

## Subject Index

Pages of errata are in boldface italics.

### **Aflatoxin**

- contamination in corn (Wilson et al), **40**
- contamination in corn; presumptive test using BGY fluorescence (Shotwell and Hesselstine), **124**
- production in barley, moisture effect (Chang and Markakis), **89**

### **Air classification**

- cakes from intermediate cuts from (Chaudhary et al), **314**
- of grain legumes, separation efficiency and fraction composition (Tyler et al), **144**
- legumes, effects on composition of (Davis), **454**

### **Amino acids**

- composition of tef grains, negative correlation of lysine with glutamic acid (Lester and Bekele), **113**
- in eastern gama grass (Bates et al), **138**

### **Ammonia**

- aqueous and controlled-release; preserving high-moisture maize with (Van Cauwenberge et al), **293**

### **$\alpha$ -Amylase**

- activity in hard red and hard white wheats (McCrate et al), **424**
- activity of pearl millet amylases toward starch granules (Beleia and Varriano-Marston), **437**
- falling number, effect of altitude (Lorenz and Wolt), **80**
- in field-sprouted wheat; distribution and effect on Japanese-type sponge cake (Finney et al), **355**
- modified procedure for determination of low levels (Kruger and Tipples), **271**
- nephelometric method for determination in flour (Osborne et al), **474**

- properties of in pearl millet (Beicia and Varriano-Marston), **433**
- wheat, detection of genotypic and nitrogen effects (Bhatt et al), **300**

### **Amylose**

- legume starches (Biliaderis et al), **486**

### **Baking**

- balady bread; effects of temperature and time on quality and nutritive value of (El-Samahy and Tsen), **546**
- bread; incorporation of salt in sponge for reduced fermentation time and bromate requirement (Kilborn et al), **508**
- cake; development of structure (Paton et al), **527**
- cake; device for monitoring expansion (Clements and Donelson), **153**
- cakes; edible beef tallow substitution in (Bundy et al), **213**
- cake and bread; starch heat-moisture treatment, functional properties and baking potential (Lorenz and Kulp), **49**
- cake and bread; starch heat-moisture treatment, physicochemical properties (Kulp and Lorenz), **46**
- Chinese and Canadian spring wheat cultivars compared (Kosmolak and Dyck), **246**
- cookies; functionality of specific flour lipids (Clements and Donelson), **204**
- cookies; regression analysis of diameter and folacin retention (Connor and Keagy), **239**
- differences in wheat varieties (Marais and D'Appolonia), **444, 448**
- effects on methyl phoxim and malathion residues (Alnaji and Kadoum), **74**
- heat sink reference oven for (Kilborn and Tipples), **295**
- lipoxxygenase role in (Faubion and Hosenev), **175**

