

# Index

## A

A1C Now, 1276  
A-200 pyrinate, 1599  
Abacavir sulfate, 1676  
Abarelix, 1560  
Abbokinase, 1334  
Abbreviated new drug application, 968  
Abciximab, 1332  
Abciximab (chimeric), 1615t  
Aberrant observations, rejection of, 150  
Abilify, 1515  
Absorption, drug delivery, 944  
Absorption, percutaneous, 872  
animal study relevance, 874  
*in silico* and *in numero* modeling, 877  
*in vitro/in vivo* studies, 873  
penetration enhancers, 875, 876t  
Absorption, pharmacokinetics, 1181, 1192  
Absorption, rectal, 877  
Absorption, vaginal, 878  
Absorption coefficient, 219  
Abuse, drugs of, 1276  
Acacia, 1072  
Acacia mucilage, 1072  
Acacia syrup, 1070  
Acamprosate, 2314  
Acarbose, 1453  
Accelerate, 1738  
Acceptance sampling, 154  
Accogel capsule machine, 924  
Accolate, 1374  
Accu-Chek Active, Advantage, Compact, and Complete, 1276  
Accupril, 1356  
Accuracy, 130  
Accutane, 1291  
ACD Solution, 1329  
ACD Solution Modified, 1329  
Ac-De, 1569  
Acbeutolol hydrochloride, 1401  
Acel-Imune, 1602t  
Acon, 1356  
Acetaminophen, 1541  
Acetaminophen tablets, 300 mg, 912  
Acetazolamide, 1425  
Acetazolamide sodium, 1425  
Acetest, 1276  
Acetic acid, 1083  
concentrated, 1083  
crystallizable, 1083  
dilute, 1083  
diluted, 1083, 1626  
glacial, 1083  
Acetohexamide, 1453  
Acetone, 1080  
as a solvent, 222  
chloroform, 1059  
Acetylcholine chloride, 1390  
Acetylcysteine, 1376  
Acetylsalicylic acid tablets, 913  
Acid, hard, 190  
Acid, soft, 190  
Acid-base assays, 501  
Acid-base disturbances, 1115  
Acid-base pairs, conjugate, 381t  
Acid-dye method, 198  
Acid catalysis, specific, 274  
Acid value, 425  
Acidifiers, systemic, chemistry, 382

## Acids

aliphatic, 1737  
aqueous, 750  
arylaliphatic, 1738  
chemistry, 381, 391  
conjugate, 391  
differentiating solvent, 236  
diluted, 750  
ionization, 236  
Lewis, 190t  
phenoxy-aliphatic, 1737  
polyprotic, 237  
stability, 748  
strong, as “buffers,” 246  
strong, calculations, 242  
weak, calculations, 242  
weak, salts of, calculations, 244  
Aciphex, 1301  
Acne vulgaris, 1131  
Acquired immunodeficiency syndrome, 1140  
Acrisorcin, 1626  
Acrivastine, 1547  
Acrylic packaging, 1053  
ACTH, 1439  
Acthar, 1439  
ActHIB, 1602t  
Aethrel, 1270  
Actidase, 1313  
Actifed, 1550  
Actigall, 1303  
Actinides, 369  
Actinomycin-D, 1569  
Activase, 1332  
Activated partial thromboplastin time, 572  
Activity, 234  
Activity coefficient, solutions, 227  
Activity coefficients, 234  
Actos, 1455  
Acupuncture, 2323  
Acyelovir, 1676  
Adalat CC, 1366  
Adapin, 1520  
Addison’s disease, 1124  
Addition, 113  
Additives, ophthalmics, 862  
Adefovir dipivoxil, 1677  
Adenine, structure, 438t  
Adenocard, 1362  
Adenosine, 1269, 1362  
Adhesional forces, 282  
Administration for Children and Families, 46  
Administration on Aging, 46  
ADR monitoring, hospital-based, 1223  
Adrenal crisis, 1125  
Adrenal disorders, 1124  
Adrenal insufficiency, primary, 1124  
Adrenal insufficiency, secondary, 1125  
Adrenalin, 1386  
Adrenaline bitartrate, 1386  
Adrenergic and dopaminergic receptors, 1380t  
Adrenergic antagonists, 1399  
Adrenergic antagonists and adrenergic neuron blocking drugs, 1399  
Adrenergic neuron blockers, 1403  
Adrenocortical function, 585  
Adrenocorticotropin, 1439  
Adriamycin, 1571

## ADRs

classification, 1222  
drug development, 1224  
further enhancing drug safety, 1227  
how common are they?, 1221  
how costly are they?, 1221  
international monitoring, 1228  
pharmacoepidemiology, 1226  
pharmacogenomics, 1225  
pharmacovigilance, 1226  
postmarketing safety surveillance, 1225  
postmarketing surveillance, effectiveness, 1226  
reporting requirements, 1223  
response to detection, 1226  
risk factors, 1223  
toxicodynamics, 1224  
toxicokinetics, 1224  
what are they?, 1221  
Adrucil, 1573  
Adsorbents, 1277, 1312  
Adsorption, effect on dissolution, 681  
from solution, 286  
from solution on to solid surfaces, 289  
molecular, theory, 286  
vapor, solid surfaces, 285  
Adsorption chromatography, 599, 610  
Adult respiratory distress syndrome, 1104  
Adverse drug reactions, 1221 (*see also* ADRs)  
and clinical toxicology, 1221  
literature, 70  
manifested by the skin, 1133  
Advil, 1537  
AeroBid, 1447  
Aerosols, 181, 325, 1000  
actuators, 1010  
advantages, 1001  
applications, 1011  
barrier-type systems, 1005  
compressed gas, 1004  
compressed gases, 1009  
container and valve components, 1013  
containers, 1009  
dispersions, 1012  
formulation, 1011  
liquefied gas systems, 1001  
liquefied gases, 1006  
metered-dose, 1012t  
emulsions, 1012  
evaluation, 1014  
formulation, 1012  
stability, 1029  
mode of operation, 1001  
newer developments, 1017  
packaging, 1010  
particle-size distribution, 1015  
powder, 1012  
propellants, 1006  
propellants, alternative, 1008  
solution, 1011  
suspensions, 1012  
topicals, evaluation, 1014  
valves, 1009  
Aerosporin, 1654  
AErrane, 1475  
Affinity chromatography, 600, 614

## Afugan, 1735

Agammaglobulinemia, X-linked, 1210  
Agar, 1073  
Agar-Agar, 1073  
Agar diffusion test, bioassay, 562  
Agency for Health Research and Quality, 46  
Agency for Toxic Substances and Disease Registry, 46  
Agererase, 1677  
Aggregation, molecular, 702  
Agitators for emulsions, 764  
Agranulocytosis, 1129  
Air force, pharmacy, 43  
Airflow obstructive disease, 1102  
Airway obstruction, reversible, 1103  
Airways disease, reactive, 1103  
A-K Spore, 1652  
Akineton, 1418  
AK-Pentolate, 1409  
Ak-Taine, 1485  
Alachlor, 1737  
Alatrofloxacin mesylate, 1659  
Alavert, 1549  
Albendazole, 1596  
Albenza, 1596  
Albumin, normal human serum, 1321  
Albumin-globulin ratio, 578  
Albumin human, 1321  
Albuminar, 1321  
Albuminoids, 423  
Albumins, 423  
Albutein, 1321  
Albuterol, 1382  
Alcaine, 1485  
Alcohol, 1080, 1626  
absolute, 1082  
abuse, 60  
as a solvent, 221  
cetostearyl, 1078  
cetyl, 1078  
dehydrated, 1082  
denatured, 1081  
diluted, 1081  
isopropyl, 1629  
isopropyl, as a solvent, 221  
methyl, 1082  
palmityl, 1078  
rubbing, 1284, 1289  
wood, 1082  
Alcohols  
chemistry, 440  
in pharmaceuticals, 746  
properties, 222  
stability, 748  
substituted, ophthalmics, 865  
Alactone, 1428  
Aldesleukin, 1561  
Aldol 52, 85, 1078  
Aldomet, 1351  
Aldomet Ester Hydrochloride, 1352  
Alemtuzumab, 1561  
Alendronate sodium, 1457  
Alexan, 1568  
Alfenta, 1530  
Alfentanil hydrochloride, 1530  
Algin, 1073  
Alginic acid, 1073  
Alkaline earth elements, 367  
Alkalizers, systemic, chemistry, 382  
Alkaloids  
chemistry, 430

