

SUBJECT INDEX

Italicized numbers refer to tables.

A

Acetic acid
 effect of concentration, *182*
Actomyosin, 203
Aden, 394-395
Aerobacter aerogenes, 213
Algae, 367
Algeria, 329
Amino acids, 293, 433
 alanine, 143
 cysteine, 142
 in fish solubles, 294
 tyrosine, 215-216, 434
 whole meal, 433
Anchovy(ies), 200-204, 330
 appetizers, 223
 barrel, 200-201
 canning, 330, 351
 changes, 202
 curing, 221-222
 directly made, 201
 discolorations, 215-216
 fermentation, 214-215
 fillets in oil, 222-223
 history, 219
 microbial aspects, 213-214
 microflora, 207-208
 overripeness, 214-215
 packing, 222-223
 paste, 219, 223
 processing, 219-225
 regulations, 224-225
 salting, 220
 Scandinavian, 195-217
 semi-conserves, 224
 warehousing, 224
 whole salted, 222
Anghak, 245
Angola, 347
Annam swelling, *see* Kwashiorkor
Argentina, 351
Artificial coloring, 97
Artificial dryers, 154-156
 air conditioning equipment, 157

 atmospheric conditions, 156-157
 atmospheric factors, 159-160
 automatic control, 159
 dehumidifying systems, 157-158
 dew point, 156
 heavy salted cod, 154-155
 humidification, 158
 light salted cod, 155-156
 limitations, 156
 thermocouple control, 158
Artificial drying, 149
Australia, 383-384

B

B vitamins, 282
Bacillus pantothenicus, 272, 278
 in fish sausage, 277
Bagoong, 234, 235
 chemical analysis, 235
Baltic, 311-314
Balyk, 322
 sturgeon, 325
Barges, 324
Barracouta, 384
Barrel salting
 Dutch method, 122
 Icelandic method, 122-123
 Norwegian method, 125
 Russian method, 124-125
 Scotch method, 123
Belgium, 307
Benguela current, 347
Benzpyrene, 323
Betabacterium buchneri, 187
Bismarck herring, 167
Black Sea and Caspian fisheries, 332
Bloaters, 81, 84, 85, 89, 92, 305, 309, 336
Blubber, 369
Blue whale unit, 252
Bolivia, 352
Bongal, 345
Bonito, 81
 canning, 354
Borneo, 383

- Brazil, 350
 Bream, 321
 Brisling, 81, 98
 British Honduras, 356
 Buckling, 85, 86, 305
 Bulgaria, 334
 Burma, 386
- C**
- Cambodia, 378
 Cameroun, 346
 Canada, 336
 Cannery, 329, 347
 Australia, 384
 Dakar, 342
 Damietta, Egypt, 328
 floating, 361
 Las Khorek, Somalia, 393
 Mar del Plata, Argentina, 351
 Pointe-Noire, Congo, 346
 Puerto Rico, 335, 338
 Rarotonga, Cook Islands, 385
 San Jose, Mindoro, 377
 Sardine, 336
 South Korea, 370
 Venezuela, 339
 Canning, 323, 354, 361, 366, 391
 anchovies, 330, 351
 bonito, 354
 crab, 319, 366
 dagaa, 395
 dolphin, 334
 eel, 330
 fishballs, 314
 maasbanker, 349
 mackerel, 349
 Mexico, 337
 pet food, 305
 pilchard, 348, 349
 sardines, 308, 323, 328, 329, 330, 335,
 339, 340-341, 350, 351
 saury, 323, 366, 370
 shrimp, 366
 sprats, 303
 sturgeon milt, 324
 tuna, 308, 328, 330, 335, 338, 341,
 342, 347, 361, 366, 370, 382, 396
 Cape hake, 348
- Carcinogenic substances in smoke, 71,
 323
 Caribbean, 336
 Carp, 313
 cultivation, 357, 373
 Caviar, 333
 sturgeon, 325
 Centolla crab, 353
 Ceylon, 389-390
 Chehon, 321
 Chile, 352-353
 Chilled salting, 111
 Chimney kilns, 95
 China, 371, 390
Clostridium, 257
 Cod, 11, 12, 13, 13, 15, 16, 38, 38, 80,
 302, 305, 310, 312, 316, 336
 drying, 153-154
 roe, 90, 305, 323
 Cold marinades, 166-167, 168-174
 beta-bacteria spoilage, 187-188
 chemical processes, 179-183
 finishing bath, 169-171
 keeping tests, 189
 microbiology, 187-189
 packing, 171-172
 preservatives, 188-189
 pretreatment, 168-169
 recovery of used brine, 172-174
 Cold salting, 111
 Cold-smoking, 57, 90
 Collared herring, 167
 Colombia, 355
 Combines, 324-326
 Astrakhan, USSR, 325
 Murmansk, USSR, 324
 Odessa, USSR, 325
 Petropavlovsk, Kamchatka, 326
 Riga, Latvia, 325
 Congo (Brazzaville), 346
 Congo (Leopoldville), 346-347
 Cooked marinades, 167, 174-175
 bleaching, 174
 chemical processes, 183-184
 microbiology, 189-190
 packing, 174-175
 pretreatment, 174
 Costa Rica, 358