- microwave radiation and storage effects on flour (MacArthur and D'Appolonia), 53
- quality of pea protein concentrate-cheese whey blends (Patel et al), 249
- shortening systems for (Knightly), 171
- surfactant effect on air incorporation and crumb grain (Junge et al), 338
- Barley**
- amino-terminal amino acid sequence of hordein (Bietz), 83
- beta-glucanase to measure neutral detergent fiber (Roth et al), 245
- beta-D-glucans in developing and germinating kernels (Prentice and Faber), 77
- dehulling of (Oomah et al), 492
- moisture content effect on aflatoxin production (Chang and Markakis), 89
- multi-sample dehulling device (Oomah et al), 392
- trace element and protein content in milled fractions (Weaver et al), 120
- Beans**
- dry; starch, crude fiber, and oligosaccharide changes in (Labaniah and Luh), 135
- Great Northern; flour and protein concentrations, effects on dough rheology and bread-baking quality (Sathe et al), 97
- Bioavailability**
- assessment with animal models (Spivey Fox et al), 6
- of iron in flat breads (Ranhotra et al), 471
- of iron and zinc, relation to soy proteins in human diets (Young and Janghorbani), 12
- of minerals (Ranhotra et al), 127
- of trace minerals from cereals and legumes (Erdman), 21
- of zinc in breakfast cereals (Morris and Ellis), 363
- Bran**
- extraction of proteins (Waszczynskij et al), 264
- micro baking evaluation of U.S. wheats for Iranian breads (Faridi et al), 428
- niacin, aromatic amine, and phytin reserve detection in (Fulcher et al), 130
- oat and wheat; rat digestion effect on (Bertrand et al), 375
- produced during sorghum decortication (Shepherd), 303
- starch content (Dintzis and Harris), 467
- wheat; as ingredient in high-fiber extruded product (Anderson et al), 370
- Bread and bread making**
- baladi bread; cottonseed flour substitution in (El-Minyawi and Zabik), 413
- balady bread; quality and nutritive value of (El-Samahy and Tsen), 546
- Do-Corder to evaluate bread-making properties of dough (Nagao et al), 384
- effect of single cell protein alone and with salty oxidant and surfactant on dough rheology and bread quality (Volpe and Zabik), 441
- fiber in, counteracting deleterious effects of (Shogren et al), 142
- flour lipids; theoretical aspects and functional properties (MacRitchie), 156
- Great Northern bean flour and protein concentrate effects on (Sathe et al), 97
- heat sink reference oven for (Kilborn and Tipples), 295
- lipid-related materials in, theory and application (Chung), 155
- mechanism for shortening and surfactants improving loaf volume (Junge and Hosney), 408
- micro baking evaluation of U.S. wheats for Iranian breads (Faridi et al), 428
- mixing tolerance (Skeggs and Kingswood), 256
- pea protein concentrate-cheese whey blend used in (Patel et al), 249
- phytic acid determination (Tangkongchitr et al), 226
- phytic acid loss during (Tangkongchitr et al), 229
- potential and quality (Pomeranz), 190
- properties of new dry yeast (Bruinsma and Finney), 477
- role of fermentation in bread making (Nagao et al), 388
- salt in sponge for reduction of fermentation time and bromate requirement (Kilborn et al), 508
- shortening level effect on flour (Chung et al), 69
- staling factors (D'Appolonia and Morad), 186
- sucrose monoesters and diesters in (Chung et al), 164
- surfactant effect on air incorporation in doughs (Junge et al), 338
- surfactant functional properties in (Chung et al), 220
- surfactant use in, theoretical aspects of (Krog), 158
- triticale lipids, composition of triticale flours (Zeringue et al), 351
- Breadfruit**
- isolation and characterization of starch from (Loos et al), 282
- Cakes and cookies**
- cakes; development of structure (Paton et al), 527
- cakes; edible beef tallow substitution in (Bundy et al), 213
- cakes; effect of field-sprouted wheat and  $\alpha$ -amylase on Japanese-type sponge (Finney et al), 355
- cakes; flour particle size relation to quality of (Chaudhary et al), 314
- cookies; diameter and folacin retention, regression analysis using factorial design (Connor and Keagy), 239
- cookies; functionality of specific flour lipids (Clements and Donelson), 204
- device for monitoring expansion (Clements and Donelson), 153
- Carbohydrates**
- starch importance in bread staling (D'Appolonia and Morad), 186
- Cereal**
- breakfast; bioavailability of zinc, influence of phy/Zn molar ratio (Morris and Ellis), 363
- dietary fiber determination in (Frølich and Asp), 524
- nutritional evaluation of wheat, triticale, and rice (Shariff et al), 86
- proximate composition, phytic acid and phosphorus content of (Davis), 347
- Cereal grains**
- decortication of sorghum (Shepherd), 303
- dielectric properties of; influence of moisture, density, and temperature (Nelson), 487
- laboratory-scale decortication of (Shepherd), 463
- protein amino acids in tef (Lester and Bekele), 113
- Corn**
- aflatoxin contaminated; presumptive test (Shotwell and Hesselstine), 124
- aflatoxin contamination and BGY fluorescence in (Wilson et al), 40
- alcohol distillation; fractionation of protein-rich residue from (Wu et al), 343
- artificial drying of (Brown et al), 75
- breakage susceptibility measurement (Miller et al), 201
- dielectric properties of; influence of moisture, density, and temperature (Nelson), 487
- differential settling test to evaluate liquid cyclone classification performance (Hron), 334
- disc gel electrophoresis of soluble endosperm proteins of inbreds (Wilson), 401
- glutelins; fraction of (Esen et al), 534
- grains; gamma ray effect on (Roushdi et al), 110
- protein; comparison by gel electrophoresis (Wilson et al), 275
- zein protein; structure of (Paulis), 542
- Cornmeal**
- moisture and temperature effects on microbiological and sensory properties of (Bothast et al), 309
- Cottonseed**
- differential settling test to evaluate liquid cyclone classification performance (Hron), 334
- Cultivar**
- flour particle size distribution related to cake volume (Chaudhary et al), 314
- Dehulling**
- of barley and sorghum (Oomah et al), 492
- multi-sampling dehulling device (Oomah et al), 392
- Dough**
- characteristics studied by height tracker (Kilborn and Preston), 198
- Do-Corder to evaluate bread-making properties of (Nagao et al), 384
- fermentation effect on bread-making properties of (Nagao et al), 388
- mixing and development (Pomeranz), 190
- mixing tolerance, effect of mixer speed and work input (Skeggs and Kingswood), 256
- phytic acid loss during fermentation (Tangkongchitr et al), 229
- rheological properties of, made from gaseous ammonia-treated flour (Terada et al), 101
- surface tension effect on rheological behavior (Bloksma), 481
- surfactant effect (Tsen and Weber), 180
- surfactant effect on air incorporation (Junge et al), 338
- vacuum expansion of mechanically developed (Bell et al), 182
- Electrophoresis**
- corn proteins, comparisons of fractions (Wilson et al), 275
- of soluble endosperm proteins of corn inbreds (Wilson), 401
- zein fractionation on Sephadex G-200 (Paulis), 542
- Enzymes**
- $\alpha$ -amylase activity, effect of altitude on FN value (Lorenz and Wolt), 80
- applications to wheat bran (Waszczynskij et al), 264
- breadmaking functionality and enzymatic properties of lipoxygenase (Faubion and Hosney), 175
- method for determining low levels of  $\alpha$ -amylase in wheat and flour (Kruger and Tipples), 271
- role of peroxidase and tyrosinase in oxidative gelation (Hosney and Faubion), 401
- starch determination in brans with glucoamylases (Dintzis and Harris), 467
- trypsin inhibitors from rye, triticale, and wheat samples, characterization