- cinchona, 435, 425t  
 classification, 431t  
 derived, 434  
 ergonine derivatives, 433t  
 ergot, 436  
 imidazole, 438  
 miscellaneous, 437  
 opium, 433t, 434, 434t  
 ornithine-derived, 432  
*Rauwolfia*, 436  
 tropane, 432  
 vinca, 437  
 xanthine, 437, 438t  
**Alkanes**, halogenated, 1474  
**Alkaptonuria**, 578  
**Alkeran**, 1579  
**Allantoin**, 438t, 1290  
**Allegra**, 1548  
**Allergenic extracts**, 1600  
**Allergenic products**, veterinary, 1623  
**Allergens**, 1616  
**Allergens**, patch-testing, 1624, 1624t  
**Allergic reactions**, agents causing, immunology, 1213t  
**Allergic reactions**, immunology, 1212  
**Allergy**, 1615  
 diagnosis of, 1616  
 hypersensitivity, delayed, tests, 1623  
 insect, 1621  
 mechanisms and manifestations, 1615t  
 sensitivity tests, 1617  
 treatment, 1617  
**Alethrin**, 1730  
**Alligation alternate**, 123  
**Allium cepa**, 2329  
**Alloys**, 184  
**Allspice oil**, 1069  
**Almond oil**, artificial essential, 1064  
**Almotriptan malate**, 1434  
**Alosetron hydrochloride**, 1314  
**Aloxi**, 1311  
**Alpha error**, 128  
**Alpha-1 proteinase inhibitor**, 1378  
**Alphagan**, 1382  
**Alpha-tocopherol**, 1699  
**Alprazolam**, 1488  
**Alprostadil**, 1369  
**Altace**, 1356  
**alteplase (recombinant)**, 1332  
**Alternagel**, 1295  
**Alternate hypothesis**, 138  
**Alternative hypothesis**, 128  
**Alternative medicine**, 2318  
 comments and criticisms, 2320t  
 food phytochemical properties, 2321t  
 food properties, 2320t  
 glossary, 2339  
 illnesses and treatment, 2336t  
 NCCAM domains, 2323  
 popularity, 2319  
 types, 2323  
**Altretamine**, 1561  
**Alum**, 1282  
 cake, 1282  
 papermaker's, 1282  
 patent, 1282  
 pearl, 1282  
 pickle, 1282  
 powdered, 1282  
**Alumen**, 1282  
**Alumen purificatum**, 1282  
**Aluminum**, 1083  
**Aluminum**, chemistry, 369t, 370  
**Aluminum acetate topical solution**, 1282  
**Aluminum carbonate gel**, basic, 1295  
**Aluminum chloride**, 1282  
**Aluminum chlorhydrates**, 1282  
**Aluminum hydroxide**, colloidal, 1295  
**Aluminum hydroxide gel**, 1295  
**Aluminum monostearate**, 1083  
**Aluminum phosphide**, 1733  
**Aluminum sulfate**, 1282  
**Alupent**, 1384  
**Alveolar excretion**, 1167  
**Alzheimer's disease**, anti-cholinesterases for, 1396  
**Alzheimer's disease**, immunology, 1215  
**Amantadine hydrochloride**, 755, 1417, 1677  
**Amaryl**, 1454  
**Ambenonium chloride**, 1394  
**Amberlite IRP-88**, 1092  
**Ambien**, 1499  
**Ambulatory patient care**, 2179  
**Amebicides**, 1667  
**Amerge**, 1435  
**American Association of Pharmaceutical Scientists**, 4  
**American Medical Screening**, 1276  
**American Pharmacists Association**, 4  
**American Society of Consultant Pharmacists**, 4  
**American Society of Health-System Pharmacists**, 4  
**Amerol**, 1737  
**Amerscreen**, 1293  
**Amicar**, 1336  
**Amidate**, 1477  
**Amifostine**, 1561  
**Amifur**, 1629  
**Amikacin sulfate**, 1650  
**Amikin**, 1650  
**Amiloride hydrochloride**, 1428  
**Amines**, substituted, 1737  
**Amino acid determination**, blood, 578  
**Amino acids**, 1690, 1690t  
 chemistry, 421  
 prominent protein, 422t  
 properties, 423  
**Aminoacetic acid**, 1692  
**Aminoaciduria**, primary overflow, 578  
**Aminobenzoic acid**, 1290  
**Aminocaproic acid**, 1336  
**Aminoform**, 1664  
**Aminoglutethimide**, 1561  
**Aminoglycoside-containing combinations**, 1652  
**Aminoglycoside case history**, pharmacokinetics, 1204  
**Aminoglycosides**, 1649, 1649t  
**Aminonippurate sodium**, 1274  
**Aminophylline**, 1372  
**Aminosalicylic acid**, 1314  
**Amiodarone hydrochloride**, 1362  
**Amitriptyline hydrochloride**, 1518  
**Amitrole**, 1737  
**Amlodipine maleate**, 1365  
**Ammoidin**, 1292  
**Ammonia**, chemistry, 366  
**Ammonia**, muriate of, 1423  
**Ammonia solution**, strong, 1083  
**Ammonia spirit**, aromatic, 1372  
**Ammonia water**, stronger, 1083  
**Ammonium chloride**, 1423  
**Ammonium compounds**  
 chemistry, 366  
 quaternary, ophthalmics, 864  
 quaternary, stability, 749  
**Ammonium hydroxide solution**, stronger, 1083  
**Amobarbital**, 1493  
**Amobarbital sodium**, 1493  
**Amorphous precipitation**, 230  
**Amoxapine**, 1519  
**Amoxicillin**, 1638  
**Amphetamine sulfate**, 1554  
**Amphiphilic compounds**, 295  
**Amphojel**, 1295  
**Ampholytes**, calculations, 243  
**Amphoteric surfactants**, 290  
**Amphotericin B**, 1670  
**Ampicillin**, 1638  
**Ampicillin sodium**, 1638  
**Amprenavir**, 1677  
**Amrinone**, 1361  
**Amyl nitrite**, 1358  
**Amylase**, 1686t  
**Amylobarbitone sodium**, 1493  
**Amytal**, 1493  
**Amytal sodium**, 1493  
**Anadrol**, 1472  
**Anafranil**, 1519  
**Analgesia**, patient-controlled, 842  
**Analgesic**, antipyretic, and anti-inflammatory drugs, 1524  
**Analgesics**, 1524, 1534  
 categories, 1525t  
 combinations, 1542  
 opioid, 1525, 1528  
**Analysis**  
 automated, 585  
 blood coagulation, 571, 571t  
 blood glucose, 576  
 blood-bank technology, 573  
 blood-volume mechanisms, 570  
 drug interaction with tests, 575  
 electrolytes, 583  
 enzymes, 579  
 erythrocytes, 565  
 erythropoietic mechanisms, 570  
 fecal, 591  
 gastric, 593  
 hematological values, 566t  
 hematology, 565  
 hemoglobin, 565  
 immunochemistry, 595  
 instrumental methods, 633  
 instrumental techniques, 634  
 instrumentation, 575  
 leukocytes, 568  
 lipids, 581  
 microbiology, 594  
 nonparametric methods, 128  
 nonprotein nitrogen  
 compounds, 577  
 organ function tests, 584  
 other body fluids, 594  
 proteins, 578  
 reference values, 586t  
 reticulocytes, 570  
 steroids and other hormones, 582  
 techniques, 575  
 thermal methods, 661  
 thrombocytes, 569  
 toxicology, 592  
 urine, 587 (see Urinalysis)  
**Analysis of experiments**, 667  
**Analysis of medicinals**, 495  
**Analysis of variance**, 128  
 experimental design, 144  
 multiple comparisons, 145  
**Analytical balances**, 496  
**Analytical equipment**, calibration, maintenance, and use, 495, 496  
**Analytical methods**  
 electronic records and signatures, 496  
 information sources, 496  
 instrument qualification, 495  
 specialized, 496  
 validation, 495  
**Anaprox**, 1539  
**Anastrazole**, 1465, 1562  
**Ancef**, 1643  
**Ancobon**, 1671  
**ANDA**, 968  
**Androgens**, major features, 1470t  
**Android**, 1471  
**Anemia**, 1128  
 aplastic, 1129  
 autoimmune hemolytic, 1128  
 drug-induced immune hemolytic, 1128  
 folic-acid deficiency, 1128  
 hemolytic, due to hexone monophosphate shunt defects, 1129  
 pernicious, 1128  
 sickle-cell, 1129  
**Anemia of chronic disease**, 1128  
**Anemia of renal failure**, 1128  
**Anemias**  
 classification, 567  
 hemolytic, 1128  
 macrocytic, agents for, 1346  
**Anemometer**, Doppler, 298  
**Anesthesia**, 1483  
**Anesthetics**  
 general, 1474  
 inhalation, 1474  
 injection, 1480  
 intravenous, 1476  
 local, 1479  
 topical, 1483  
**Aneurine hydrochloride**, 1710  
**Angitis**, hypersensitivity, 1122  
**Angiotensin converting enzyme inhibitors**, 1354  
**Angiotensin II receptor antagonists**, 1356  
**Anhydron**, 1426  
**Aniline violet**, 1348  
**Animal testing**, 553  
**Anionic surfactants**, 290  
**Anise**, 1068  
**Anise oil**, 1064  
**Anise seed**, 1068  
**Aniseed oil**, 1064, 1068  
**Anisindione**, 1328  
**Anistreplase**, 1333  
**Anorectal physiology**, 877  
**Ansaid**, 1536  
**Ansar**, 1737  
**Answer 1 Step**, 1276  
**Answer Quick & Easy**, 1276  
**Antacid tablets**, chewable, 912, 913  
**Antacids**, 1295, 1297t  
 chewable tablets, 1298t  
 gastric, chemistry, 382  
 mixtures, 1297  
 suspensions, 1298t  
**Antara**, 1367  
**Anthra-Derm**, 1284  
**Anthralin**, 1284  
**Anthraquinones**, chemistry, 439  
**Anthrones**, chemistry, 439  
**Antiadrenergics**, peripheral, 1351  
**Antiandrogens**, 1472, 1472t  
**Antiangular drugs**, 1358  
**Antianxiety agents** and hypnotic drugs, 1486  
**Antiarrhythmics**, 1362  
**Antibacterials**, miscellaneous, 1659  
**Antibacterials**, systemic, 1630  
**Antibiotics**, 1633, 1736  
 aminoglycosides, 1649  
 beta-lactam, 1635  
 beta-lactam, combinations, 1641  
 beta-lactamase inhibitors, 1649  
 bioassay, 561  
 classes and agents, 1635  
 control, 1635  
 detection and isolation of organisms, 1633  
 fluoroquinolones, 1656, 1657t  
 macrolides, 1652, 1652t  
 oxazolidinones, 1660  
 polypeptides, 1653  
 production, 1634  
 streptogramins, 1660  
 tetracyclines, 1654  
**Antibodies**, 1324  
 anticoagulant, 1615t  
 anti-inflammatory, 1615t

- antineoplastic, 1615t  
immunoantidote, 1615t  
immunology, 1206  
immunosuppressive, 1615t  
monoclonal, 1615t  
Antibody products, other, 1614  
Anticholinergics, 1375  
Anticholinesterases, 1393  
Anticholinesterases for  
  Alzheimer's disease, 1396  
Anticoagulant antagonists, 1335  
Anticoagulant citrate dextrose  
  solution, 1329  
Anticoagulant citrate phosphate  
  dextrose adenine solution,  
  1329  
Anticoagulant citrate phosphate  
  dextrose solution, 1329  
Anticoagulant sodium citrate  
  solution, 1329  
Anticoagulants, 1327  
  biotechnology, 995t  
  nonprothrombogenic, 1329  
  oral, 1328  
  prothrombogenic, 1328  
Antidepressants, 1516, 1518t  
Antidiabetic drugs, 1452, 1456  
Antidiarrheals, 1309  
Antidiuretic hormone secretion,  
  inappropriate, syndrome  
  of, 1123  
Antiemetics, 1310  
Antiepileptic drugs, 1501, 1508  
Antiestrogens, 1464  
Antiformin, 1630  
Antifungals, 1670, 1670t  
Antigens, diagnostic skin test,  
  1624, 1624t  
Antihematopoietic drugs, 1348  
Antihemophilic factor, 1326  
Antihistamines, 1544, 1546  
Antihistaminics, 1543  
Antihypertensives, 1350  
  centrally acting, 1351  
  direct vasodilators, 1352  
Anti-infectives, 1595, 1626  
Anti-inflammatory drugs, 1524, 1534  
  nonsalicylate nonsteroidal, 1535  
  nonsteroidal, 1534  
  salicylate-like nonsteroidal, 1535  
  relative potency, 875t  
Anti-inhibitor coagulant complex,  
  1327  
Antilirium, 1395  
Antilogarithms, 113  
Antimalarials, 1665  
Antimigraine drugs, 1434  
Antiminth, 1597  
Antimony, chemistry, 374t  
Antimony potassium tartrate, 1596  
Antimuscarinic and antispasmodic  
  drugs, 1405, 1406t  
  examples and uses, 1406t  
  ophthalmic, 1409  
Antimycobacterials, 1662  
Antineoplastic drugs, 1556, 1560  
  chemotherapeutic intervention,  
  1556  
  drug classes and mechanisms,  
  1558  
  tumor growth and kinetics, 1556  
Antioxidants, 1058  
  in pharmaceuticals, 747t  
  parenterals, 804  
Antiparkinson drugs, 1417  
Antiperspirants, 1281  
Antiplatelet drugs, 1334, 1335  
Antipodes, optical, 171  
Antiprotozoals, miscellaneous, 1669  
Antipsychotics, 1509  
  atypical, 1515, 1515t  
  novel, 1515  
  typical, 1510, 1511t  
Antipyretics, 1524, 1534  
Antisecretory drugs, acid suppression, 1299t  
Antiseptics, activities, 1627t  
Antiseptics, systemic urinary  
  tract, miscellaneous, 1664  
Antisera, heterologous, 1613t  
Antisera, immunosuppressive,  
  1613t  
Antispasmodics, 1410  
Antithrombin III (human), 1326  
Antithyroid drugs, 1460  
Antitoxin, botulism monovalent  
  (equine), 1613t  
Antitoxin, botulism types A, B,  
  and E (equine), 1613t  
Antitoxin, diphtheria (equine),  
  1613t  
Antitoxins, 1613t  
Antitussives, 1375  
Antivenin  
  crotalidae polyvalent (equine),  
  1613t  
  *Lactrodectus mactans* (equine),  
  1613t  
  *Micruurus fulvius* (equine), 1613t  
  *Sculpturatus centruroides*  
  (caprine), 1613t  
Antivenins, 1613t  
Antivert, 1311  
Antiviral drugs, 1675, 1675t  
Ants, control, 1728  
Anxiolytics, nonbenzodiazepine,  
  1491  
Anzatax, 1582  
Anzemat, 1310  
Aortic insufficiency, 1099  
APC tablets, 813  
Apis, 2330  
Apislol, 1275  
Apnea programs, 1992  
Apolipoprotein E, 1241  
Apomorphine, structure, 434t  
Apothecary conversions, 114  
Apothecary measure, 103t  
Apothecary weights, 107  
Apothecary weights, set, 108  
Application of ethical principles to  
  practice dilemmas, 1745  
Apraclonidine hydrochloride, 1382  
Aprepitant, 1310  
Apresoline, 1352  
Aquatag, 1426  
Arabinin, 1568  
Arachis oil, 1072  
Aracytin, 1568  
Aracytine, 1568  
Aralast, 1378  
Aralen phosphate, 1666  
Aramine, 1381  
Arcine transformation, 160  
Ardeparin, 1330  
Afonad, 1354  
Argenti nitras, 1287  
Arginine hydrochloride, 1270, 1690  
Argon, chemistry, 365t  
Argon plasma, direct-current, 654  
Argon plasma, inductively coupled,  
  654  
Aricept, 1396  
Arimidex, 1465, 1562  
Aripiprazole, 1515  
Aristocort, 1448  
Arixtra, 1330, 1333  
Arm-a-Med, 1383  
Army, pharmacy, 42  
Arnica montana, 2329  
Aromaatase inhibitors, 1464  
Aromasin, 1465, 1572  
Aromatherapy, 2324  
Aromatic elixir, 1071  
Arrhenius equation, 341t  
Arrhenius relationship, 155  
Arrhenius theory, 234  
Arsenic, chemistry, 374t  
Arsenic trioxide, 1562  
Arsenicals, 1730  
Arsenicals, organic, 1736  
Arsenicum album, 2330  
Arsonate liquid, 1737  
Artane, 1421  
Arteritis, giant-cell, 1122  
Arthritis, crystal-induced, 1120  
Arthritis, rheumatoid, 1119, 1212  
Artificial atmospheres, chemistry,  
  384  
Asacol, 1314  
Ascenia Breeze, 1275  
Ascorbic acid, 1700  
Ascorbic acid USP tablets, 912, 913  
Asendin, 1519  
Aseptic processing  
  advanced, 800  
  home infusion, 2290  
  administration, 2302  
  compounding devices, 2294,  
  2295t  
  compounding facilities, 2292  
  distinctives, 2291  
  final product release testing,  
  2298  
  labeling, 2299  
  packaging and shipping, 2300  
  personnel, 2296  
  quality control, 2297  
  shipping package design,  
  2301t  
  storage, home, 2301  
  storage, pharmacy, 2300  
  training, 2297  
  training content, 2302  
Asparaginase, 1562  
Aspirin, 1535  
Aspiroles, 1358  
Assays  
  acid-base reactions, 501  
  biological, 553 (see Bioassays)  
  botanicals, 511  
  color developing reagents, 502t  
  complexation reactions, 506  
  compounded preparations, 511  
  gravimetric methods, 507  
  index for official drugs, 515t  
  indicator solutions, 499  
  indicators, 499, 502t  
  indicators for endpoints, 499  
  miscellaneous methods, 509  
  nonaqueous titration systems,  
  506t  
  nutritional supplements, 511  
  official, classification, 513t  
  official chemical, 498  
  official physical, 498  
  precipitation reactions, 503  
  preparation of solutions, 498  
  reaction capacity values for  
  reagents, 498t  
  redox reactions, 503  
  spectrometric methods, 507  
  techniques, 502t  
  titer values, 499t  
  titrimetric methods, 499  
  titrimetric procedures, 501  
Assure, 1275  
Astatine, chemistry, 377t, 379  
Astemizole, 1546  
Asthma, bronchial, 1103  
Asthma drugs, inhaled, 1375  
Astringents, 1281  
Astringents, chemistry, 383  
Atabrine hydrochloride, 1667  
Atacand, 1356  
Atarax, 1491  
Atazanavir sulfite, 1677  
Atenolol, 1401  
Atgam, 1578, 1591  
ATGAM, 1613t  
Atherosclerosis, 1095  
Ativan, 1490  
Atmospheres, artificial, chemistry,  
  384  
Atmospheric pressure chemical  
  ionization, 637  
Atomic absorption, 653  
Atomic number, 162  
Atomic refractions, 168t  
Atomic structure, 162  
  Bohr's theory, 163  
  modern model, 163  
Atomic theory, Dalton's, 162  
Atomic weight, 162  
Atoms, configuration, 172  
Atopy, 1616  
Atorvastatin calcium, 1368  
Atovaquone, 1669  
Atpeg, 1079  
Atracurium besylate, 1412  
Atrazine, 1737  
Atropa belladonna, 2330  
Atropine, structure, 432t  
Atropine and related alkaloids,  
  432t  
Atropine sulfate, 1408  
Atrovent, 1408  
Attenuvax, 1602t  
Aufbrau principle of quantum  
  theory, 361  
Augmentin, 1649  
Autoclaves  
  air over steam, 784  
  counter pressure, 786t  
  counterpressure methods, 783  
  saturated steam, 781  
  superheated water spray, 784  
Autoimmune disorders, 1212  
Automation, 1753  
  role of, 1758  
  patient safety, 1758  
  systems approach, 1760  
Autoplex, 1327  
Autoprotolysis, 238  
Avandamet, 1456  
Avandia, 1455  
Avapro, 1357  
Avastin, 1563  
Avelox, 1658  
Aventyl, 1521  
Average, 129  
Avitene, 1337  
Avitrol, 1733  
Avodart, 1473  
Avoirdupois weights, common,  
  102t, 107  
Axert, 1434  
Axid, 1299  
Ayfivin, 1653  
Ayurvedic medicine, 2325  
Azacitidine, 1563  
Azactam, 1648  
Azatadine maleate, 1546  
Azathioprine, 1563, 1588  
Azelastine hydrochloride, 1546  
Azithromycin, 1652  
Azlocillin sodium, 1638  
AZO Test Strips, 1276  
AZT, 1684  
Aztreonam, 1648  
Azulfidine, 1633
- B**
- Bacampicillin hydrochloride,  
  1638  
Bacitracin, 1653  
Baclofen, 1415  
Bacteria, control, 1734  
Bacterial endotoxin test, bioassay,  
  562  
Bactocill, 1640  
Bactrim, 1632  
Baking soda, 1297, 1340  
BAL in Oil, 1343  
Balan, 1737  
Balances  
  analytical, 496  
  compound-lever, 105  
  construction, 104  
  electronic, 106  
  laboratory, 105  
  minimal weighing quantity, 108  
  prescription, 106

