
Air classification, of wheat flour, relation of hardness to protein content, yield, and protein shift (Wu and Stringfellow), 188
Alkali
—debranning, to obtain corn bran (Mistry and Eckhoff), 202
extracted starch, from corn flour, characteristics (Mistry and Eckhoff), 296
Alkylresorcinols, in extruded cereal brans (Al-Ruaie and Lorenz), 472
Alveograph, characteristics; effects of lipids, emulsifiers, defatting of flours (Addo and Pomeranz), 6
Amaranth, in infant formula, nitrogen balance (Del Valle et al), 156
Amino acid, composition
—of carbohydrate-containing protein (Chen et al), 475
—of gliadin fractions (Khan et al), 270
Amino acid sequencing, sequences of and cysteines in LMW-glutenin subunits (Lew et al), 508
a-Amylase
—inhibition of rye and barley (Törnönen et al), 355
—variability of synthesis in germinating maize (Knutson and Grove), 436
Amylopectin, recrystallization, surfactant effect (Rao et al), 613
Amylose
—colorimetric determination (Tester and Morrison), 654
—interaction with lipid, cause of unique properties of bread crumb amylogram (Ku et al), 502
—location in starch granules (Jane et al), 405
Baking
—absorption, effect on bread yield, crumb moisture, and crumb water activity (Puhur and D’Appolonia), 582
—bread: effect of pentosans from gluten-washing water (Yin and Walker), 592; rheological properties and baking quality of doughs made with different mixers (Mani et al), 222
—crumb of bread characterized by video image analysis (Bertrand et al), 257
—effects of egg yolk and sugar ester on frozen dough (Hosomi et al), 89
—gas retention in nonheated doughs (He and Hoseney), 1
—instrumental measurement of cookie hardness: application to product quality variables (Gaines et al), 120; assessment of methods (Gaines et al), 115
—potassium bromate analysis in flour, dough, and bread (De Stefanis), 683
—protein quantity effect on bread loaf volume (He and Hoseney), 17
—quality: flours milled from freshly harvested soft wheats (Shelke et al), 141; relationship to protein fractions (Preston et al), 560
—sensory characteristics and optimization of sugar-substituted cakes (Frey and Setser), 338
—use of electrical resistance oven for freshly harvested soft wheat batters (Shelke et al), 145
—white pan and whole wheat breads, comparison of hard red and white wheats (Chang and Chambers), 556
Barley
—α-amylase activity inhibition (Törnönen et al), 355
—cholesterol-lowering properties (Newman et al), 240
—dry milling and sieving for β-glucan enrichment (Knuckles et al), 198
—β-glucan content and viscosities of (Bhatty), 469
—β-1,3-glucans in (Szczyrdek et al), 419
—high-amylase, starch-lipid interactions (Szczyrdek and Pomeranz), 626
—hydrolyzed β-glucan effects on wheat starch gelatinization (Kim and Setser), 447
—near-infrared reflectance spectra (Czuchajowska et al), 413
—starch, waxy-nonwaxy, granule dimensions and swelling factors (Tester and Morrison), 654
Beans, azuki and common, composition, cooking time, and maturation of (Hsieh et al), 244
Bioavailability, calcium, in tortillas (Serna-Saldívar et al), 78
Biuret reaction, for rapid determination of protein in grains (Strong and Duarte), 659
Bran, phytate content as related to kernel size, environmental influences, and soft spring cultivars (Dintzis et al), 577
Bread and baking
—baking absorption effect on bread crumb moisture, yield, and crumb water activity (Puhur and D’Appolonia), 582
—bread crumb amylogram, cause of unique properties (Ku et al), 502
—bread crumb: characterized by video image analysis (Bertrand et al), 257; during storage, surfactant effect (Rao et al), 613; elastic properties of (Nussinovitch et al), 678
—bread crust and crumb, aroma and flavor (Chang and Chambers), 556