- and heat stability (Chang and Tsen), 211  
 trypsin inhibitors isolated from rye, triticale, and wheat samples (Chang and Tsen), 207
- Errata**  
 Gaines and Tsen (Vol. 57, p. 429), 154  
 Hsieh et al (Vol. 58, p. 106), 362  
 Pomeranz et al (Vol. 52, p. 849), 480  
 Ranum et al (Vol. 58, p. 32), 248  
 Varriano-Marston et al (Vol. 57, p. 242), 248
- Extrusion cooking**  
 estimation of degree of cooking (Paton and Spratt), 216  
 twin-screw; of high-fiber cereal product (Anderson et al), 370
- Fermentation**  
 dough height tracker application in study of dough characteristics (Miller et al), 201  
 effect on bread-making performance (Nagao et al), 388
- Fiber**  
 in breadmaking; counteracting deleterious effects (Shogren et al), 142  
 cell wall material from peas (*Pisum sativum*) (Reichert), 266  
 changes in germinating dry beans (Labaneiah and Luh), 135  
 dietary; in breakfast cereals (Morris and Ellis), 363  
 dietary; determination in wheat flour, wheat bran, and rye flour (Frølich and Asp), 524  
 dietary; in diets containing native oat bran and native, enzymically, or chemically modified wheat brans (Bertrand et al), 375  
 dietary; in high-fiber extruded product (Anderson et al), 370  
 effect on human bowel function and trace mineral balances (Kelsay), 2  
 neutral detergent; measurement of in barley kernels (Roth et al), 245
- Flat bread**  
 bioavailability of iron in (Ranhotra et al), 471  
 micro baking evaluation of U.S. wheats in Iranian (Faridi et al), 428
- Flour**  
 cakes from soft and hard wheat air classified or wet fractionated (Chaudhary et al), 314  
 components influencing Do-Corder curves (Endo et al), 538  
 defatted and reconstituted wheat; shortening level effect (Chung et al), 69  
 gaseous ammonia treatment (Terada et al), 101  
 isolation and estimation of cell wall material from peas (Reichert), 266  
 legume; composition and protein quality of (Davis), 454  
 lipids; theoretical aspects and functional properties (MacRitchie), 156  
 method for determining  $\alpha$ -amylase of (Kruger and Tipples), 271  
 microwave radiation and storage effects on (MacArthur and D'Appolonia), 53  
 nephelometric method for measuring alpha-amylase in (Osborne et al), 474  
 neutral lipids in (Hsieh et al), 106, 362  
 protein level and mixing tolerance (Skeggs and Kingswood), 256  
 type and condition influence on expansion (Bell et al), 182  
 wheat; extraction of unreduced glutenin with SDS (Danno), 311  
 wheat; moisture and temperature effects on microbiological and sensory properties of (Bothast et al), 309  
 wheat; relation between hydrophobic properties of gluten proteins and extractability and turbidity in neutral salts (Preston), 317
- Germination**  
 $\alpha$ -amylase effect in hard red and hard white wheats (McCrate et al), 424  
 wheat, assessment of methods (Bhatt et al), 300
- Gluten**  
 flow properties of dispersion (Mita and Matsumoto), 57  
 wheat; neutral salt effects on protein properties of (Preston), 317
- Glutenin**  
 extraction with SDS (Danno), 311
- Grains**  
 breakage susceptibility in corn (Miller et al), 201  
 decortication of sorghum (Shepherd), 303  
 dielectric properties of; influence of moisture, density, and temperature (Nelson), 487  
 dust; mineral components of (Lai et al), 417  
 laboratory-scale decortication of (Shepherd), 463  
 multi-sample dehulling device (Oomah et al), 392  
 sorghum; tempering (Abdelrahman and Farrell), 307
- Instruments and instrumentation**  
 decorticator for small grains (Shepherd), 463  
 device for monitoring batter expansion (Clements and Donelson), 153  
 Do-Corder to evaluate bread-making properties of dough (Nagao et al), 384  
 Do-Corder to investigate rheological and bread-making properties of dough (Nagao et al), 388  