- protection, 107  
 requirements, 106  
 single-beam equal-arm, 104  
 testing, 106  
 torsion, 105  
 Troemner, 105  
 unequal-arm, 105  
*Balsalazide disodium*, 1314  
*Balsam de maltha*, 1280  
*Balsam of the holy victorious knight*, 1280  
*Balsamum catholicum*, 1280  
*Balsamum commendatoris*, 1280  
*Balsamum equities sancti victoris*, 1280  
*Balsamum friari*, 1280  
*Balsamum persicum*, 1280  
*Balsamum suecium*, 1280  
*Balsamum traumaticum*, 1280  
*Balsamum vervaini*, 1280  
*Balsamum vulnerarium*, 1280  
 Bandage, adhesive, 1973  
 Bandage, gauze, 1973  
 Bar chart, 130  
 Barbiturate combinations, 1495  
 Barbiturates, 1476, 1492  
 Barbiturates, salting-out constants, 235t  
*Barium*, chemistry, 367t, 368  
*Barium sulfate*, 1263  
 Barrier technology, parenterals, 816  
*Barytes*, artificial, 1263  
*Barytes*, synthetic, 1263  
 Base catalysis, specific, 274  
 Bases, 235  
 chemistry, 381, 391  
 conjugate, 391  
 differentiating solvent, 236  
 ionization, 236  
 Lewis, 190t  
 strong, as "buffers," 246  
 strong, calculations, 242  
 weak, calculations, 242, 243  
 weak, salts of, calculations, 244  
*Basic pharmacokinetics and pharmacodynamics*, 1171  
*Basicap*, 1736  
*Basiliximab*, 1218, 1594  
*Basophilis*, 569  
*Bathroom safety aids*, 1986  
*Bay oil*, 1069  
*Baycol*, 1368  
*BayGam*, 1613t  
*BayHep B*, 1613t  
*BayRab*, 1613t  
*BayRho-D*, 1613  
*BayTet*, 1613t  
*BCG live (intravesical)*, 1563  
*BCG vaccine*, 1563  
*Bear-berry*, 1306  
*Beclomethasone dipropionate*, 1446  
*Beclovent*, 1446  
*Beconase*, 1446  
*Becquerel units*, 484t  
*Bedbugs*, control, 1728  
*Bedfast patient*, accessories for, 1989  
*Bedpans*, 1989  
*Beds*, hospital, 1987  
*Beer's law*, 647  
*Beetles*, carpet, control, 1729  
*Behavioral determinants*, 1762  
*Behrens-Fisher test*, 139  
*Belladonna*, 1408  
*Benadryl hydrochloride*, 1545, 1548  
*Benazepril hydrochloride*, 1355  
*Bendroflumethiazide*, 1426  
*Benefin*, 1737  
*Benemid*, 1431  
*Benfluralin*, 1737  
*Benicar*, 1357  
*Benne oil*, 1072  
*Benomyl*, 1735  
*Benoquin*, 1292  
*Bensulide*, 1738  
*Bensumec*, 1738  
*Bentiomide*, 1272  
*Bentonite*, 1073  
*Bentonite as an emulsifying agent*, 331  
*Bentonite magma*, 1073  
*Benzaldehyde*, 1064  
*Benzalkonium chloride*, 1626  
*Benzedrex*, 1387  
*Benzene*, 166  
*Benzethonium chloride*, 1627  
*Benzhexol hydrochloride*, 1421  
*Benzocaine*, 1483  
*Benzodiazepam combinations*, 1491  
*Benzodiazepine antagonist*, 1499  
*Benzodiazepine anxiolytics*, 1488t  
*Benzodiazepines*, 1487  
*Benzoe*, 1280  
*Benzoic acid*, 1627  
*Benzoin*, 1280  
*Benzoin tincture*, compound, 1280  
*Benzonataze*, 1375  
*Benzothiadiazine*, 1425  
*Benzoyl peroxide*, 1288  
*Benzphetamine hydrochloride*, 1554  
*Benzthiazide*, 1426  
*Benztropine*, structure, 432t  
*Benztropine mesylate*, 1418  
*Benztropine methanesulfonate*, 1418  
*Benzyl alcohol*, 1627  
*Benzylpenicillin potassium*, 1640  
*Benzylpenicillloyl polylysine*, 1274  
*Bepridil hydrochloride*, 1365  
*Beractant*, 1378  
*Berotec*, 1383  
*Beryllium*, chemistry, 367, 367t  
*Beta error and power*, 138  
*Beta<sub>2</sub>-adrenergic agonists*, inhaled, 1372t  
*Betagan Liquifilm*, 1402  
*Beta-hypophamine*, 1442  
*Betaine*, 1713  
*Beta-lactam antibiotic combinations*, 1641  
*Beta-lactam antibiotics*, 1635  
*Beta-lactamase inhibitors*, 1649  
*Betamethasone*, 1446  
*Betapace*, 1403  
*Betaxolol hydrochloride*, 1401  
*Bethanechol chloride*, 1302, 1390  
*Betoptic*, 1401  
*Betula oil*, 1065  
*Bevacizumab*, 1563  
*Bexarotene*, 1564  
*Bextra*, 1541  
*Bias*, 130  
*Biaxin*, 1653  
*Bicalutamide*, 1564  
*Bichloroacetic acid*, 1286  
*Bicillin*, 1640  
*BiCNU*, 1566  
*Biguanides*, 1452  
*Bile acids*, 1303  
*Biliary excretion*, 1166  
*Biltricide*, 1597  
*Binders*, effect on dissolution, 677  
*Binders*, tablet, 891  
*Binding constants*, 194  
*Bingham bodies*, 343  
*Binomial distribution*, normal approximation to, 136  
*Binomial probabilities*, 135t  
*Bioadhesives*, drug delivery, 957, 960  
*Bioassays*  
 agar diffusion test, 562  
 animal, 553, 554  
 antibiotics, 561  
 bacterial endotoxin test, 562  
 biological safety tests, 563  
 calcium pantothenate, 561  
 chorionic gonadotropin, 559  
 classification, 554  
 corticotropin, 558  
 cylinder plate method, 561  
 depressor substances test, 562  
*Dexpanthenol*, 561  
*Digitaloid drugs*, 554  
*Direct contact test*, 562  
*Disadvantages*, 554  
*Elution test*, 562  
*Glucagon*, 555  
*Heparin*, 559  
*Implantation test*, 563  
*Insulin*, 555  
*Intracutaneous test*, 563  
*Microbial*, 560  
*Niacin*, 560  
*Niacinamide*, 560  
*Oxytocin*, 558  
*Parathyroid*, 558  
*Posterior pituitary*, 558  
*Procedure summary*, 556t  
*Procedures*, 553  
*Protamine sulfate*, 559  
*Pyrogen test*, 562  
*Reactivity tests*, *in vitro*, 562  
*Reactivity tests*, *in vivo*, 562  
*Reference standards*, 553  
*Systemic injection test*, 562  
*Test procedures*, summary, 563t  
*Tests*, 562  
*Turbidimetric*, 561  
*Vasopressin*, 558  
*Vitamin B<sub>12</sub> activity*, 561  
*Vitamins*, 559, 560  
*Bioavailability*, general concepts, 1037  
*Bioavailability and bioequivalency testing*, 1037  
*Bioavailability from coarse dispersions*, 336  
*Biochemistry*, research, 91  
*BioCox*, 1275  
*Bioequivalence assessment and data evaluation*, 1041  
*AUC*, 1042t  
*Average*, 1043  
*Criteria*, 1043  
*Data evaluation*, 1040  
*FDA high-fat test meal*, 1043t  
*Federal studies*, 1043  
*General concepts*, 1037  
*Individual and population*, 1044  
*Methods for determining*, 1038  
*Minimizing the need for studies*, 1038  
*Study design*, 1044  
*Testing*, 1037, 1040  
*Therapeutic evaluations*, 1037  
*Bioisosterism*, 471  
*Biological half-life*, drug delivery, 944  
*Biological test procedures*, summary, 563t  
*Biological testing*, 553 (see Bioassays)  
*Biological tests*, 562  
*Biologicals*, 1601t  
*Biologics*, characteristics, 1600  
*Biology*, cell, research, 91  
*Biology*, molecular, research, 91  
*Biorheology*, 349  
*BIOSIS Reviews*, 66  
*Biotax*, 1582  
*Biotechnology*, 976  
 background, 976  
 glossary, 997t  
 guide to understanding, 995t  
 hairy root cultures, 986t  
 manufacturing applications, 988  
 medicines approved and in development, 990t  
 milestones, 977t  
 moral and ethical questions, 988  
 organic synthesis applications, 988  
*Pharmacognostical applications*, 985  
*Pharmacological applications*, 987  
*QA and QC*, 1020  
*Unique challenges*, 983  
*Biotechnology and drugs*, 976  
*Biotechnology drugs*, 978  
*Biotechnology products*, drug delivery, 958  
*Biotin*, 1702  
*Biotransformation*, 1160  
*Biotransformations*, 1163, 1164  
*Biperiden hydrochloride*, 1418  
*Biphosphonates*, 1457, 1458t  
*Bipyridyliums*, 1738  
*Birch oil*, sweet, 1065  
*Bisacodyl*, 1306  
*Biscumarol*, 1328  
*Bishydroxycoumarin*, 1328  
*Bismuth*, chemistry, 374t  
*Bismuth nitrate*, basic, 1083  
*Bismuth oxynitrate*, 1083  
*Bismuth paint*, 1083  
*Bismuth subcarbonate*, 1282  
*Bismuth subnitrate*, 1083  
*Bismuth subsalicylate*, 1296  
*Bismuthyl nitrate*, 1083  
*Bisoprolol fumarate*, 1401  
*Bithionol*, 1596  
*Bitolterol*, 1372  
*Bitolterol mesylate*, 1383  
*Bitter bark*, 1306  
*Bitter salts*, 1307  
*Bitumen*, sulfonated, 1285  
*Black balsam*, 1285  
*Bleaching powder*, 1735  
*Blenoxane*, 1564  
*Bleomycin sulfate*, 1564  
*Blocadren*, 1403  
*Blood*  
 collecting, processing, and storing, 573  
 collection and preparation for analysis, 576  
 compatibility testing, 575  
 components, 1318, 1319  
 drug-related problems, 575  
 evaluating transfusion reactions, 575  
 fluids, electrolytes, and hematological drugs, 1318  
 hepatitis testing, 575  
 issuing, 575  
 miscellaneous drugs affecting, 1348  
 RH-HR system, 574  
 whole, 1318, 1319  
*Blood-bank technology*, analysis, 573  
*Blood-clotting proteins*, 1325  
*Blood-glucose monitors*, 1998  
*Blood-group factors*, 1324t  
*Blood-group systems*, 574t  
*Blood-grouping serum*, anti-A, 1325  
*Blood-grouping serum*, anti-B, 1325  
*Blood-grouping serums*, 1324, 1325t  
*Blood-grouping serums*, anti-Rh, 1325  
*Blood-pressure monitors*, 1998  
*Blood-typing serums*, 1324  
*Blood-volume mechanisms*, analysis, 570  
*Blood cells*  
 human red, 1320  
 red, leukocytes removed, 1320  
 red, saline washed, 1320  
*Blood coagulation*  
 agents affecting, 1325  
 analysis, 571  
*Blood coagulation factors*, 571t  
*Blood donor*, receiving and examining  
*Blood dyscrasias*, 1129  
*Blood glucose*, analysis, 576