—compressive stress-strain of crumbs, characterization and prediction (Swynegedau and Peleg), 217
—cooper (II) vs. zinc inorganic salts as oxidizers in (Finney et al), 347
—crumb amylograph studies, effects of storage time, shortening, flour lipids, and surfactants (Ku et al), 495
—effects of wheat proteins (Scheromm et al), 664
—firming of crumb containing waxy barley starch (Inagaki and Seib), 321
—influence of specific gliadins (Van Lonkhuijsen et al), 174
—monitoring of gas production in bread dough (Ito et al), 325
—nonchaotropic salt effect on (He et al), 366
—potassium bromate analysis in (De Stefanis), 683
—properties, effects of high-voltage electric field treatment (Aibara et al), 465
—protein composition and breadmaking quality in wheat (Dong et al), 132
—psyllium effect on (Czuchajowska et al), 516
—quality and rheological properties of, using different dough mixers (Mani et al), 222
—reduction of phytic acid in whole meal (Fretzdorf and Brümmer), 266
—salt effect on interaction of milk proteins and wheat flour proteins (Roach et al), 574
—steamed, oven spring of (Rubenthaler et al), 334
Brown rice, stabilizing to lipolytic hydrolysis by ethanol vapors (Champagne and Hron), 152
Cake
—age-related changes in batter properties (Shelke et al), 145
—baking quality of, age-related changes in, freshly harvested soft wheats (Shelke et al), 141
—compressive stress-strain of crumbs, characterization and prediction (Swynegedau and Peleg), 217
—model systems, water loss and structure development in, microwave and convection heating (Lambert et al), 303
—psyllium effect on (Czuchajowska et al), 516
—reduced-calorie, layer-sensory and optimization (Frye and Setser), 338
—starch, sugar, and emulsifier interaction (Kim and Walker), 206
Calcium, bioavailability in tortillas (Serna-Saldívar et al), 78
Carbohydrate
—in glycoprotein of gluten (Chen et al), 475
—structural characterization of glycopeptide of wheat gluten (Chen et al), 481
Chlorination, effect on flours milled from freshly harvested soft wheats (Shelke et al), 141
Cholesterol
—effect of barley, oat bran, and wheat in chicks and rats (Newman et al), 240; of rice bran, defatted rice bran plus rice bran oil, and rice bran oil fractions—, wax, gum, degummed-dewaxed oil (Kahlon et al), 485
—reduction by oat bran and concentrates (Mäkki et al), 647
Chromatography
—hydrophobic interaction on phenyl-Sepharose CL-4B (Magnus and Khan), 607
—semipreparative RP-HPLC of gliadin (Khan et al), 270
—size-exclusion: of gluten proteins (Chen et al), 475; and ion-exchange of glycopeptide from gluten (Chen et al), 481
Cookies
—effect of various sugars on quality (Nishibori and Kawakishi), 160
—instrumental measurement of cookie hardness: application to product quality variables (Gaines et al), 120; assessment of methods (Gaines et al), 115
Corn (see also Maize)
—alkali-debranned yellow dent, dry milling and physical characteristics of (Mistry and Eckhoff), 82
—bran, alkali debranning to obtain (Mistry and Eckhoff), 202
—breakage susceptibility, density, stress cracked kernels, hardness, dry-milling response, and proximate analysis (Peplinski et al), 397
—calcium bioavailability in tortillas (Serna-Saldívar et al), 78
—hardness, related to particle size and yield of fractions from a micro hammer-cutter mill (Win), 343
—high-lysine, fractionation to produce edible by-products (Mistry et al), 33
—kernels, determination of water distribution and mobility in, using MRI (Ruan and Litchfield), 13
moisture measurement using MRI (Ruan et al), 600
- sequential extraction processing using ethanol (Hojilla-Evangelista et al), 643
- starch changes during tortilla processing (Gomez et al), 275
- sweet, zeins in (Wilson), 113