 dough height tracker (Kilborn and Preston), 198  
 falling number, effect of altitude (Lorenz and Wolt), 80  
 gas chromatography for separation and estimation of neutral lipids from wheat endosperm (Hsieh et al), 106, 362  
 Stein breakage tester modification effects (Miller et al), 201  
 variable speed dough mixer (Skeggs and Kingswood), 256
- Iron**  
 in breads (Ranhotra et al), 471
- Legumes**  
 air classification of (Tyler et al), 144  
 effects of processing on composition and protein quality (Davis), 454  
 isolation and estimation of cell wall material from peas (Reichert), 266  
 starches; structural characterization of (Biliaderis et al), 486, 502
- Lipids**  
 binding in breads; surfactant and soy flour effects on (Chung et al), 220  
 in breadmaking (Pomeranz), 190  
 flour; functionality in cookies (Clements and Donelson), 204  
 flour; theoretical aspects and functional properties (MacRitchie), 156  
 lipoxigenase biochemistry and role in breadmaking (Faubion and Hoseney), 175  
 steryl esters and acylglycerols in wheat endosperm (Hsieh et al), 106, 362  
 triticale; composition and bread-making characteristics of triticale flour (Zeringue et al), 351
- Lipoxigenase**  
 biochemistry and role in breadmaking (Faubion and Hoseney), 175
- Maize**  
 high-moisture; controlled-release ammonia or aqueous ammonia for preservation of (Van Cauwenberge et al), 293
- Methods**  
 for decorticating sorghum (Shepherd), 463  
 to determine low levels of  $\alpha$ -amylase in wheats and flours (Kruger and Tipples), 271  
 Do-Corder to evaluate bread-making properties of dough (Nagao et al), 384  
 for elucidating how sorghum peels (Shepherd), 303  
 extraction of unreduced glutenin from wheat flour (Danno), 311  
 heat sink reference oven for bread baking (Kilborn and Tipples), 295  
 preharvest sprouting assessment (Bhatt et al), 300
- Microwave heating**  
 effect on microstructure of rapeseed (Maheshwari et al), 381
- Millet**  
 pearl; activity toward starch granules (Beleia and Varriano-Marston), 437  
 pearl; properties of partially purified alpha-amylase (Beleia and Varriano-Marston), 433
- Milling**  
 of barley and sorghum (Oomah et al), 492  
 Chinese and Canadian spring wheat cultivars compared (Kosmolak and Dyck), 246  
 to decorticate sorghum (Shepherd), 303  
 differential settling test to evaluate liquid cyclone classification performance (Hron), 334  
 effect on trace element and protein content of barley and oats (Weaver et al), 120  
 in laboratory decortication (Shepherd), 463  
 multi-sample dehulling device (Oomah et al), 392  
 sorghum into grits (Abdelrahman and Farrell), 521
- Minerals**  
 bioavailability assessment with animal models (Spivey Fox et al), 6  
 bioavailability of from cereals and legumes (Erdman), 21  
 bioavailability of in citrate phosphate complexes (Ranhotra et al), 127  
 components of grain dust (Lai et al), 417  
 content in soluble and insoluble dietary fiber components (Frølich and Asp), 524  
 diet fiber level effect on balances in humans (Kelsay), 2  
 phytic acid and trace metal relation in wheat bran and soybean (Ellis and Morris), 367  
 soy proteins in human diets in relation to iron and zinc bioavailability (Young and Janghorbani), 12  
 trace; in oats, groats, and hulls grown on soil treated with sewage sludges (Kirlis et al), 530
- Moisture**  
 effect on aflatoxin in barley (Chang and Markakis), 89
- Mungbean**  
 physical and hydrodynamic studies on salt-soluble proteins of (Narang et al), 92
- Nutrition**  
 of balady bread; effects of baking temperature and time (El-Samahy and Tsen), 546  
 of breakfast cereals (Morris and Ellis), 363  
 folacin retention in enriched cookies, regression analysis using factorial design (Connor and Keagy), 239  
 protein, zinc, and copper relations (Ritchey), 18