- Blood glucose monitors, 1275  
 Blood group classification, ABO, 573  
**Blood Grouping Serums**, Anti-D, Anti-C, Anti-E, 1325  
 Blood lactate/pyruvate ratio, 577  
 Blood lipids, drugs affecting, 1366  
 Blood plasma expanders, 1321  
 Blood plasma extenders, 1322  
 Blood plasma volume expanders, 1322  
 Blood substitutes, 349  
 Blood testing, 1275, 1276  
 Bodywork, 2332  
 Bohr's theory of atomic structure, 163  
 Boiling-point elevation, 225  
 Bombardment, fast-atom, 636  
**Bond**  
 covalent energy, 167t  
 ionic, 168  
 partial ionic, 168  
 Bond complexes, aromatic sigma, 170  
 Bond's law, 703  
**Bonding**  
 charge-transfer, 191  
 hydrogen, 191  
 theories of coordinate, 188  
**Bonds**  
 carbon-carbon, 164  
 carbon-heteroatom, 167  
 coordinate covalent, 169, 236  
 covalent, 164  
 electronegativities, 168t  
 hybridized, 165  
 hydrogen, 173  
 ionic character, 168t  
 molecular, 170  
 noncarbon, 167  
 pi, 165  
 polar, 168  
 sigma, 165  
 Bone mineralization, agents affecting, 1457  
 Bonine, 1311  
 Boric acid, 1083, 1627  
 Borneol, structure, 440  
 Boron, chemistry, 369t, 370  
 Bortezomib, 1565  
 Bosentan, 1369  
 Botran, 1735  
 Bourbanal, 1064  
 Bovine spongiform encephalopathy, 1449  
 Bravais lattices, 659t  
 Breath freshener tablets, 913  
 Brethaire, 1385  
 Brethine, 1385  
 Bretylium tosylate, 1362  
 Bretylol, 1362  
 Brevibloc, 1402  
 Brevital sodium, 1476  
 Bricanyl, 1385  
 Bridge, salt, 246  
 Briggsian logarithm base, 240  
 Brimonidine tartrate, 1382  
 Brioschi, 1297  
 Bristaxol, 1582  
 British Anti-Lewisite, 1343  
 British gum, 1085  
 British measures, 103t  
 Brodifacoum, 1734  
 Bromacil, 1737  
 Bromadiolone, 1734  
 Bromfenac sodium, 1536  
 Bromine, chemistry, 377t, 378  
 Bromocriptine mesylate, 1418  
 Brompheniramine maleate, 1546  
 Bronchitis, chronic, 1102  
 Bronchitis, predominant, and emphysema, 1103  
 Bronchodilators, 1371  
 Bronkophrine, 1386  
 Bronkometer, 1383  
 Bronkosol, 1383  
 Bronsted amphitropic substance, 236  
 Bronsted theory of acids and bases, 391  
 Buccal administration, 1157  
 Bucrylate, 1091  
 Budesonide, 1446  
 Buffer, for stabilization, 278  
 Buffer capacity, calculations, 245  
**Buffers**  
 calculations, 244  
 chemistry, 381, 382  
 ophthalmics, 862  
 parenterals, 804  
 solubility, 229  
 systemic, 1337  
 Bumetanide, 1429  
 Buminate, 1321  
 Bupivacaine hydrochloride, 1481  
 Buprenex, 1530  
 Buprenorphine hydrochloride, 1530  
 Buprenorphine sublingual, 2315  
 Bupropion hydrochloride, 1519  
 Bupropion SR, 2311t  
 Burow's solution, 1282  
 BuSpar, 1491  
 Buspirone hydrochloride, 1491  
 Busulfan, 1565  
 Butabarbital, aspirin and caffeine, 1495  
 Butabarbital sodium, 1494  
 Butalbital, acetaminophen and caffeine, 1495  
 Butazolidin, 1539  
 Butenafine hydrochloride, 1673  
 Butisol sodium, 1494  
 Butorphanol tartrate, 1530  
 Butylparaben, 1627
- C**
- Cacao butter, 1085  
 Cacao syrup, 1070  
 Cachets, 925  
 Cadodylic acid, 1736  
 Cade oil, 1285  
 Cadmium, chemistry, 366t, 368  
 Cafcit, 1553  
 Cafergot, 1434  
 Caffeine, 1551  
 citrated, 1553  
 structure, 438t  
 Caffeine and sodium benzoate injection, 1553  
 Cahn-Ingold-Prelog system, 171  
 Cahn-Robinson sequence, 434  
 Cajeputol, 1069  
 Calamine, 772, 1283  
 artificial, 1283  
 prepared, 1283  
 Calan, 1366  
 Calcibind, 1342  
 Calcifediol, 1698  
 Calciferol, 1697  
 Calcijex, 1458  
 Calcimar, 1456  
 Calcitonin, 1456  
 Calcitriol, 1458, 1698  
 Calcium, chemistry, 367t, 368  
 Calcium alginate dressings, 1969  
 Calcium carbonate, 1296  
 Calcium channel blockers, 1364  
 Calcium chloride, 1337  
 Calcium citrate, 1337  
 Calcium Disodium Versenate, 1343  
 Calcium glubionate, 1338  
 Calcium gluceptate, 1338  
 Calcium gluconate, 1338  
 Calcium glycerophosphate, 1338  
 Calcium hydrate, 1084  
 Calcium hydroxide, 1084  
 Calcium hypochlorite, 1735  
 Calcium lactate, 1338  
 Calcium levulinate, 1338  
 Calcium metabolism disorders, 1126  
 Calcium pantothenate, 561, 1707  
 Calcium phosphate, dibasic, 1338  
 Calcium phosphate, tribasic, 1339  
 Calcium polysulfides, 1730  
 Calcium stearate, 1084  
 Calcium sulfate, 1084  
 Calcium sulfosuccinate, dioctyl, 1308  
 Calcium tetrachloride, 1084  
**Calculations**  
 answers to problems, 125  
 dosage, 116  
 freezing-point, 257  
 pharmaceutical, 99, 111  
 problem-solving methodology, 116  
 Calfactant, 1378  
 Calomel electrode, 247  
**Calorimetry**, differential scanning, 662  
 Calphosan, 1338  
 CamPath, 1561  
 Camphor, 1284  
 gum, 1284  
 laurel, 1284  
 peppermint, 1285  
 Campitosar, 1577  
 Canasa, 1314  
**Cancer**  
 colon, 1109  
 gastric, 1107  
 immunology, 1216  
 Cancidas, 1671  
 Candesertan cilexetil, 1356  
 Candida albicans skin test antigen, 1275  
 Candin, 1275  
 Canes, 1982  
 Cantharidin, 1284  
 Capecitabine, 1565  
 Capillarity, 284  
 Capillary fragility test, 572  
 Capoten, 1355  
 Capsicum, 1285  
 Capsules, 918  
 extemporaneous methods, 920  
 fill chart, 921t  
 gelatin, stability, 1027  
 hard gelatin, 919  
 machine filling methods, 920  
 microencapsulation, 924  
 plate process, 923  
 rotary die process, 923  
 soft elastic, 923  
 uniformity, 922  
 Captan, 1735, 1738  
 Captopril, 1355  
 Carabamazepine, 1503  
 Carafate, 1302  
 Carbachol, 1391  
 Carbamates, 1737  
 Carbapenems, 1643t, 1647  
 Carbaryl, 1732  
 Carbasus absorbens, 1973  
 Carbicillin disodium, 1639  
 Carbetapentane tannate, 1376  
 Carbidopa, 1418  
 Carboxyamine maleate, 1547  
 Carbocaine, 1482  
**Carbohydrates**, 1692  
 chemistry, 412  
 composition, 412  
 occurrence and uses, 419  
 structure, 412  
 Carboxylic acid, 1087, 1088  
 Carbomer, 1073  
 Carbomer gel, 772  
**Carbon**  
 chemistry, 371, 371t  
 tetrahedral configuration, 165  
 uniqueness, 164  
**Carbon-carbon bonds**, 164  
**Carbon-heteroatom bonds**, 167  
 Carbon dioxide absorbers, chemistry, 384  
 Carbon disulfide, 1733  
 Carbonic anhydrase inhibitors, 1425  
 Carboplatin, 1566  
 Carboprost tromethamine, 1432  
 Carbose-D, 1073  
 Carbowaxes, 1079  
 Carboxymethocel S, 1073  
 Carboxymethylcellulose sodium, 1073  
 Cardamom fruit, 1064  
 Cardamom seed, 1064  
 Cardamom, Ceylon or Malabar, 1064  
 Cardene, 1366  
 Cardiaquin, 1364  
 Cardilate, 1359  
 Cardio-Green, 1270  
 Cardiovascular drug, 1350  
 Cardiovascular drugs, special-use, 1369  
 Cardizem, 1365  
 Cardura, 1400  
 Careers, 3  
 Cargile membrane, 1976  
 Carisoprodol, 1415  
 Carisprodate, 1415  
 Carmustine, 1566  
 Carnauba wax, 1084  
 Carnot cycle, 204  
 Carotenoids, 1717  
 Carrageenan, 1073  
 Carteolol hydrochloride, 1402  
 CartiaXT, 1365  
 Cartrol, 1402  
 Carvacrol, structure, 440  
 Carvedilol, 1402  
 Carvone, structure, 440  
 Casanthranol, 1306  
 Cascara sagrada, 1306  
 Casodex, 1564  
 Casoron, 1738  
 Caspofungin acetate, 1671  
 Cassia, Saigon, 1064  
 Casson model, 348  
 Castor oil, 1306  
**Catalysis**,  
 acid, specific, 272  
 base, specific, 272  
 enzyme, 274  
 Cataplasms, 886  
 Catapres, 1351  
 Catgut, surgical, 1978  
 Cation-complexing agents, 1342  
 Cationic surfactants, 290  
 Caustics, 1286  
 Cavity model, 192  
 CCNU, 1578  
 CDP Plus, 1491  
 Ceclor, 1643  
 Cedax, 1646  
 CeeNU, 1578  
 Cefaclor, 1643  
 Cefadyl, 1647  
 Cefamandole nafate, 1643  
 Cefazolin sodium, 1643  
 Cefdinir, 1644  
 Cefepime hydrochloride, 1644  
 Cefixime, 1644  
 Cefizox, 1646  
 Cefmetazole sodium, 1644  
 Cefobid, 1644  
 Cefonicid sodium, 1644  
 Cefoperazone sodium, 1644  
 Cefotan, 1645  
 Cefotaxime sodium, 1645  
 Cefotetan disodium, 1645  
 Cefoxitin sodium, 1645  
 Cefpodoxime proxetil, 1645  
 Cefprozil, 1645  
 Cefradroxil, 1645  
 Cefazidime, 1646  
 Ceftibuten, 1646  
 Ceftizoxime sodium, 1646