- Crab, 362
 canning, 319, 366
- Crayfish, 385, 386
- Cultivation
 carp, 357
 guapote, 357
 inland fish, 374
 mullet, 373
 mussels, 308
 oysters, 306, 308, 373
 shrimp, 373
- Curing, 320, 364-365, 391
 anchovies, 221-222
 optimum temperature, 222
- D**
- Dagaa, canning, 395
- Dahomey, 345
- Dehydration, *see* Drying
- Dehydration formulas, 51
 mathematics, 51
 symbols, 51
- Denmark, 304
- Dew point, 157
- Dilis, drying, 376
- Dolphin, 334, 369
 canning, 334
- Drying, 1-53, 242-243, 321, 355, 364-365, 379, 389, 391, 393, 394, 416-420
 accelerated freeze-drying, 4
 air, 18
 air velocity, 151
 Apjohn's equation, 22-23, 51
 appraisal as a process, 49-50
 atmospheric conditions, 156-158
 calculations, 79-80
 categories of methods, 18-21
 Clapeyron's equation, 9
 conditions, 150
 constant-rate period, 7, 74-77
 costs, 50-51
 critical moisture content, 26
 critical time, 26
 density, 11-13
 diffusion coefficient, 17-18
 dilis, 376
 drying time-constant, 30
 equilibrium water content, 8, 14-15
 falling-rate period, 77-79
 generalized treatment, 4-11
 heavy salted cod, 153
 history, 2-4
 humidity, 150
 infrared, 21
 intermittent, 151
 light salted cod, 153-154
 microwave, 20-21
 natural air drying, 38-39
 physical properties, 11-18
 physics of air drying, 21-33
 practical aspects, 38-49
 press-piling, 152
 radio-frequency, 20
 rate, 24, 25
 of evaporation, 28
 roller, 19, 40
 salted fish, 148-160
 sardines, 365
 shrimp, 379
 temperature, 150
 thermal conductivity, 15-16, 16, 17
 ultrasonic, 20
 vacuum, 19-20, 321
 vacuum contact dehydration, 42-45
 vacuum fat drying, 46-48
 warm air-tray drying, 41-42
 water content, 13-14
 water-horsing, 149
 water vapor pressure, 9
 whale meat, 261
 wind tunnels, 39-40
- Dry salting, 110
- Dyes, 97
- E**
- East Africa, 395
- East Germany, 313
- Eberthella typhi*, 72
- Ecuador, 355
- Eel, canning, 330
- Egypt, 327
- Eire, *see* Ireland
- El Salvador, 357
- Enzymes, 213, 222, 228, 232
 in ripening, 207