Dietary fiber, nonstarch polysaccharide and lignin values compared (Flint and Camire), 444

Dielectric properties, of starch-gluten-water system (Umbach et al), 637
- Differential scanning calorimetry
- comparisons for glucose, maltose, maltotriose, and sucrose on starch onset temperature (Lim et al), 397
- of flour with repeated heating and cooling (Ku et al), 502
- of gelatinization of starch granules (Liu and Leclere), 597
- of high-amylose barley, starch-lipid interaction (Szczodrak and Pomeraan), 626
- for sugar and emulsifier effect on starch gelatinization (Kim and Walker), 212

Dough
- breadmaking properties, effects of high-voltage electric field treatment (Albara et al), 465
- dielectric monitoring of dough expansion (Ito et al), 325
- frozen: effects of egg yolk and sugar ester (Hosomi et al), 89; rheology and yeast viability (Autio and Sinda), 409
- frozen bread, storage and freeze-thaw cycle effect and flour quality on baking and rheological properties (Inoue and Bushuk), 423
- mixing properties: effect of protein and lipoprotein fractions (Bekas and Gras), 229; heritability in early generations (Gras and O'Brien), 254
- potassium bromate analysis in (De Stefanis), 683
- reduction of phytic acid in model dough systems as affected by pH and temperature (Fretzdorff and Brummer), 266
- rheological characteristics of biscuit dough, effect of mixing time and amount of water (Sai Manohar and Haridas Rao), 619
- rheological properties and breadmaking quality with different dough mixers (Mani et al), 222
- temperature, during mixing (Li and Walker), 681
- treated with low concentrations of reducing agent (Khan and Huckle), 686
- viscoelastic properties of wheat flour doughs with added enzymes and at raised temperatures (Lindahl and Eliasson), 542
- viscoelasticity of zein-starch mixtures (Lawton), 351

Dry milling, of alkali-debranned yellow dent corn (Mistry and Eckhoff), 82

Drying, effect on quality and biochemical components of pasta (Aktan and Khan), 288

Elastic properties, of bread crust (Nussinovitch et al), 678

Electrophoresis
- acid and SDS separation of wheat proteins (Branlard et al), 677
- of fractions of glutenin from hydrophobic interaction chromatography (Magnus and Khan), 607
- of glutenin in relation to structure, SDS-PAGE modified procedure (Khan and Huckle), 686
- of high-temperature dried pasta (Aktan and Khan), 288
- one- and two-dimensional SDS-PAGE of partially reduced glutenin (Werner et al), 535
- of RP-HPLC gliadin fractions (Van Lomkuhijzen et al), 174

Emulsifiers
- effect on alveograph characteristics (Addo and Pomeraan), 6; on bread crumb amylogram and crumb firmness (Ku et al), 495; on starch gelatinization (Kim and Walker), 212
- interaction with starches and sugars in high-ratio cake model systems (Kim and Walker), 206

Ethanol, recovery from corn during sequential extraction processing (Hojilla-Evangelista et al), 643

Environment
- effect on bran phytate content and flour quality and milling parameters (Dintzis et al), 577
- and nitrogen fertilization, effect on baking quality (Scheromm et al), 664

Enzymes, addition of α-amylases and mixtures of α-amylases and proteases to wheat flour doughs (Lindahl and Eliasson), 542

Ethanol, vapors, for lipolytic hydrolysis to stabilize brown rice (Champagne and Hron), 152

Extraction, of corn meal, corn starch, wheat flour, and wheat starch, gelatinization and textual properties (Case et al), 401

Fiber
- soluble, from oat bran and concentrate, physical properties and hypo-cholesterolemic effects in rats (Mållkki et al), 647
- total and soluble, in air-classified white flour (Ranhotra et al), 75
- flour, air-classified white, fiber content of (Ranhotra et al), 75
- color, measurement in color space parameters (Olivier et al), 546
- corn, alkali-extracted starch obtained from (Mistry and Eckhoff), 296
- defatted, alveograph characteristics of (Addo and Pomeraan), 6
- non-cholesterolemic salt effect in breadmaking (He et al), 366
- oat, isolation of oat starch from (Lim et al), 233
- potassium bromate analysis in (De Stefanis), 683
- procedure to make tablets of to measure endosperm tensile strength (Malouf and Hoseney), 164
- refinement prediction; measurement of pericarp fluorescence (Symons and Dexter), 137
- taro, physicochemical studies (Jane et al), 528
- wheat, functional properties and protein composition (Gupta et al), 125

Fractionation
- of barley and oats by dry milling and sieving, yield and β-glucan and starch content of fractions (Knuckles et al), 198
- of carbohydrate-containing proteins of gluten (Chen et al), 475
- of glutenin by hydrophobic interaction chromatography (Magnus and Khan), 607
- of glycoprotein from gluten (Chen et al), 481

Gas retention, in unheated doughs (He and Hoseney), 1

Gelatinization
- of extruded starch-based materials, relationship to textural properties (Case et al), 401
- of starches from maize mutants (Wang et al), 328