- Ceftriaxone sodium, 1646  
 Cefuroxime sodium, 1646  
 Cefzil, 1645  
 Cekiuron, 1737  
 Celebrex, 1541  
 Celecoxib, 1541  
 Celestone, 1446  
 Celexa, 1519  
 Cell constant, 232  
 CellCept (base), 1592  
 CellCept IV (hydrochloride), 1592  
 Cellosize, 1074  
 Cells, encapsulated, drug delivery, 962  
 Cells, immunology, 1208  
 Cellulose  
   absorbable, 1973  
   hydroxyethyl, 1074  
   hydroxypropyl, 1074, 1280  
   microcrystalline, 1084  
   microcrystalline, and  
    carboxymethylcellulose  
    sodium,  
    co-processed, 1085  
   oxidized, 1973  
   powdered, 1074, 1278  
 Cellulose acetate phthalate, 1084  
 Cellulose derivatives, 305  
 Cellulose gum, 1073  
 Cellulose sodium phosphate, 1342  
 Cellulosic acid, 1973  
 Cellulosic packaging, 1053  
 Cellulosic solutions, tablets, 892  
 Celontin, 1505  
 Centers for Disease Control and  
  Prevention, 46  
 Centocor, 1332  
 Central Limit Theorem, 135t  
 Central nervous system infection,  
  1139  
 Central nervous system stimu-  
  lants, 1551  
 Centrifugation, 693  
 Centrifuge, bottle, 693  
 Centrifuge, ultra-, 694  
 Centrifuges, sedimentation, 693  
 Cephalexin, 1647  
 Cephalosporins, 1641, 1642t  
 Cephalothin sodium, 1647  
 Cephapirin sodium, 1647  
 Cephadrine, 1647  
 Cerebrospinal fluid, drug entry,  
  1156t  
 Cerebrospinal fluid, rheology, 352  
 Cerelose, 1085  
 Ceresin, 1092  
 Cerivastatin sodium, 1368  
 Cerosin, 1092  
 Cerubidine, 1569  
 Cervidil, 1432  
 Cesium, chemistry, 365t, 366  
 Cetirizine hydrochloride, 1547  
 Cetuximab, 1566  
 Cetyl esters wax, 1077  
 Cevalin, 1701  
 Cevimeline hydrochloride, 1391  
 Chalk, French, 1091  
 Charcoal, activated, 1313  
 Charcoal, medicinal, 1313  
 Charcoal Plus DS, 1313  
 Charge-transfer acceptors and  
  donors, 192t  
 Charge-transfer bonding, 191  
 Charge-transfer complexes, 170  
 Chavichol, structure, 440  
 Chelate, 186  
 Chelates, 169  
 Chelating agents in  
  pharmaceuticals, 747t  
 Chemet, 1344  
*Chemical Abstracts*, 66  
 Chemical kinetics, 266  
   (see Kinetics)  
 Chemical modification, drug  
  delivery, 959  
 Chemical reactions, basis, 361  
 Chemical reactivity, 196  
 Chemistry, descriptive  
  coordination, 186  
 Chemistry, group VI-B elements,  
  377  
 Chemistry, host-guest, 193  
 Chemistry, inorganic, 361  
  acids, 381  
   bases, 381  
   basis of reactions, 361  
   buffers, 381  
   electrolytes, 382  
   essential trace elements, 382  
   group 0 elements, 364, 365t  
   group I elements, 365  
   group I-A elements, 365, 365t  
   group I-B elements, 366  
   group II-A elements, 367, 367t  
   group II-B elements, 368  
   group III elements, 369  
   group III-A elements, 369t, 370  
   group III-B elements, 371  
   group III-B transition  
    elements, 369t  
   group IV elements, 371  
   group IV-A elements, 371, 371t  
   group IV-B elements, 373  
   group IV-B transition elements,  
    369t  
   group V elements, 374  
   group V-A elements, 374  
   group V-B elements, 375  
   group V-B transition elements,  
    375t  
   group VI elements, 375  
   group VI-A elements, 375, 376t  
   group VI-B transition elements,  
    375t  
   group VII elements, 377  
   group VII-A elements, 377  
   group VII-A elements, 377t  
   group VII-B elements, 379  
   group VII-B transition  
    elements, 378t  
   group VIII elements, 379  
   group VIII elements, first triad,  
    380  
   group VIII transition elements,  
    first triad, 378t  
   halogenoids, 379  
   miscellaneous applications, 384  
   nomenclature, 362  
   pseudochemicals, 379  
   structural repairs, 385  
   topical agents, 383  
   transition elements, 369  
   water, 380  
 Chemistry, organic  
  acids, 391  
   bases, 391  
   chemical classifications, 389  
   groups, 388, 403t  
   heterocycles, 390, 405t  
   literature, 389  
   nomenclature, 386  
   notation brevity, 388t  
   notation systems, 388  
   pharmaceuticals, 389  
   pharmacological classifications,  
    389  
   pH control, 382  
   physical, research, 93  
   prefixes, 401t  
   radicals, 388, 403t  
   research, 90  
   suffixes, 402t  
   types of compounds, 386, 396t  
 Chem-Neb, 1735  
 Cherry, black, leaf, 1408  
 Cherry, wild, 1069  
 Cherry bark, wild black, 1069  
 Cherry syrup, 1070  
 Cherry syrup, wild, 1071  
 Chewing gum, medicated, 925  
 Chewing gum, medicated, formula,  
  926t  
 Chibroxin, 1658  
 Chiggers, control, 1728  
 Chimichlor, 1737  
 China clay, 1313  
 Chiral chromatography, 620  
 Chiral derivatizing agent, 620  
 Chiral stationary phase, 621  
 Chiropractic, 2325  
 Chi-square table, 142t  
 Chi-square test, 128, 142  
 Chittem, 1306  
 Chloral, 1497  
 Chloral hydrate, 1497  
 Chlorambucil, 1566  
 Chloramphenicol, 1659  
 Chlorazine, 1312  
 Chlorbutanol, 1059  
 Chlorbutol, 1059  
 Chlordiazepoxide, 1489  
 Chlordiazepoxide hydrochloride  
  with clidinium bromide,  
    1491  
 Chlordiazepoxide with  
  amitriptyline hydrochlo-  
    ride, 1491  
 Chloretoene, 1059  
 Chlorhexidine gluconate, 1627  
 Chlorine, chemistry, 377t, 378  
 Chlorine dioxide sterilization, 792  
 Chlorobutanol, 1059, 1484  
 Chlorofluorocarbon propellants,  
  1006  
 Chloroform, 1085  
 Chloromycetin, 1659  
 Chloroneb, 1735  
 Chloropicrin, 1733  
 Chloroprocaine hydrochloride,  
  1481  
 Chloroquine phosphate, 1666  
 Chlorothiazide, 1426  
 Chlorphenacinone, 1734  
 Chlorphenesin carbamate, 1416  
 Chlorpheniramine maleate, 1545  
 Chlorpheniramine tannate, 1545  
 Chlorpromazine hydrochloride,  
  1511  
 Chlorpropamide, 1453  
 Chlorthalidone, 1426  
 Chlor-Trimeton, 1545  
 Chlorzoxazone, 1416  
 Chocolate syrup, 1070  
 Chocolate-flavored syrup, 1070  
 Cholac, 1316  
 Cholecalciferol, 1697  
 Cholelithiasis, 1112  
 Cholesterol, 1074  
 Cholesterol as an emulsifying  
  agent, 331  
 Cholesterol testing, 1275  
 CholesTrak, 1275  
 Cholestyramine resin, 1367  
 Choline, 1703  
 Choline bitartrate, 1703  
 Choline chloride, 1703  
 Choline dihydrogen citrate, 1703  
 Cholinesterase reactivators, 1397  
 Cholinomimetic drugs, 1389  
 Cholinomimetics, 1389  
 Cholografin, 1264  
 Cholografin meglumine, 1264  
 Cholybar, 1367  
 Chondrus, 1073  
 Chorigonadotropin alfa, 1439  
 Chromatography, 599  
  adsorption, 599, 610  
  affinity, 199, 600, 614  
  chiral, 199, 620, 621t  
  classification of methods, 599  
  column, adsorbents used, 610t  
  column, classic, 615  
  column dimensions on  
    separations, 625t  
  common GC detectors, 608t  
  common papers, 629t  
  derivatizing agents, 628t  
  displacement analysis, 601  
 electro-, 630  
 electro-, capillary, 600  
 electrophoresis, 630  
 elution analysis, 601  
 evaporative light scattering  
  detector, 618  
 experimental factors, 615  
 frontal analysis, 601  
 gas, 605  
  basic instrumentation, 605  
  carrier gas, 606  
  column design, 607  
  detectors, 607  
  operating conditions, 607  
  qualitative analysis, 609  
  special techniques, 609  
  stationary phase, 606  
 gel filtration, 613  
 high-performance liquid, 615  
  columns for different  
    compound types, 623t  
  commonly available columns,  
    617t  
  derivatization, 619  
  detectors, 618t  
  method development, 621  
  qualitative analysis, 619  
  quantitative analysis, 619  
  recent developments, 619  
 hydrophobic, 199  
 hydrophobic interaction, 620  
 instrumentation, 615  
 ion, 619  
 ion-exchange, 600, 612  
 ion-pairing, 612  
 ion-suppression, 612  
 liquid, 610  
 micellar electrokinetic  
  (capillary), 305, 631  
 microbore, 621  
 molecular-sieve, 613  
 paper, 628  
 paper, chromatogram  
  development, 629  
 paper, phases, 629  
 paper, sample preparation and  
  application, 629  
 particle physical characteristics  
  on separations, 625t  
 partition, 599, 611  
 process, 600  
 reverse-phase, 620  
 size-exclusion, 600, 613  
 "soap," 612  
 solvent characteristics, 611t  
 supercritical fluid, 619  
 techniques, 604  
 techniques of column  
  development, 600  
 theory, 602  
 thin-layer, 626  
  detection methods, 628  
  plate preparation, 627  
  qualitative analysis, 628  
  quantitative analysis, 628  
  sample application and  
    development, 627  
  stationary and mobile phases  
    used, 627t  
 Chromium, 1715  
 Chromoproteins, 423  
 Chronic wound care, 2342  
 Chronogyn, 1471  
 Chymex, 1272  
 Cibacalcin, 1456  
 Cidex, 1628  
 Cignolin, 1284  
 Ciloxan, 1657  
 Cimetidine, 1298  
 Cinchona alkaloids, 435 (see  
  Alkaloids)  
 Cinchomidine, structure, 435  
 Cinchonine, structure, 435  
 Cineol, 1069  
 Cinnamon, 1064  
 Ceylon, 1069