Ethiopia, 393

Evaporator

- auxiliary equipment, 290-291
- forced-circulation, 289-290
- horizontal-tube, 289
- inclined-tube, 289
- steam condensate, 291-292
- types, 289-290
- vacuum, 286-288
- vertical-tube, 289

F

Faeroe Islands, 310

Fermentation, 214

- Baltic herring, 196

Fermented herring, 196-197, 213

Fermented seafood, 227-250

- microbiology, 228-229

Finland, 311-312

Finnan haddie, 82, 87, 89, 90, 93, 305

Fish cake, 380, 381

Fish catch

- Australia and New Zealand, 384
- average catch per vessel, 320
- Baltic countries, 311
- Black Sea and Caspian countries, 332
- Caribbean & Gulf of Mexico countries, 337
- Indo-Pacific countries, 387
- Inland USSR, 315
- Mediterranean countries, 328
- Middle America, 356
- Middle Atlantic countries, 340
- Northeast Atlantic-Europe countries, 303
- Northwest Atlantic countries, 334
- Northwest Pacific countries, 359
- Red Sea countries, 393
- sources of Soviet, 316
- Southeast Africa countries, 395
- Southeast Asian countries, 375
- Southeast Atlantic countries, 344
- Southeast Pacific countries, 352
- Southwest Atlantic countries, 349
- Soviet, 315
- Tuna, 360
- West Indies, 339

Fish combines, 324

Fish crackers, 380

Fish cultivation, 395

Fisheries

- Bristol Bay, 317
- China, 371-372
- cod, 303
- Davis Strait, 336
- Faeroe Banks, 303
- fresh-water, 361
- George's Bank, 317, 336
- Grand Banks, 317, 336, 341
- Greenland, 340
- herring, 303
- Icelandic Banks, 303
- Koko Nor, 371
- Lake Chad, 343, 345
- Lake Tanganyika, 346, 395, 396
- Lake Victoria, 395
- Lofoten, 302
- Magdalena River, 355
- Newfoundland, 340
- Newfoundland Banks, 305, 313
- Northwest coast of Africa, 329
- regional development, 301-409
- saury, 360
- Shetland and Hebrides Islands, 305
- Taiwan, 374

Fish factor, 283

Fish flour, 245-246, 336, 342, 354-355, 389, 441

- sardines, 329

Fishing bases, *see also* Fishing ports, 320, 363, 386

- Aterias Cove, Cuba, 339
- Cochin, India, 388
- Mar del Plata, Argentina, 351
- Penang, Malaya, 382-383
- Philipsburg, Sint Maarten, 338
- Port of Spain, Trinidad, 338
- Tandjung Periuk, Indonesia, 381
- Tema, Ghana, 344
- Willemstad, Curaçao, 338

Fishing Ports, *see also* Fishing bases

- Alvarado, Veracruz, 337
- Archangelsk, USSR, 317
- Assab, Ethiopia, 393
- Cherzon, USSR, 317
- Faeringhavn, Greenland, 311