Gliadin
- effect on rheological properties of amylopeptin starch (Maduka and Kokini), 489
- in relation to: baking quality (Van Lomkuhijzen et al), 174; kernel hardness, environment, and spike position (Huebner and Gaines), 148
- β-Glucan
- content in barley and oat fractions produced by dry milling and sieving (Knuckles et al), 198
- measurement in oat lines grown two years (Lim et al), 262
- from oat bran and concentrates, physical properties and hypocholesterolemic effects in rats (Mållkki et al), 647

Gluten
- digestion with pronase enzyme (Chen et al), 481
- free, Kjeldahl nitrogen values and gluten protein content for wheat starches (Skerritt and Hill), 110
- metal-complexing agent effect on water binding by (Clements), 315

Glutenin
- characterization of LMW-glutenin subunits (Lew et al), 508
- dimers of HMW-glutenin subunits formed by partial reduction (Werner et al), 535
- equivalence of subunits prepared by RP-HPLC and SDS-PAGE (Kawka et al), 92
- fractionation by hydrophobic interaction chromatography (Magnus and Khan), 607
- HMW and LMW (Branlard et al), 677
- SDS-PAGE of unreduced protein (Khan and Huckle), 686
- structure polymeric model in relation to rheological properties (Gao et al), 452

Grain
- antinutrients as affected by oven baking (Gahlawat and Sehgal), 463
- dryers, in-bin and continuous-flow (Moreira and Bakker-Arkema), 390
- Guideline for the preparation and review of papers reporting sensory evaluation data, v

Hardness
- of cookies: instrumental measurement of, application to product quality variables (Gaines et al), 120; instrumental measurement of, assessment of methods (Gaines et al), 115
- of corn, related to yield and particle size of fractions (Wu), 343
- of wheat: measuring endosperm tensile strength of tablets made from wheat flour (Malouf and Hoseney), 164; relating to gliadin composition (Huebner and Gaines), 148; starch granule protein effect on (Manou et al), 169

HPLC
- characterization by lotus starch by (Suzuki et al), 309
- enhancement by addition of SDS (Peterson and Wolf), 101