- Saigon, 1064  
true, 1064
- Cinoxate, 1290
- Ciodyn, 1732
- Cipro, 1657
- Ciprofloxacin, 1657
- Cirrhosis, 1111
- Cisapride, 1302
- Cisatricurium besylate, 1413
- Cisplatin, 1567
- Citalopram hydrochloride, 1519
- Citanest, 1482
- Citracl, 1337
- Citral, structure, 440
- Citric acid, 1085
- Citronellal, structure, 440
- Citrovorum factor, 1705
- Cixivan, 1680
- Cladribine, 1567
- Claforan, 1645
- Clapeyron equation, 208
- Clarification, 697
- Clarinex, 1548
- Clarithromycin, 1653
- Claritin, 1549
- Clarity, ophthalmics, 861
- Clathrates, 194
- Clathrates, channel, 194
- Claudius inequality, 206
- Clavulanate potassium, 1649
- Clays, swelling, 372
- Clean rooms  
air cleaning, 815  
classifications, 815t  
maintenance, 817  
parenterals, 814
- Cleansing preparations, 1289
- Clear Choice, 1276
- Clearance, organ-specific, pharmacokinetics, 1182
- Clearance, pharmacokinetics, 1195
- Clearblue Easy, 1276
- Clearplan Easy, 1276
- Clemastine fumarate, 1547
- Cleocin hydrochloride, 1659
- Clindamycin hydrochloride, 1659
- Clindex, 1491
- Clindibrax, 1491
- Clinical analysis, 565  
(*see* Analysis)
- Clinical drug literature, 74 (*see* Literature)
- Clinical pharmacokinetics and pharmacodynamics, 1191
- Clinical trial  
ADRs, 974  
bias control, 970  
blinding, 972  
design, 970  
determining sample size, 971t  
drug packaging, 972  
drug product blinding, 973t  
drug product design, 972  
feasibility, 972  
GCP monitoring, 974  
intervention application, 971  
intervention assignment, 971  
outcome measurement, 971  
patient treatment regimens, 970t  
planning and design, 969  
population selection, 971  
regulations, 973  
sample size, 971  
selecting objectives, 970  
statistical analysis, 974
- Clinical trials, 76t (*see* Studies)  
controlled, 133  
design and conduct, 133  
Phase II dose validation for  
Phase III, 1256
- Clinoril, 1540
- Clinoxide, 1491
- Clofazimine, 1662
- Clomid, 1465
- Clomiphene citrate, 1465
- Clomipramine hydrochloride, 1519
- Clonazepam, 1503
- Clonidine, 1270
- Clonidine hydrochloride, 1351
- Clopidogrel bisulfite, 1335
- Clorazepate, 1489
- Closures, rubber, ingredients, 811t
- Closures, rubber, parenterals, 810
- Closures, stability, 1036
- Clotrimazole, 1671
- Clove, 1069
- Cloxacillin sodium, 1639
- Cloxacillin sodium monohydrate, 1639
- Clozapine, 1639
- Clozaril, 1515
- CMC, 1073
- CNS stimulants, 1551
- CNS stimulants, classes and compounds, 1552t
- Coacervation, simple, 298
- Coagulation of hydrophobic dispersions, 302
- Coagulation values, 303t
- Coal tar, 1285
- Coalescence, rate, and emulsion type, 331
- Coarse dispersions, 319 (*see* Dispersions)
- Coating  
binder solution formulations, 930t  
dusting powder formulations, 931t  
enteric, 932  
evolution, 929  
film, problems, 933  
film, solid dosage forms, 932  
fluidized-bed, equipment, 936  
modified-release film, 932  
pharmaceutical dosage forms, 929  
potential for totally automated, 936  
procedures and equipment, 934  
processes, 930  
recent trends, 938  
stability testing, 937  
sugar, compressed tablets, 930  
suspension subcoating formulation, 931t  
sustained-release, 933  
tablets, quality control, 937
- Cobalt, 1715
- Cobalt, chemistry, 378t, 380
- Cocaine, 1484
- Cocaine hydrochloride, 1385
- Coccidiomycosis skin test antigen, 1275
- Cockroaches, control, 1728
- Cocoa butter, 1085
- Cocoa butter, suppositories 884
- Cocoa butter, suppositories, density factors, 886t
- Cocoa syrup, 1070
- Coconut oil, 1281
- Cod liver oil, 1697
- Codeine, 1527
- Codeine, structure, 434t
- Codeine phosphate, 1527
- Codeine sulfate, 1528
- Coefficient, activity, 245
- Coefficients, partition, 174
- Cogentin, 1418
- Cognex, 1397
- Cohesional forces, 282
- Coinage metals, 366
- Colace, 1308
- Colation, 699
- Colazal, 1314
- Cold cream, 1078
- Colesevelam hydrochloride, 1367
- Colestid, 1367
- Colestipol hydrochloride, 1367
- Colitis, granulomatous, 1109
- Colitis, ulcerative, 1109
- Collagen, microfibrillar, 1337
- Collagenase, 1686
- Colligative properties, electrolytes, 231
- Colligative properties, electrolyte solutions, 226
- Colligative properties, practical applications, 227
- Colligative properties of solutions, 224
- Collodion, 1278
- Collodions, 757
- Colloid mills for emulsions, 764
- Colloid solutions, 1321
- Colloidal carriers, drug delivery, 953
- Colloidal dispersions, 293  
(*see* Colloids)
- Colloids  
applications, 314  
association, 294, 295, 310  
classification, 294t  
classifications, 293  
definitions, 293  
delivery systems, 315  
diffusion, 296  
electric properties, 300  
electrokinetic phenomena, 304  
gel formation, 298  
hydrophilic, 294  
hydrophobic, coagulation, 302  
interfaces, 293  
light scattering, 297  
liposomes, 314  
lyophilic, 294  
lyophilic dispersions, 305  
lyophobic, 294  
lyophobic dispersions, 306  
microemulsions, 313  
particle shape, 295  
particulate, 294  
particulate hydrophilic dispersions, 306  
phases, 293  
properties, 295  
protective, 310  
radioactive, 314  
sedimentation, 296  
sensitization, 310  
specific surface area, 293  
stabilization, 308  
systems, 293  
viscosity, 298
- Collyrium Fresh, 1381
- ColoCare, 1275
- Colon  
diseases of, 1108  
dysfunction symptoms, 1108  
polypoid lesions, 1109
- Colony stimulating factor  
biotechnology, 995t  
granulocyte-macrophage, 1219
- Colophony, 1089
- Colorants, 1060
- Colorimetry, 246
- Coloring agents, 1060  
natural, 1060  
synthetic, 1060
- tablet, 893
- Column chromatography, classic, 615
- Combipres, 1426
- Commander's balsam, 1280
- Comminution, effect on specific surface area, 294t
- Comminution, powders, 702
- Commissioned Corps Readiness Force, 47
- Commodes, 1985
- Communicable disease control, 56
- Communication, patient, 1770
- Communications  
administrator, 1821
- clinical practice guidelines and pathways, 1814
- drug alert notifications, 1814
- drug evaluation monographs, 1812
- follow-up and documentation, 1810
- formulary, 1812
- ideal slide/transparency text, 1812t
- manuscripts for publication, 1814
- newsletters, 1814
- personnel, 1817
- poster presentations, 1816
- presentations, 1811
- professional, 1808
- questions, 1809t
- research project publication, 1815t
- SOAP note, 1810t
- telephone, 1809
- verbal; drug orders, 1810
- writing rules, 1816t
- written, 1810
- written professional, 1816
- Community pharmacy, 30, 2083  
balance sheets, 2086t  
capital, 2085  
compounding, 30  
credit, 2093  
distribution and control, 30  
economics, 2082  
establishing, 2083  
facilities, 2091  
forces of change, 31  
inventory, 2089  
management, 2082, 2087  
money, 2088  
organization, 2084  
personnel, 2092  
pharmaceutical care, 32  
records, 2096  
responsibilities, 32  
risk, 2094  
site selection, 2085
- Compendia, drug, 68
- Complement factors, immunology, 1208
- Complex formation, 186, 229
- Complex stability, 194
- Complex stability, factors affecting, 197
- Complex stability, measurement, 195
- Complexation  
physical properties affected by, 198  
reactions, assays, 506  
self-association, 193  
solubility, 229
- Complexes, 182  
aromatic sigma bond, 170  
charge-transfer, 170  
inclusion, 193  
metal-ion coordination, 186  
molecular, 190  
classification, 193t  
examples, 192  
role of the solvent, 191  
solvophobic effect, 193  
types, 186
- Complexes in pharmacy, 198
- Complexes in therapeutics, 199
- Complexing agents, for stabilization, 278
- Complimentary and alternative medical health care, 2318
- Complimentary medicine, 2318  
comments and criticisms, 2320t  
food phytochemical properties, 2321t  
food properties, 2320t  
glossary, 2339