- Gdynia, Poland, 312
 Kaliningrad, USSR, 317, 326
 Karachi, Pakistan, 390
 Kiel, Germany, 309
 Merida, Yucatan, 338
 Massawa, Ethiopia, 393
 Mexico, 337
 Okha Port, India, 388
 Puntarenas, Costa Rica, 358
 Port Etienne, Mauritania, 342
 Ranong, Thailand, 379
 Rostock, East Germany, 313
 Sozopol, Bulgaria, 334
 Świnoujście, Poland, 312
 Szczecin, Poland, 312
 Walvis Bay, 348
- Fish meal, 303, 307, 309, 329, 353-354, 380, 391-392, 420-422, 431, 433, 440
 anchoveta, 353
 Angola, 347
 export, 353
 factory ships, 363
 herring, 310
 menhaden, 335
 pilchard, 349
 production, 353, 414-416, 419, 422, 427
 sardine, 342
- Fish pastes, 234-238, 384
 chemical analysis, 236
- Fish poisoning, 242
- Fish processing, regional development, 301-409
- Fish sauce, 229-234, 381, 387
- Fish sausage, 265-280, 366
Bacillus pantothenicus, 277
 casings, 272-273
 chemical aspects, 267-270
 fat, 271
 food additives, 272
 microbiology, 277-278
 microflora, 276
 preparation and processing, 273-274
 production, 266
 quality control, 278-279
 raw fish, 270-271
 raw material, 270-273
 recipes, 274-276
 shelf-life, 276-278
 spices, 271-272
 starch, 271
- Fish silage, 304
- Fish solubles, 281-299, 427
 amino acids, 294
 ash content, 294-295
 change in composition, 295
 chemical analysis, 292
 concentration, 285-289
 cooking, 284
 general characteristics, 292-293
 history, 281-282
 major constituents, 293
 mixing operations, 297
 oil removal, 285
 quality, 292-296
 quality control, 295-296
 raw material, 283-284
 specifications, 298
 storage, 296-297
 transportation, 297
 vitamin values, 294
- Flecking, 216
- Floating factories, 361
- France, 308
- Free fatty acids, 143
- Freeze-drying, 321
 accelerated, 45
 dehydro-freezing, 48-50
 heated spike, 45-46
 theory, 34
 vacuum, 17, 19, 42
- Freezing, 311, 350, 354, 362, 364, 384, 391, 395
 shrimp, 328, 335, 338, 350, 352, 355, 356, 357, 358, 373, 392, 396
 tuna, 344, 355
 vacuum, 362
 whale meat, 258-259
- Freezing trawlers, 318
- Freshness, 86
- Fresh-water, cultivation, 372
- Fried marinades, 168, 176-177
 chemical processes, 184-185
 frying, 176
 microbiology, 190
 packing, 177
 pretreatment, 176

octopus, 368
oyster, 368
tuna, 368

G

Gaffelbitar, *see* Tidbits
Gaspé cure, 155, 336
Gaspé-cured fish, 160
Gelatin, physical and chemical properties, 261
German Democratic Republic, *see* East Germany
Ghana, 344
Goraka, 389
Greece, 330
Greenland, 311
Growth factors, 286
Guapote, cultivation, 357
Guatemala, 356-357
Guianas, 349-350
Guinea, 342-343
Gwyniad, 195

H

Haddock, 89, 305, 336
Hake, 336
 liver oil, 349
Halibut, 81, 321, 336
Herring, 12, 12, 13-14, 15, 39, 80, 81, 107-131, 302, 304-305, 306, 307, 312
 Baltic, 195, 198, 213-214
 fat and protein contents, 120
 filleting, 206
 fillets, soluble nitrogen fractions, 203
 total nitrogen, 203
 Icelandic, 195, 198
 marinated, 308
 packing, 205
 salted, 307
 sexual products, 119-121
History
 anchovies, 219
 canning, 303, 335, 366
 drying fish, 2-4
 fish culture, 371
 fish solubles, 281-282
 fishing, 359

Japanese whaling, 251
 salted herring, 107
 Scandinavian herring industry, 197-200
 seldyanka, 107
 stickwater, 281-282
 whales as food, 259-260
Honduras, 357
Hong Kong, 373
Horse mackerel, *see* Maasbanker
Hot-smoking, 57, 90, 96

I

Iceland, 310
India, 387-388
Indian Ocean, 386-392
Indonesia, 380-381
Inland fish, cultivation, 374
Internal Africa, 343
Iran, 332-333
Ireland (Eire), 306
Israel, 332
Italy, 330
Ivory Coast, 343-344

J

Japan, 339, 342, 345, 350, 359-369, 381, 387, 390
 aquatic harvest, 359
Japanese whaling, history, 251
Jellied products, 168
Jordan, 394