- tribolium in nutritional evaluation of cereals (Shariff et al), **86**  
 trypsin inhibitor from rye endosperm (Boisen and Djurtoft), **194**
- Oats**  
 aleurone and starchy endosperm structure (Bechtel and Pomeranz), **61**  
 amino acid sequence determination in purothionin analogue from, letter to editor (Békés and Lásztity), **361**  
 heavy metal content of when grown on soil treated with sewage sludge (Kirleis et al), **530**  
 starch; effect of sucrose, salts, and acids (Paton), **35**  
 trace element and protein content in milled fractions (Weaver et al), **120**
- Oxidation**  
 mechanism for oxidative gelatin of wheat flour water-solubles (Hoseney and Faubion), **421**  
 use of salt for reduced fermentation time and bromate requirement in bread (Kilborn et al), **508**
- Particle size**  
 flour; relation of cultivar to cake volume (Chaudhary et al), **314**
- Peanut**  
 differential settling test to evaluate liquid cyclone classification performance (Hron), **334**
- Peas**  
 isolation and estimation of cell wall material (Reichert), **266**
- Pentosans**  
 water-soluble; mechanism of oxidative gelation of wheat flour (Hoseney and Faubion), **421**
- Phytic acid**  
 in breakfast cereals, method for determining (Davis), **347**  
 in breakfast cereals, phy/Zn molar ratio (Morris and Ellis), **363**  
 concentration in legumes and legume products (Davis), **454**  
 determination in bread, flour, and dough (Tangkongchitr et al), **226**  
 fate during breadmaking (Tangkongchitr et al), **229**  
 relation with trace metals in wheat bran and soybean (Ellis and Morris), **367**
- Polyphenol oxidase**  
 activities of wheat cultivars (Lamkin et al), **27**
- Polyphenols**  
 sorghum; evaluation of methods determining (Earp et al), **234**
- Polysaccharides**  
 cell-wall; analysis of, in oat and wheat brans, hemicelluloses and cellulose (Bertrand et al), **375**
- Prolamin**  
 amino-terminal amino acid sequence of hordein (Bietz), **83**
- Protease**  
 wheat, detection of genotypic and nitrogen effects (Bhatt et al), **300**
- Protein**  
 amino-terminal amino acid sequence of hordein (Bietz), **83**  
 content in breakfast cereals (Davis), **347**  
 corn; endosperm fractions, compared by gel electrophoresis (Wilson et al), **275**  
 of cultivated and wild cereals (Lester and Bekele), **113**  
 disc gel electrophoresis of soluble endosperm proteins of corn inbreds (Wilson), **401**  
 extractability; in breadmaking (Chung et al), **220**  
 fractionation of alcohol-soluble glutelin (Esen et al), **534**  
 fractionation of corn stillage fractions (Wu et al), **343**  
 granules; in eastern gama grass (Bates et al), **138**  
 lipoxygenase biochemistry and breadmaking functionality (Faubion and Hoseney), **175**  
 milling of barley and oats (Weaver et al), **120**  
 mungbean; physical and hydrodynamic studies on (Narang et al), **92**  
 quality; microbiological assay of legume products using *Tetrahymena pyriformis* (Davis), **454**  
 relation to zinc and copper in human nutrition (Ritchey), **18**  
 soy; N-terminal amino acid sequences and subunit structure of glycinin (Iyengar and Ravestain), **325**  
 soy; relation to iron and zinc bioavailability in human diets (Young and Janghorbani), **12**  
 zein; disulfide structure of (Paulis), **542**
- Rapeseed**  
 microwave treatment effect on microstructure of (Maheshwari et al), **381**
- Rheology**  
 changes in exudate viscosity of wheat starch pastes in presence of xanthan, guar, and CMC gums (Christianson et al), **513**  
 Do-Corder to evaluate bread-making properties of dough (Nagao et al), **384**  
 dough; Great Northern bean flour and protein concentrate effects on (Sathe et al), **97**  
 surface tension effect on rheological behavior of dough (Bloksma), **481**
- Rice**  
 chemical composition as related to kernel thickness (Matthews et al), **331**  