- illnesses and treatment, 2336t  
NCCAM domains, 2323  
popularity, 2319  
types, 2323  
Compound 42, 1734  
Compound F, 1447  
Compound formation, 229  
Compounding  
batch feasibility, 1904  
chemical grades, 1907t  
economic considerations, 1905  
evaluating the need, 1904  
extemporaneous, 1903  
factors, 1905  
GMPs, 1909  
information sources, 1905  
job satisfaction, 1909  
pharmacist, 1904  
regulations and guidelines, 1909  
types, 1907  
Compress, adhesive absorbent, 1973  
Compression, direct, 913  
Compression force, effect on dissolution, 678  
Compro, 1312  
Computer use in drug design, 477  
Computer-assisted drug design, 177  
Computerized prescriber order entry, 1755  
Computers, 1753  
Comtan, 1419  
Comvax, 1602t  
Concentration, 122  
Concerta, 1554  
Condensation, 288  
Conductance  
equivalent, 232  
metallic, 231  
specific, 232  
Conductivities, ionic, 233t  
Conductivity, electrolytes, 231  
Conductivity test, 326  
Condylolox, 1287  
Confidence interval, 128, 136  
Confidence interval for  $y$  and  $x$ , 156  
Confidence intervals, one-sided, 137  
Confidence intervals, unsymmetrical, 137  
Confidence limits, 137, 156  
Confidence limits and test of the intercept, 156  
Confidence limits and test of the slope, 156  
Confirm 1-step, 1276  
Conjugates, drug-polymer, 317  
Conray, 1266  
Constipation, 1108  
Contact angles, liquids, 283t  
Contact lenses, 866  
care products, 868  
information, 867t  
Contraceptives, 887  
hormonal, 1468  
male, 1469  
oral, side effects, 1469t  
Controlled release drug delivery by stimulation, 951  
Conversion, 114  
Conversions, apothecary, 114  
Convulsive disorders, 1116  
Cooling curve, 180  
Coombs' antiglobulin test, 574  
Coordinate covalent bonds, 169  
Coordination number, 186  
Copolymers, cyclic olefin, packaging, 1052  
Copper, 1715  
Copper, chemistry, 366, 366t  
Copper 8-quinolinolate, 1735  
Copper sulfate, 1735  
Copper sulfate (pentahydrate), 1736  
Coppertone, 1291  
Cordarone, 1362  
Coreg, 1402  
Corgard, 1402  
Coriander, 1069  
Corlopam, 1352, 1388  
Corn oil, 1071  
Corn syrup, 1086  
Coronary artery disease, 1095  
Correlation, 128, 158  
Cortef, 1447  
Corticorelin ovine trifluate, 1270  
Corticosteroids  
adrenal, major, 1443t  
for IBD  
inhaled, 1372t  
respiratory, 1371, 1373  
topical, potency ranking, 1445t  
Corticotropin, 1439  
Corticotropin, bioassay, 558  
Corvert, 1363  
Cosmegen, 1569  
Cosmetics, literature, 71  
Cosolvents, solubility, 229  
Cosurfactant, 314  
Cotazyme, 1686t  
Cotazyme-S, 1686t  
Co-Trimoxazole, 1632  
Cotton  
absorbable, 1973  
absorbent, 1973  
purified, 1973  
surgical, 1969  
Cotton effect, 172  
Cotton oil, 1072  
Cotton seed oil, 1072  
Cottonseed oil, 1072  
Couette correction, 353  
Coumadin, 1329  
Countercurrent distribution, 691  
Covalent bond energy, 167t  
Covalent bonds, 164  
Coviracil, 1678  
COX-2 inhibitors, 1540  
Cozaar, 1357  
CPD Solution, 1329  
CPDA-1 Solution, 1329  
CPD-Adenine Solution, 1329  
Cravat, 1657  
Creams, 887  
Creon, 1686t  
Crestor, 1369  
Crinone, 1468  
Critical micelle concentration, 311, 313t  
Critical point, 179  
Crohn's disease, 1109  
Crolom, 1547  
Cromelin Complexion Blender, 1290  
Cromolyn sodium, 1375, 1547  
Crossover design, 133, 148  
Crotamiton, 1598  
Crotroxophos, 1732  
Crutches, 1984  
Cryoprotectants, parenterals, 804  
Crystal field theory, 189  
Crystal systems, 659t  
Crystallization, 307  
Crystallization, powders, 702  
Crystallography, cryo-, 658  
Crystallography, x-ray, 658  
Crystals, liquid, 183  
Crystals, phases, 183  
Cumin, sweet, 1068  
Cupreine, structure, 435  
Cupid, 1344  
Cuprimine, 1343  
Cuprous oxide, yellow, 1736  
Curosurf, 1378  
Current Good Manufacturing Practices, 1023  
Cutaneous biotransformation, 877  
Cutivate, 1447  
Cyanocobalamin, 1712  
Cyclobenzaprine hydrochloride, 1416  
Cyclogyl, 1409  
Cyclokapron, 1336  
Cyclopentolate hydrochloride, 1409  
Cyclophosphamide, 1567, 1589  
Cyclosporine, 1315, 1568, 1590  
Cyclothiazide, 1426  
Cyclotron-produced radionuclides, 485  
Cycrin, 1467  
Cydofovir, 1678  
Cylert, 1555  
Cylinder plate method, bioassays, 561  
Cymbalta, 1523  
Cyproheptadine hydrochloride, 1547  
Cystamin, 1664  
Cystic fibrosis, 1105, 1108  
Cysto-Conray, 1266  
Cystogen, 1664  
Cystografin, 1263  
Cystospaz, 1408  
Cytadren, 1561  
Cytarabine, 1568, 1677  
Cytochrome 450 enzyme CYP2D6, 1232  
Cytochrome P450 enzyme, 1232  
Cytochrome P4502C subfamily, 1234  
Cytochrome P4503A subfamily, 1235  
CytoGam, 1613t  
Cytokines, effects, 1214t  
Cytokines, myeloid, immunology, 1207  
Cytomel, 1460  
Cytosar-U, 1568  
Cytovene, 1680  
Cytosan, 1567, 1589
- D**
- Dacarbazine, 1569  
Daclizumab, 1219, 1594, 1615t  
Dacmozen, 1569  
Dactinomycin, 1569  
Dakin's solution, 1630  
Dalapon, 1737  
Dalfopristin, 1660  
Dalgan, 1531  
Dalmane, 1496  
Dalteparin, 1330  
Dalton's atomic theory, 162  
Danaprodil sodium 1330  
Danavir, 1681  
Danazol, 1471  
Danocrine, 1471  
Dantrium, 1413  
Dantrolene sodium, 1413  
Dapsone, 1662  
Daranide, 1424  
Daraprim, 1666  
Darenthin, 1362  
Darvon, 1533  
Darvon-N, 1533  
Data transformations, 159  
Databases, evidence-based medicine, 65  
Databases, online, 65  
Daunoblastin, 1569  
Daunoblastina, 1569  
Daunomycin hydrochloride, 1569  
Daunorubicin citrate liposomal, 1570  
Daunorubicin hydrochloride, 1569  
DaunoXome, 1570  
Daxotel, 1570  
ddL, 1678  
DDS, 1662  
DDVAP, 1441  
Deadly nightshade, 2330  
Deadly nightshade leaf, 1408  
Deaggregation, effect on dissolution, 679  
Deborah number, dimensionless, 345  
Debrisan, 1973  
Debye forces, 172  
Debye-Hückel theory, 234  
Debye-Hückel theory parameter, 301  
Decadron, 1447  
Decantation, 699  
Decarboxylation, stability, 1031  
Declomycin, 1655  
Decoction, 773  
Decoloration, 699  
Deet, 1733  
Deferoxamine mesylate, 1342  
Definition, 1269  
Deflocculation, 320  
Defoliants, 1738  
Degenerative joint disease, 1120  
Dehydroacetic acid, 1059  
Delavirdine mesylate, 1678  
Delocalization, 166  
Delphene, 1733  
Deltasone, 1448  
Demecarium bromide, 1394  
Demeclocycline hydrochloride, 1655  
Dementia, 1119  
Demerol hydrochloride, 1531  
Demser, 1404  
Demulcents, 1279  
Denatonium benzoate, 1085  
Density, 110  
Density, types, 110  
Dentifrices, 718  
Deoxyribonuclease and fibrinolysis, 1687  
Deoxyribonuclease recombinant, 1686  
Depakene, 1508  
Depakote, 1504  
Depen, 1343  
DepoCyt, 1568  
Depo-Provera, 1467  
Deprenyl, 1421  
Depression, major, immunology, 1215  
Depressor substances test, bioassay, 562  
Depyrogenation, 785  
Dermal clearance, 876  
Dermatitis, allergic contact, 1132  
Dermatitis, atopic, 1132  
Dermatologicals, miscellaneous, 1289  
Dermatology, 1131  
Dermatomyositis, 1122  
DES, 1463  
Desferal Mesylate, 1342  
Desflurane, 1475  
Desiccants, 1738  
Desipramine hydrochloride, 1519  
Desloratadine, 1548  
Desmopressin acetate, 1441  
Desquamating agents, 1288  
Desyrel, 1522  
Detergents as flocculating agents, 323  
Dethdiet, 1734  
Detrol, 1409  
Development of a pharmacy care plan and patient problem solving, 2170  
Deviation, standard, 130, 136t, 153t  
Dexamethasone, 1447  
Dexbrompheniramine maleate, 1548  
Dexchlorpheniramine maleate, 1548  
Dexitac, 1551  
Dexmethylphenidate hydrochloride, 1555  
Dextotel, 1570  
Dexpanthenol, bioassay, 561

- Dexrazoxane, 1570  
 Dextran, 1273  
 Dextran 70, 1322  
 Dextran 75, 1322  
 Dextransomer, 1290, 1973  
 Dextrin, 1085  
 Dextroamphetamine sulfate, 1554  
 Dextromethorphan hydrobromide, 1376  
 Dextrose, 1085  
 anhydrous, 1085  
 monohydrate, 1085  
 Dextrose and sodium chloride injection, 1324  
 Dextrose injection, 1323  
 Dezocine, 1531  
 DFP, 1395  
 DHE 45, 1432  
 DHT, 1458  
 DiaBeta, 1454  
 Diabetes, type I, 1212  
 Diabetes insipidus, 1123  
 Diabetes mellitus, 1125  
 Diabinese, 1453  
 Diachlor, 1426  
 Diagnostic drugs, 1261 (*see* Diagnostics)  
 Diagnostic drugs and reagents, 1261  
 Diagnostic self-care, 2206  
 Diagnostics, 1261  
 adrenal gland, 1270  
 bronchial airway hyperactivity, 1273  
 cardiovascular, 1269  
 diabetes mellitus, 1275  
 endocrine, 1270, 1275  
 exocrine, 1272  
 gallbladder, 1271  
 gastric acid test, 1272  
 gastrointestinal tract, 1271  
 HIV, 1276  
 imaging, 1262  
 immunity tests, cell-mediated, 1274  
*in vitro* self-care devices, 1275  
 infectious disease, 1276  
 intestinal absorption, 1272  
 kidney, 1274  
 liver, 1272  
 lymphatic, 1273  
 magnetic resonance contrast, 1267  
 myasthenia gravis, 1273  
 neuromuscular, 1273  
 non-imaging *in vivo*, 1269  
 ophthalmic, 1273  
 ovulation, 1276  
 pancreas, 1272  
 pancreatic gland, 1270  
 parathyroid, 1270  
 pheochromocytoma, 1270  
 pituitary, 1270  
 pregnancy, 1276  
 pulmonary, 1273  
 reproductive, 1273  
 skin antigen tests, 1274  
 miscellaneous, 1274  
 special senses, 1273  
 stomach, 1272  
 thyroid, 1271  
 ultrasound contrast agents, 1269  
 urinary tract, 1274, 1276  
 uterine cavity, 1273  
 Dialysis, 197  
 Diamox, 1425  
 Diamox sodium, 1425  
 Diarrhea, 1108  
 Diarrhea, infectious, 1139  
 Diastereoisomers, 171  
 Diatomaceous earth, 1089  
 Diatrizoate meglumine, 1263  
 Diatrizoate meglumine and diatrizoate sodium, 1263  
 Diatrizoate meglumine and iodipamide meglumine, 1264  
 Diatrizoate sodium, 1264  
 Diatrizoate sodium and diatrizoate meglumine, 1263  
 Diatrizoic acid, 1264  
 Diazepam, 1489  
 Diazepam solution, 1489  
 Diazinon, 1732  
 Diazoxide, 1352  
 Dibenzyline hydrochloride, 1400  
 Dibrom, 1732  
 Dibucaine, 1484  
 DIC, 1569  
 Dicamba, 1738  
 Dichloroacetic acid, 1286  
 Dichlorobenil, 1738  
 Dichlorodifluoromethane, 1086  
 Dichlorotetrafluoroethane, 1086  
 Dichlorphenamide, 1424  
 Dichroism, circular, 172  
 Diclofenac sodium, 1536  
 Dicloxacillin sodium, 1639  
 Dicumarol, 1328  
 Didanosine, 1678  
 Didronel, 1458  
 Die swell effect, 346  
 Dielectric constant, 221  
 Dielectric constant of solvent, 275  
 Diet, chemically defined elemental, 250  
 Diethylcarbamazine citrate, 1596  
 Diethylpropion, 1554  
 Diethylstilbestrol, 1463  
 Diethyltoluamide, 1733  
 Differential thermal analysis, 229  
 Diffusion, colloids, 296  
 Diffusion-controlled implants, drug delivery, 947  
 Diffusion coefficient, 296  
 Diffusion phenomena, 700  
 Diffusion products, matrix, drug delivery, 947t  
 Diffusion products, reservoir, drug delivery, 946t  
 Diffusion systems, drug delivery, 946  
 Diffusivity, drug delivery, 942  
 Diflucan, 1671  
 Diflunisal, 1536  
 Digallic acid, 1283  
 Digestants, 1303  
 Digestion, 773  
 Digestive aids, 1687  
 Digibind, 1361, 1615t  
 Digidot, 1615t  
 Digitalis, 1360  
 Digitaloid drugs, bioassays, 554  
 Digitek, 1361  
 Digitonides, 429  
 Digitoxin, 1360  
 Digoxin, 1361  
 Digoxin case history, pharmacokinetics, 1203  
 Digoxin immune FAB (ovine), 1361, 1615t  
 Dihydrocodeinone bitartrate, 1528  
 Dihydroergotamine mesylate, 1432  
 Dihydromorphinone hydrochloride, 1528  
 Dihydropyrimidine dehydrogenase, 1235  
 Dihydroxyacetone, 1290  
 Dihydroxyluminum sodium carbonate, 1296  
 Dilacor XR, 1365  
 Dilantin sodium, 1506  
 Dilatancy, 343  
 Dilatrate-SR, 1359  
 Dilaudid hydrochloride, 1528  
 Dilor, 1373  
 Diltiazem hydrochloride, 1365  
 Diluents, effect on dissolution, 677  
 Diluents, tablet, 891  
 Diluting agents, 1060, 1069  
 Dilution, 122  
 Dilution test, 326  
 Dimhydrinate, 1310, 1548  
 Dimensional analysis, 116  
 Dimercaprol, 1343  
 Dimetapp, 1546  
 Dimethicone, 1278  
 Dimethyl ketone, 1080  
 Dinoprostone, 1432  
 Diovan, 1357  
 Dioxyanthranol, 1284  
 Dioxybenzone, 1290  
 Dipentum, 1314  
 Diphenacnone, 1734  
 Diphenadione, 1734  
 Diphenhydramine hydrochloride, 1545, 1548  
 Diphenoxylate hydrochloride, 1309  
 Diphenyl, 1735  
 Diphenylhydantoin sodium, 1506  
 Dipiverin hydrochloride, 1385  
 Dipole-induced dipole force, permanent, 223  
 Dipole moment, 168  
 Diprivan, 1477  
 Dipterox, 1732  
 Dipyradimole, 1269  
 Direct contact test, bioassay, 562  
 Dirithromycin, 1653  
 Discrete data, 129  
 Disease management, 2163  
 business plans, 2168  
 chronic, 57  
 history, 2163  
 medical conditions, 2164t  
 pharmacist's role, 2165, 2165t  
 pharmacists and, 2164  
 program components, 2164t  
 protocol development, 2166  
 qualifiers, 2164  
 quality assurance, 2168  
 success components, 2166  
 Disease prevention, 55  
 Diseases, manifestations and pathophysiology, 1095  
 Disintegrants, effect on dissolution, 677  
 Disintegrants, tablet, 893  
 Disintegration, mechanical, 306  
 Dismutases, biotechnology, 995t  
 Disodium hydrogen phosphate, 1307  
 Disodium methaneearsonate, 1737  
 Disodium Versenate, 1343  
 Disopyramide phosphate, 1363  
 Diso-Tate, 1343  
 Disperse systems, 348  
 Dispersion, ideal, 219  
 Dispersion, optical rotatory, 171  
 Dispersion of particles, 321  
 Dispersions  
 coarse, 319  
 colloidal, 293 (*see* Colloids)  
 dispersion step, 319  
 interfacial properties, 319  
 lyophilic, 305  
 lyophobic, 306  
 lyophobic, preparation methods, 306  
 particulate hydrophilic, 306  
 solid, solubility, 229  
 surface potential, 319  
 surface-free energy, 319  
 Dissociation constants, 237t, 238, 239  
 Dissolution and disintegration, correlation, 674  
 Dissolution medium, effect on dissolution, 680  
 Dissolution products, encapsulated, 949t  
 Dissolution products, matrix, drug delivery, 950t  
 Dissolution systems, drug delivery, 949  
 Dissolution test, 129t  
 Dissolution test, tablets, 918  
 Dissolution testing, automation, 687  
 Dissolution, 672  
 bioavailability, 1039  
 definition and theoretical concepts, 672  
 disintegration and, nutritional supplements, 686  
 effect of test parameters on rate, 679  
 factors affecting rate, 675  
 factors related to test parameters, 677  
 factors related to the dosage form, 678  
 factors relating to drug product formulation, 676  
 relating to physicochemical properties, 675  
 immediate release solid oral dosage forms, 683  
 intrinsic, 673  
 intrinsic, rate constants, 673  
 mathemataics, 673  
 miscellaneous factors, 681  
 modified release dosage forms, 687  
 orally disintegrating tablets, 684  
 poor, preformulation, 728  
 preformulation, 736  
 profile comparisons, 687  
 suppositories, 686  
 suspensions, 684  
 topical dosage forms, 684  
 USP/NF methods, 681  
 validation of method, 688  
 Distillation, compression, 807  
 Distribution  
 binomial, normal approximation to, 136  
 drug delivery, 944  
 F, 143  
 pharmacokinetics, 1192  
 standard normal, 136t  
 T, 137  
 Distribution volume  
 pharmacokinetics, 1193  
 two-compartment, pharmacokinetics, 1194  
 Distributions  
 binomial probability, 133  
 frequency, 130  
 normal probability, 133  
 Dithane M-22, 1735  
 Dithiocarbamates, 1735  
 Dithranol, 1284  
 Diulo, 1427  
 Diuretic drugs, 1422  
 Diuretics, 1350, 1422  
 benzothiadiazine and related, 1425  
 loop, 1429  
 osmotic, 1423  
 potassium-sparing, 1428  
 renal tubule-inhibiting, 1424  
 renal tubule-inhibiting, other, 1430  
 Diuril, 1426  
 Diuron, 1737  
 Divalproex sodium, 1504  
 Diverticulitis, 1109  
 Diverticulosis, 1109  
 Division, 114  
 DLVO theory, 302  
 DNOC, 1738  
 Dobutamide, 1269  
 Dobutamine hydrochloride, 1385  
 Dobutrex, 1385  
 Docetaxel, 1570  
 Documenting, billing, and reimbursement for pharmaceutical care services, 2114  
 Docusate calcium, 1308  
 Docusate potassium, 1308  
 Docusate sodium, 1308  
 Dodine, 1735  
 Dofetilide, 1363