K

Kamaboko, 266, 267, 363, 367
Katsuwo-Bushi, 365
Kingfish, 80
Kipper, 81
Kippered herring, 84, 85, 87, 90, 305, 309
Klipfish, 311
Kuwait, 392
Kwashiorkor, 344, 345, 346

L

Labberdaan or Laberdan, 307, 313
Liberia, 343
Libya, 328
Lingcod, 352

M

- Maasbanker, 348, 442
 canning, 349
 oil, 349
- Mackerel, 329
 canning, 349
 marinated, 308
- Madagascar, *see* Malagasy Republic
- Makassar fish, 245
- Malagasy Republic, 396-397
- Malaysia, 382
- Maldivian fish, 389
- Marinades, 165-193, 307, 309
 characteristics, 165-166
 chemical process, 179-185
 garbad, 166
 individual products, 166-168
 influence of water content, 185
 keeping properties, 177-179
 microbiological processes, 185-187
 pickling bath, 166
 preservatives, 190-191
 spoiled, 183
- Matjes herring, 309
- Mauritania, 342
- Mechanical kilns, 98
- Mediterranean, 327
- Mexico, 336
- Middle America, 356-359
- Middle Atlantic, 340
- Mixed salting, 110
- Monosodium glutamate, 275
- Morocco, 329
- Motherships, 319, 361
- Mullet, 80
 cultivation, 373
- Multipurpose units, 362
- Muscle tissues, structural and mechanical
 characteristics, 113
- Mussels, cultivation, 308
- Myosin, 267-268
 various fish species, 268
- N**
- Nam-pla, 234, 308, 380
- Netherlands, 306
- New Zealand, 385
- Nicaragua, 357-358
- Nigeria, 345
- Northeast Atlantic, 302-311
- North Korea, 369
- North Vietnam, 377
- Northwest Atlantic, 334
- Norway, 302-304, 345
- Nuoc-mam, 229, 230-234, 308, 377-378
 amount used, 232
 biochemistry, 233
 chemical analysis, 232
 methyl ketones, 233
 microbiology, 233
- Nyasaland, 396
- O**
- Oceania, 383-386
- Off-flavors, 100
- Oil
 fish, 354, 424-426
 hake-liver, 349
 liver, 392
 maasbanker, 349
 pilchard, 349
 shark, 371
 shark-liver, 385
 sperm, 262
 whale, 385
- Oysters, cultivation, 306, 308, 373
- P**
- Pack, herring delicatessen, 199
- Pakistan, 390
- Panama, 358
- Pedah siam, 238-239, 240
 biochemistry, 239, 240, 241
 chemical analysis, 240
- Perch, 195
- Peru, 353
- pH, raw jelly, 268-269
- Philippines, 375
- Phospholipids, 143, 144
- Pickle constituents, 142-144
- Pickling
 silver herring, 261
 whalemeat, 261
- Pike perch, 12, 16, 321
- Pilchard
 canning, 348, 349
 oil, 349