IEF, zeins in sweet corn (Wilson), 113

Image analysis
- bread crumb, characterization of texture (Bertrand et al), 257
Lactic acid, bacteria, in starter cultures, effect on sourdough (Vollmar and Meuser), 20
Lignin, recovery during nonstarch polysaccharide analysis (Flint and Camire), 444
Lipase, effect on lipid stability in oats (Ekstrand et al), 379
Lipidic response, in rats fed flaxseed or sunflower oils (Ranhotra et al), 623
Lipids
—deterioration related to lipase activity in oats (Ekstrand et al), 379
—effect on aleuropathic characteristics (Addo and Pomeranz), 6
—flour, effect on bread crumb amylogram and crumb firmness (Ku et al), 495
—interaction with starch, cause of unique properties of bread crumb amylogram (Ku et al), 502
Maize (see also Corn)
—high-moisture, preservation by propionate treatments (Raeker et al), 66
—thermal and gelling properties of starches from mutants (Wang et al), 328
—variability of α-amylase synthesis in germinating (Knutson and Grove), 436
—wet-milling characteristics of: product yield and composition (Wang and Johnson), 43; proximate composition and physical property relation (Fox et al), 191; starch and gluten qualities (Wang and Hanson), 47
Methods
—estimating pasta cooking loss (Matsuo et al), 27
—instrumental measurement of cookie hardness: application to product quality variables (Gaines et al), 120; assessment of methods (Gaines et al), 115
—to monitor dough expansion dielectrically (Ito et al), 325
—room-temperature, rapid, for protein determination in grains (Strong and Duarte), 659
Microwave heating
—model cake systems (Lambert et al), 303
—starch-gluten-water system (Umbach et al), 637
Millet, puffing quality (Delost-Lewis et al), 359
Milling
—to achieve desirable rheological behavior (Lindahl and Eliasson), 30
—of brown rice, thermal properties of starch in milled fractions (Marshall), 632
—characteristics of Canadian wheats (Symons and Dexter), 137
—degree evaluated by McGill rice miller (Andrews et al), 35
—sequential extraction processing of corn (Hojilla-Espiritu et al), 643
Mixograph
—application to early generation selection for dough strength (Gras and O'Brien), 254
—comparison of 35 gram vs. 10 gram (Wooding and Walker), 249
—flour-water dough, additive effect on (Lang et al), 587
—protein relationship with (Dong et al), 132
—temperature changes during mixing (Li and Walker), 681
Moisture, in starch and microcrystalline cellulose as measured using NIR spectroscopy (Delwiche et al), 107
NIR, sensitivity to moisture content and water activity (Delwiche et al), 107
NIR spectroscopy
—of barley β-d-glucans (Szczerdak et al), 419
—of barleys, starches, and β-d-glucans (Czuchajowska et al), 413
Nitrogen
—balance, in infant formula (Del Valle et al), 156
—digestibility of puffed millet (Delost-Lewis et al), 359
NMR
—comparisons of water mobility for four sugars in wheat starch-water system (Lim et al), 387
—pulsed gradient spin-echo, starch-gluten-water system (Umbach et al), 637
—wheat starch-sucrose-water interactions (Lim et al), 382
NMR imaging, distribution and mobility inside corn kernels during steeping (Ruan and Litchfield), 13
Oat bran
—cholesterol-lowering properties (Newman et al), 240
—concentrates of, physical properties of β-glucan and hypocholesterolemic effects in rats (Mäkikari et al), 647
Oats
—characterization of starch from groats with different amounts of lipid
(Hartunian Sowa and White), 521
—dry milling and sieving for β-glucan enrichment (Knuckles et al), 198
—β-glucan content in different genotypes (Lim et al), 262
—lipase activity (Ekstrand et al), 379
Oil
—canola oil, mineral oil, dust suppression, storage, HRS wheat (White et al), 182
—fatty acid profile of Inca peanut (Hamaker et al), 461
—flaxseed or sunflower, lipidemic response in rats (Ranhotra et al), 623
Particle size, determination of small-particle corn starch (Jane et al), 280
Pasta
—estimating cooking loss colorimetrically (Matsuo et al), 27
—high-temperature effect on dried (Aktan and Khan), 288
Pentosans
—in flours of 1B/1R translocation wheats (Biladeris et al), 226
—water-soluble, from gluten-washing water (Yin and Walker), 592
Phytic acid, starch, content, relationships to milling and flour quality parameters (Dintiz et al), 577
Phytic acid, reduction during breadmaking of whole-meal breads (Fretzdorff and Brummer), 266
Polydextrose, effects of fractions on wheat starch gelatinization (Kim and Setzer), 447
Popcorn, popping behavior and zein coating of (Wu and Schwartzberg), 567
Porridge, stff, acidic and basic (Vivas et al), 673
Propionic acid, for preservation of high-moisture maize (Raeker et al), 66
Protein
—content and strength effect on oven spring of steamed bread (Rubenthaler et al), 334