 mineral elements on (Dikeman et al), **148**
- Rye**  
 flour, soluble and insoluble dietary fiber determination (Frølich and Asp), **524**  
 identification among cereals (Boisen and Djurtoft), **194**  
 trypsin inhibitors, characterization and heat stability (Chang and Tsen), **211**  
 trypsin inhibitors isolation (Chang and Tsen), **207**
- Salts**  
 neutral; effect on wheat gluten protein properties (Preston), **317**
- Scanning electron microscopy**  
 of rice (Dikeman et al), **148**
- Semolina**  
 durum; adulteration by spring wheat farina, neutral lipids in (Hsieh et al), **106, 362**
- Shortening**  
 difference in expansion under vacuum of doughs with and without (Bell et al), **182**  
 mechanism for its improvement of loaf volume (Junge and Hoseney), **408**  
 use of surface-active agents in (Knightly), **171**
- Sorghum**  
 decortivating in laboratory mill (Shepherd), **463**  
 dehulling of (Oomah et al), **462**  
 dry milling for grits (Abdelrahman and Farrell), **521**  
 how a typical one peels (Shepherd), **303**  
 methods for measuring tannin levels (Earp et al), **234**  
 moisture penetration in (Abdelrahman and Farrell), **307**  
 multi-sample dehulling device (Oomah et al), **392**
- Soybeans**  
 decomposition of phospholipids during storage (Nakayama et al), **260**  
 N-terminal amino acid sequences and subunit structure of glycinin (Iyengar and Ravestain), **325**  
 phytic acid and trace mineral relation in (Ellis and Morris), **367**  
 trypsin inhibitors, thermal inactivation of (Ellenrieder et al), **291**
- Soy products**  
 determination of trypsin inhibitor content (Hamerstrand et al), **42**
- Starch**  
 from breadfruit; isolation and characterization of (Loos et al), **282**  
 changes in germinating dry beans (Labaneiah and Luh), **135**  
 determination in cereal brans (Dintzis and Harris), **467**  
 heat-moisture treatment of, functional properties and baking potential (Lorenz and Kulp), **49**  
 heat-moisture treatment of, physicochemical properties (Kulp and Lorenz), **46**  
 kuzu; physicochemical properties of (Suzuki et al), **286**  
 legume; structural characterization of (Biliaderis et al), **486, 502**  
 sorption of water, sodium sulfate, and water-soluble alcohols by (BeMiller and Pratt), **517**  
 starch damage effect on Do-Corder curves (Endo et al), **538**  
 wheat; gelatination of, effect of xanthan, guar, and cellulose gums (Christianson et al), **513**
- Storage**  
 decomposition of soybean phospholipids (Nakayama et al), **260**  
 effect on hard red spring wheat flour (MacArthur and D'Appolonia), **53**  
 of wheat flour and corn meal, moisture and temperature effects (Bothast et al), **309**
- Surfactants**  
 in breadmaking (Pomeranz), **190**  
 edible beef tallow substitution in cakes (Bundy et al), **213**  
 effect on air incorporation and crumb grain of bread (Junge et al), **338**  
 effect on dough properties and proof time (Tsen and Weber), **180**  
 effect on lipid binding in breads (Chung et al), **220**  
 mechanism for their improvement of loaf volume (Junge and Hoseney), **408**  
 sucrose esters in breadmaking (Chung et al), **164**  
 theoretical aspects of in breadmaking (Krog), **158**
- Symposia**  
 impact of foods on trace mineral availability and metabolism (Hackler), **1**  
 lipid-related materials in breadmaking (Chung), **155**
- Tannins**  
 levels in sorghum, evaluation of methods for (Earp et al), **234**
- Triticale**  
 lipids; composition and bread-making characteristics of triticale flour (Zeringue et al), **351**  
 trypsin inhibitors, characterization and heat stability (Chang and Tsen), **211**  
 trypsin inhibitors isolation (Chang and Tsen), **207**
- Trypsin inhibitors**  
 characterization and heat stability, from rye, triticale, and wheat samples (Chang and Tsen), **211**