Pindang, 241-242

Pirarucu, 350

salting, 350

Plaice, roe, 323

Poland, 312, 345, 390

Polyphosphates, 272

Portugal, 341

Prahoc, 235

chemical analysis, 236-237

Preservatives, 196, 201, 207

boric acid, 333

chemical analysis, 212

microflora, 210

Problems, 276

Processing at sea, 318

Protein, 432-436

denaturation, 141

enzymic breakdown, 142

supplements, 282-283

Pseudomonas salinaria, 146

Putty fish, 137

R

Rakørret, 195, 213

Raw jelly

polyphosphates, 269

salt, 231

setting phenomenon, 269-270, 270

Redfish, 14

Red herring, 86, 88, 92, 305

Red sea, 392-395

Rhodesia, 396

Ripening

anchovy, 202-204

autolytic theory, 118-119

biochemistry, 206

enzymic theory, 119

heavily salted herring, 117

herring, 201, 205

microbiological theory, 117-118

nuoc-mam, 231

optimum temperature, 117

salted fish, 115-116

Roach, 321

Rock lobsters, 348

Roller-drying, 3

Romania, 334

Ropy brine, 215

S

Sabalo, 351

Sablefish, 80

Saithe slices, 309

Salmon, 90, 361

catch, 361

pickled, 365

Salt, 134-136

deposits, 134

fineness, 136

mined salt, 135

myosin extraction, 268

properties, 134

solar, 134

Salted Caspian herring

composition, 116-117

Salted cod, 39, 133-163, 304, 311, 340

dressing, 137-138

drying, 153-154

processing, 136-141

treatment on board ship, 136-137

Salted fish not dried, 238-244

Salted herring quality, 128

Salted lingcod, 304

Salted products, 243-244

Salt impurities

effect on fish, 135-136

Salting, 88-90, 107-131, 138-141, 242-

243, 321, 341, 365, 379, 381, 389,

391

anchovies, 220

in barrels, 321

brine, 139

brining, 88

characteristic features, 111

chemical features, 141

containers, 109

dry-salting, 88

hard salted, 88

herring, history, 107

kench, 138-139

low-temperature, 321

methods, 108-109

pickle, 139

pirarucu, 350

red halophilic bacteria, 145-147

roused, 88, 89

salt penetration, 111

- salting rate, 112
- sardines, 331
- seldyanka, 107
- stages, 114-115
- technological aspects, 119-128
 - barrel salting, 121-125
 - vat salting, 125-128
- tuzluk, 110
- types, 110-111
- water-horsing, 139, 145
- whalemeat, 258-259
- Sarcina littoralis*, 146
- Sardines, 219, 329, 396
 - African, 317
 - canning, 308, 323, 328, 329, 330, 335, 339, 340-341, 350, 351
 - drying, 365
 - salting, 331
- Saury, 328
 - canning, 323, 366, 370
- Scandinavian herring industry, history, 197-200
- Scotland, 2
- Seldyanka, history, 107
- Senegal, 342
- Shark
 - fin(s), 372, 379
 - liver oil, 385
 - oil, 371
- Sheatfish, 113
- Shellfish, 268
- Shemaya, 321
- Shrimp, 329
 - canning, 366
 - cultivation, 373
 - drying, 379
 - fishery
 - Baranquilla, Colombia, 356
 - Brazil, 350
 - Gulf of Siam, 378
 - Iskenderun, Turkey, 331
 - Rawson, Argentina, 351
 - Taiwan, 374-375
 - freezing, 328, 335, 338, 350, 352, 355, 356, 357, 358, 372, 392, 396
 - paste, 380
- Sierra Leone, 343
- Sild, 81
- Skipjack, 364
- Sliminess, 215
- Sliming, 145-146
- Smoke, *see also* Wood Smoke
- Smoke concentrates, 99
- Smoked fish, production, 56
- Smokies, 86, 92
- Smoking, 55-105, 305, 312, 322, 345
 - biological quality, 81-86
 - electrical, 322
 - electrostatic deposition, 60-61
 - factors affecting drying, 73-80
 - fresh-water fish, 279
 - hanging, 92-93
 - importance of particle and vapor, 61-62
 - mild cures, 91
 - pale cure, 87
 - post-smoking treatment, 99-100
 - precooked fish, 81
 - preparation of fish, 81-90
 - rate of deposition, 60
 - splitting and cleaning, 87-88
 - types of process, 90-92
 - types of products, 80-81, 82-85
- Snoek, 348
- Sodium or potassium nitrite, 272
- Somalia, 393-394
- South Africa, 348
- Southeast Africa, 395-397
- Southeast Asia, 375
- Southeast Atlantic, 343-349
- Southeast Pacific, 352-356
- South Korea, 370
- South Pacific, 386
- South Vietnam, 377
- Southwest Africa, 348
- Southwest Atlantic, 349
- Soviet Union, 314-327
- Spain, 340
- Spanish mackerel, 80
- Special salt cures
 - fall cure, 140
 - Gaspé cure, 140, 144
 - heavy salted cod, 140-141
- Sperm oil, 262
- Spoilage
 - acetic acid content, 183
 - biological, 178