—fractionation by RP-HPLC and Osborne procedure (Khan et al), 270
—friabilin starch granule (Morris et al), 467
—glutenin oligomers and imers of subunits (Gao et al), 452
—in grains, rapid determination (Strong and Duarte), 659
—influence on rheological properties of starches (Chedid and Kokkin), 551
—K protein in developing wheat grain (Kazemie and Bushuk), 103
—in quality of Inca peanut (Hamaker et al), 461
—in quantity effect on bread loaf volume (He and Hoseney), 17
—in sorghum, maize, and pearl millet for stff porridge (Vivas et al), 673
—in structure of disulfide-linked HMW-glutenin subunits (Werner et al), 535
—in wheat flour, solubility in LiCl solution (Kazemie and Bushuk), 105
Psyllium, effects on bread staling and dough mixing (Czuchajowska et al), 516
Quinoa, nutrients and antinutrients (Chauhan et al), 85
Rheological properties
—doughs, relation to breadmaking quality and mixing equipment (Mani et al), 222
—in effect of mixing time and amount of water on biscuit dough (Sai Manohar and Haridas Rao), 619
Rheology
—amylose, amylopectin plus protein systems (Chedid and Kokkin), 551
—in frozen storage effect on (Autow and Sinda), 409
—in gelatinization of starch granules (Liu and Lelievre), 597
—in oscillatory measurements on wheat flour doughs (Lindahl and Eliasson), 542
—in viscoelastic properties of durum and wheat flour doughs (Lindahl and Eliasson), 30
Rice
—in head, yield evaluated by McGill rice miller (Andrews et al), 35
—in starch thermal properties in brown and milled (Marshall), 632
—in rice bran, cholesterol-lowering in hamsters (Kahlon et al), 485
—in RP-HPLC
—in equivalence of HMW subunits prepared by (Kawk et al), 92
—in of gliadins: of high-temperature dried pasta (Aktan and Khan), 288
—in relating to kernel hardness (Hueneber and Gaines), 148
—in relation to baking quality (Van Lomhuisjes et al), 174
—in separation of reduced and pyridylethylated fractions of HMW-glutenin subunits (Lew et al), 508
—in of wheat proteins using highly stable column (Marchylo et al), 371
Rye, α-amylase activity inhibition (Törrönen et al), 355
Rye bran, extruded, alkylresorcinols in (Al-Ruqaie and Lorenz), 472
Salt, effect on interaction of milk proteins and wheat flour proteins (Roach et al), 574
Scanning electron microscopy
—of sorghum flour, effects of cooking and treatment with sodium bisulfitie (Rom et al), 178
—of starch granules (Fannon et al), 284
—of starch paste and granule remnants (Fannon and BeMiller), 456
SDS-PAGE
—analysis of unredrned glutenin by modified stacking gel procedure (Khan and Huckle), 686
—enhanced detection and isolation of friabilin (Morris et al), 467
—equivalence of HMV subunits prepared by (Kawka et al), 92
—of fractions of glutenin from hydrophobic interaction chromatography (Magnus and Khan), 607
—of high-temperature dried pasta (Aktan and Khan), 288
—one-dimensional analysis of reduced and pyridylethylated fractions of LMW-glutenin subunits (Lew et al), 508
—RP-HPLC of soybean proteins (Peterson and Wolf), 101
—two-dimensional analysis (unreduced vs. fully reduced proteins) of partially reduced glutenin (Werner et al), 555
—zeins in sweet corn (Wilson), 113
Sorghum
—endosperm flour, nonstarch polysaccharides and hardness (Kavitha and Chandrashekar), 440
—flour, effects of cooking and treatment with sodium bisulfitie on digestibility and microstructure (Rom et al), 178
Sourdough, fermenter, performance influenced by starter cultures (Vollmair and Meuser), 20
Soybean, proteins; enhanced HPLC with SDS (Peterson and Wolf), 101
Starch
—amylopectin, zein and gliadin effect on rheological properties of (Madeka and Kokini), 489
—amylose and amylopectin structures affecting paste properties (Jane and Chen), 60
—barley, waxy, nonwaxy, granule dimensions and swelling factors (Tester and Morrison), 654
—changes during tortilla processing (Gomez et al), 275
—characterization from groats with different amounts of lipid (Kartunian Sowa and White), 521
—corn, paste and granule remnants, scanning electron microscopy of (Fannon and BeMiller), 456
—detection of water within using NIP spectroscopy (Delwiche et al), 107
—gelatinization: in brown and milled rice and pulverized rice kernels (Marshall), 632; DSC and rheology for (Liu and Lelièvre), 597; in presence of bulking agents (Kim and Setzer), 447; sugar and emulsifier effect on (Kim and Walker), 212
—gelatinization in presence of bulking agents (Kim and Setzer), 447
—graft polymerization by reactive extrusion (Carr et al), 70
—granular structure of (Jane et al), 405
—granule protein; effect on wheat hardness (Manouf et al), 169