isolation from rye, triticale, and wheat samples (Chang and Tsen), **207**  
modified analytical procedure in soy products (Hamerstrand et al), **42**  
from rye endosperm; purification and properties (Boisen and Djurtoft),  
**194**  
of soybean, thermal inactivation (Ellenrieder et al), **291**  
from wheat, purification and characterization (Boisen and Djurtoft), **460**

**Ultrastructure**  
of oats (Bechtel and Pomeranz), **61**

**Viscosity**  
isolation and characterization of starch from breadfruit (Loos et al), **282**

**Vitamins**  
effect of flour treatments on (Ranum et al), **32, 248**  
folacin retention in enriched cookies, regression analysis using factorial  
design (Connor and Keagy), **239**

**Wheat**  
by-product utilization (Waszczyński et al), **264**  
Chinese and Canadian spring wheat cultivars compared (Kosmolak and  
Dyck), **246**  
dielectric properties of, influence of moisture, density, and temperature  
(Nelson), **487**  
durum; effect of starchy kernels, immaturity, and shrunken kernels on  
quality of (Dexter and Matsuo), **395**  
effect of variety on baking properties (Marais and D'Appolonia), **444,**  
**448**  
extraction of unreduced glutenin with SDS (Danno), **311**  
field-sprouted; distribution of  $\alpha$ -amylase in (Finney et al), **355**  
flours and bran; soluble and insoluble dietary fiber determination  
(Frølich and Asp), **524**

method for determining  $\alpha$ -amylase of (Kruger and Tipples), **271**  
micro baking evaluation of U.S. wheats for Iranian breads (Faridi et al),  
**428**  
nutrient composition of; proximate analysis, thiamin, riboflavin, niacin,  
and pyridoxine (Davis et al), **116**  
polyphenol oxidase activities in (Lamkin et al), **27**  
preharvest sprouting (Bhatt et al), **300**  
preharvest sprouting and  $\alpha$ -amylase activity (McCrate et al), **424**  
trypsin inhibitors, characterization and heat stability (Chang and Tsen),  
**211**  
trypsin inhibitor from, purification and characterization (Boisen and  
Djurtoft), **460**  
trypsin inhibitors isolation (Chang and Tsen), **207**  
use of salt for reduced fermentation time and bromate requirement in  
bread (Kilborn et al), **508**

**Wheat bran**  
phytic acid and trace mineral relation in (Ellis and Morris), **367**

**Yeast**  
dough properties and proof times of yeasted doughs affected by  
surfactants (Tsen and Weber), **180**  
dry; properties of in bread-making (Bruinsma and Finney), **477**

**Zein**  
 $\alpha$  and  $\beta$  forms; disulfide characteristics of (Paulis), **542**

**Zinc**  
analysis by gel electrophoresis and isoelectric focusing (Wilson et al), **275**  
bioavailability estimate in breakfast cereals; influence of phy/Zn molar  
ratio (Morris and Ellis), **363**  
relation to copper in human nutrition (Ritchey), **18**