- chemical, 178
 dun, 147
 nonbacterial damage, 147-148
 physical, 177-178
 salted cod, 144-148
 stickwater, 285, 288
Sporendonema epizoom, 147
 Sprats, 195, 200, 219, 309
 canning, 303
 Squid, 364, 379
Staphylococcus aureus, 72
 Stickwater
 biochemistry, 284
 carnosine, 284
 chemical analysis, 284
 history, 281-282
 nitrogenous extractives, 293
 uncondensable gases, 288
 yield, 285
 Stockfish, 38, 39, 303, 307, 310
 Storage life, 91
 Sturgeon, 333
 canning, 324
 roe, 333
 Sudan, 393
 Surströmming, *see also* Fermented her-
 ring, 213-214
 Sweden, 314, 390
- T**
- Taiwan, 374
 Taurine, 142, 143
 Thailand, 378
 Tidbits, 204-206, 210, 212
 chemical analysis, 212
 discolorations, 215-216
 fermentation, 214-215
 microflora, 210
 overripeness, 214-215
 Togo, 345
 Total nitrogen
 nuoc-mam, 232
 Trade, 368
 Transport ships, 319
 Transport vessels, 363
 Trassi, 237, 381
 chemical analysis, 237-238
 Trimethylamine oxide, 215
- Trout, 195
 Tuna, 329
 canning, 308, 328, 330, 335, 338, 341,
 342, 347, 361, 366, 370, 382, 396
 chicken, 384
 freezing, 344, 355
 ham, 384
 sausages, 383
 Tunisia, 328-329
 Turbot, 321
 Turkey, 331
 Turtles, 358
- U**
- United Arab Republic, *see* Egypt
 United Kingdom, 3-4, 305, 345
 United States, 2, 3, 334, 345
 Uruguay, 351
 USSR, *see also* Soviet Union, 345
- V**
- Vacuum freeze-drying
 conditions for rapid, 36
 physics, 33-38
 Vat salting
 Atlantic herring, 127-128
 Southern herring, 126-127
 Venezuela, 339
 Vitamin B₁₂, 283, 439
- W**
- Warm salting, 111
 West Germany, 309-310
 West Indies, 338
 Wet salting, 110, 114
 Whale
 anatomy, 255-257
 canned, 260
 catch, 253
 conversion rate, 252
 direct consumption, 259-260
 edible gelatin, 260
 edible products, 258
 oil, 385
 permissible minimum body length, 252
 processing, 257-258
 production of processed products, 259
 quota, 252, 254

- rengi, 260
 - research, 262-263
 - sausage, 260
 - use as food, 259-261
 - history, 259-260
 - weights of parts, 255, 256
 - Whale meat, 385
 - drying, 261
 - freezing, 258-259
 - salting, 258-259
 - total production, 263
 - Whale oil, 261-262
 - Whale products, 251-264
 - Whaling, 326, 369
 - Whiting, 15
 - Winter herring
 - chemical analysis, 211
 - microflora, 208, 209
 - Wood smoke
 - aliphatic compounds, 69
 - antioxidant, 71
 - 3,4-benzpyrene, 71
 - carcinogenic activity, 71, 323
 - chemistry, 69-73
 - electrostatic smoking, 71
 - measurement, 62-69
 - optical properties, 62
 - particle decrease, 59
 - particle size, 58-60
 - phenol value, 73
 - physical properties, 58-60
 - physics, 58-69
 - production, 93
 - Ringelmann number, 63
 - sawdust, 94, 95
 - smokemeter, 64-69
- Y
- Yemen, 394
 - Yugoslavia, 330
- Z
- Zoute haring, 307