—interaction: with sucrose and water studied by NMR (Lim et al), 382; with sugars by DSC and NMR studies (Lim et al), 387; with sugars and emulsifiers in high-ratio cake model systems (Kim and Walker), 206
—lotus, characterization of (Suzuki et al), 309
—near-infrared reflectance spectra (Czuchajowska et al), 413
—oat: cationic, preparation and effect on paper strength (Lim et al), 237; isolation from oat flour (Lim et al), 233
—pejibaye, characterization (Jane et al), 96
—rheological behavior of wheat flour doughs caused by damaged starch (Lindahl and Eilassi), 30
—rheological properties of amylase, amylopectin plus protein systems (Chedid and Kokini), 551
—small-particle corn, preparation and properties (Jane et al), 280
—surface pores of granules (Fannon et al), 284
—taro, physicochemical studies (Jane et al), 528
—thermal and gelling properties of maize mutants (Wang et al), 328
—wheat, relation between Kjeldahl nitrogen values and gluten protein content (Skerritt and Hill), 110
Steeping, of corn kernels, MRI for moisture measurement (Ruan et al), 600
Storage, effect of canola oil or mineral oil on wheat storage (White et al), 182
Sugar
—effect: on cookie quality (Nishibori and Kawakishi), 160; on starch and water interactions studied by NMR (Lim et al), 382; on starch gelatinization (Kim and Walker), 212
—effect on water mobility (Lim et al), 387
—interaction with starches and emulsifiers in high-ratio cake model systems (Kim and Walker), 206
Surfactants, effect
—on amylopectin recrystallization and bread crumb recoverability (Rao et al), 613
—in frozen dough (Hosomi et al), 89
Tannins, quinoa seed fractions (Chauhan et al), 85
Texture, of extruded starch-based materials, relationship to extent of gelatinization (Case et al), 401
Tortillas
—calcium bioavailability in (Serna-Saldívar et al), 78
—corn, effect of processing on starch (Gomez et al), 275
Triticale bran, extruded, alkylresorcinols in (Al-Ruqaie and Lorenz), 472
Viscosity, batter, age-related changes, in freshly harvested soft wheats (Shelke et al), 145
Wet milling
—of maize, grain proximate composition and physical property relations (Fox et al), 191
—in proportionate-treated high-moisture maize: product yield and composition (Wang and Johnson), 43; starch and gluten qualities (Wang and Johnson), 47
Wheat
—1B/1R translocation, pentosans in flour of (Biladeris et al), 226
—cultivar and environmental effect on quality (Scheromm et al), 664
—durum, measurement of pigment by VIS/NIR (McCaig et al), 671
—durum and wheat flour doughs compared (Lindahl and Eilassi), 30
—effect of oil application for dust suppression on storage characteristics, baking and milling, and insecticides in HRS wheat (White et al), 182
—estimating pasta cooking loss (Matsu et al), 27
—flour, functional properties and protein composition (Gupta et al), 125
—flour protein solubility in LiCl solution (Kazemz and Bushuk), 105
—friabilin starch granule protein (Morris et al), 467
—hard red, classification and quality of (Slaughter et al), 428
—in hard red and hard white winter, compared in bread (Chang and Chambers), 556
—in hard and soft, air-classified white flour from, fiber content of (Ranhota et al), 75
—in hardness: measured by protein content, yield, and protein shift after air classification (Wu and Stringfellow), 188; measuring endosperm tensile strength of tablets made from wheat flour (Malouf and Honesey), 164; starch granule protein effect on (Manouf et al), 169
—in hybrids, parental blends as predictors of quality (Lanning et al), 329
—in K proteins in developing grain (Kazemz and Bushuk), 103
—in Karnal bunt infected: milling, rheological, and baking properties (Sekhon et al), 50; nutritional and biological effects (Singh et al), 55
—in protein: glutenins, HMW and LMW, D-zone proteins (Branlard et al), 677; of high protein line (Khan et al), 270; RP-HPLC for analysis with highly stable column (Marchylo et al), 371
—in protein fractions, relationship to quality (Preston et al), 560
—in relation of gliadins to kernel hardness (Huebner and Gaines), 148
—in selection for mixing properties, use of 2-gram mixograph for (Gras and O'Brien), 254
—in storage proteins, glutenin structure (Gao et al), 452
—in structure and arrangement of glutenin protein subunits (Werner et al), 535
Wheat bran, extruded, alkylresorcinols in (Al-Ruqaie and Lorenz), 472
Yeast
—in activity, frozen storage effect in dough (Auto and Sinda), 409
—in starter cultures, effect on sourdough (Vollmair and Meuser), 20
Zein
—in coating, of popcorn (Wu and Schwartzberg), 567
—in effect on rheological properties of amylopectin starch (Madeka and Kokini), 489
—in sweet corn (Wilson), 113
—in viscoelasticity of composite flour doughs containing starch and dibutyl tetratate (Lawton), 351