- Dogmatyl, 1363  
 Dogwood, 1306  
 Dolantin, 1531  
 Dolantol, 1531  
 Dolasetron, 1363  
 Dolasetron mesylate, 1310  
 Dolobid, 1536  
 Dolophine hydrochloride, 1532  
 Donepezil, 1396  
 Donnan distribution, 1161  
 Donnan effect, 1159  
 Dopamine drugs, 1387  
 Dopamine hydrochloride, 1387  
 Dopastat, 1387  
 Doppler anemometer, fiber-optic, 298  
 Doprax, 1372  
 Doquadine, 1735  
 Doral, 1496  
 Doriden, 1498  
 Dosage, individuals of any age or size, 116  
 Dosage, infants and children, 116  
 Dosage adjustment, pharmacokinetics, 1199  
 Dosage calculations, 116  
 Dosage forms  
     bioavailability, 1038  
     oral, approved colors, 894t  
     oral solid, 889  
 Dosage regimens, individualized, pharmacokinetics, 1197  
 Dose, approximate equivalents, 104  
 Douche powders, 719  
 Douches, 750  
 Doxacurium chloride, 1413  
 Doxapram hydrochloride, 1372  
 Doxazosin mesylate, 1400  
 Doxepin hydrochloride, 1520  
 Doxil, 1571  
 Doxorubicin hydrochloride, 1571  
 Doxorubicin hydrochloride  
     liposomal, 1571  
 Doxycycline, 1655  
 Doxylamine succinate, 1548  
 Dr. Brown's Home Drug Testing System, 1276  
 Draize-Shelanski test, 882  
 Dramamine, 1310  
 Dressings, 1994  
     occlusive, 1279  
     topical, 887  
 Dristan, 1387  
 Drixoral, 1548  
 Dronabinol, 1310  
 Droperidol, 1512  
 Dropper, medicine, 110  
 Droppers, calibrated, 104  
 Drug  
     powdered, drug delivery, 962  
     routes of administration, 1156  
     selected names, 68t  
 Drug-drug interactions, pharmacokinetics, 1196  
 Drug absorption, 1153, 1156  
     action, and disposition, 1142  
     factors affecting, 1158  
     membrane structure and properties, 1153  
     significance, 249  
 Drug abuse, 2303 (*see* Substance abuse)  
 Drug action, 1142  
     dose-effect relationships, 1144  
     mechanisms, 1149  
     occupation and other theories, 1148  
     receptor binding, 1150  
     receptor structure and function, 1150  
     types of targets, 1149  
 Drug activity, significance, 249  
 Drug approval, overview, 965  
 Drug approval, preclinical testing, 966  
 Drug combinations, fixed, 1168  
 Drug combinations, reasons, 1167  
 Drug compendia, 68  
 Drug delivery,  
     extended release, properties, 941  
     modified-release, 939, 940, 940t  
     novel systems, 961  
     rate-controlled, 946  
     release rate and dose, 942  
     targeted, 939, 953  
 Drug delivery systems (*see* Drug Delivery)  
 Drug design  
     addition of functional groups, 470  
     analog approach, 468  
     combinatorial chemistry, 478  
     computer use, 477  
     drug disposition, 474  
     homologs, 468  
     ionization, 473  
     isosteric replacements, 471, 471t  
     mechanism-based, 476  
     molecular fragmentation, 469  
     property-based, 720  
     quantitative relationships, 475  
     stereochemistry, 472  
     structure-activity relationship and, 468  
 Drug development, 1249  
 Drug development, research, 93  
 Drug diffusion, 1154  
 Drug discovery, 478, 966  
 Drug discovery process, 720  
 Drug disposition, 474, 1160  
 Drug distribution, 1153  
 Drug education, 1796  
     basic principles, 1799  
     behaviors, 1798t  
     future efforts, 1804  
     strategies and programs, 1805t  
 Drug education in a medical context, 1801  
 Drug education in a nonmedical context, 1801  
 Drug education programs  
     development, 1802, 1803t  
     effects and outcomes, 1800  
     technical aspects, 1803t  
 Drug effect, 1142  
 Drug excretion, 1153, 1160, 1165  
 Drug interaction, 1167  
 Drug interactions, 1889 (*see* Interactions)  
 Drug interactions, literature, 70  
 Drug literature, clinical, 74 (*see* Literature)  
 Drug nomenclature, literature, 68  
 Drug nomenclature, United States  
     Adopted Names, 443 (*see* USAN)  
 Drug penetration, physicochemical factors, 1155  
 Drug receptor theory, 1147  
 Drug receptors, 1147  
 Drug sales, top companies, 95t  
 Drug solubility, significance, 248  
 Drug stability, significance, 248  
 Drug stabilization, 277  
 Drug therapy  
     conventional, 939  
     modified-release, 939  
     multiple, dangers, 1169  
 Drug transport, 1154  
 Drug use, reasons and motivations for, 1798t  
 Drug use and education, 1796  
 Drugs  
     new, rapid access to, 969  
     top-selling, 95t  
 Dryvax, 1602t  
 DSCG, 1547  
 DTIC-Dome, 1569  
 Duet System, 1275  
 Dulcolax, 1306  
 Duloxetine hydrochloride, 1523  
 Duncan's New Multiple Range Procedure, 146  
 Duncan's test, 147  
 Dunnett's procedure, 146  
 Duodenum, diseases of, 1106  
 Duponol C, 1075  
 Duract, 1536  
 Duranest, 1481  
 Duricef, 1645  
 Dusting powder, 719  
     absorbable, 1973  
     starch-derivative, 1973  
 Dutasteride, 1473  
 Duvoid, 1390  
 Dwale, 1408  
 Dwayberry leaf, 1408  
 D-Xylose, 1272  
 Dycill, 1639  
 Cyclone, 1484  
 Cyclonine hydrochloride, 1484  
 Dye-solubility test, 326  
 Dymelor, 1453  
 DynaCirc, 1365  
 Dynapen, 1639  
 Dyphylline, 1373  
 Dyrenium, 1429
- E**
- e.p.t., 1276  
 Earth-nut oil, 1072  
 Earth wax, 1092  
 Echothiophate iodide, 1395  
 Ecodide, 1395  
 Econazole nitrate, 1673  
 Economics, health care, 2082  
 Eczema, 1132  
 Edathamil, 1343  
 Edecrin, 1430  
 Edecrin sodium, 1430  
 Eddetate calcium disodium, 1343  
 Eddetate disodium, 1343  
 Eddetic acid, 1086  
 Edex, 1369  
 Edrophonium chloride, 1395  
 Education, 3, 4  
     colleges, 5  
     drug, 1796  
     schools, 5  
 Efavirenz, 1678  
 Effexor, 1522  
 Efficacy, drug delivery, 945  
 Efudex, 1573  
 Einstein's law of viscosity, 296, 348  
 Elaic acid, 1077  
 Elase, 1687  
 Elastic deformation, 338  
 Elasticity, modulus, 340, 340t  
 Elavil, 1518  
 Eldepryl, 1421  
 Eldopaque forte, 1291  
 Eldoquin, 1291  
 Electric charges, 300  
 Electric double layers, 300  
 Electricity-modulated drug delivery, 951  
 Electrochemical distribution, 1161  
 Electrochromatography, 630  
 Electrochromatography, capillary, 600  
 Electrode  
     calomel, 247  
     glass, 248  
     hydrogen, 246, 247  
     quinhydrone, 247  
     reference, 247  
 Electroendosmosis, 630  
 Electrolyte disturbances, 1115  
 Electrolyte solutions  
     balanced, 1323  
     colligative properties, 226  
     oral, miscellaneous, 1323  
 Electrolytes, 231, 1337  
     analysis, 583  
     chemistry, 382  
     strong, 232  
     theories, 234  
     weak, 232  
     weak, ionization, 233  
 Electrolytes as flocculating agents, 322  
 Electrolytic equilibria, 231  
 Electron impact, 636  
 Electronegativity and dissociation constants, 238  
 Electronegativity values of some elements, 168t  
 Electron-pair concept, 236  
 Electroosmosis, 304  
 Electro-osmotic effect, 631  
 Electrophoresis, 630  
     capillary, 304  
     capillary gel, 305  
     free-boundary, 630  
     moving boundary, 630  
     polyacrylamide gel, 630  
     zone, 630  
 Electrophoretograms, 630  
 Electrophysiology, 1099  
 Electrospray ionization, 637  
 Electrostatic repulsion, 301  
 Electrostatic theory, 189  
 Electrozone sensing, 708  
 Elements, electronegativity values, 168t  
 Elements, electronic configuration, 163, 164t  
 Eletriptan hydrobromide, 1434  
 Elimination, drug delivery, 944  
 Elimination, pharmacokinetics, 1192  
 Elimination rate constant, pharmacokinetics, 1196  
 Elixir adjuvans, 1071  
 Elixirs, 757, 1063  
 Elixophyllin, 1373  
 Ellence, 1571  
 Eloxinatin, 1581  
 Elspar, 1562  
 Elution test, bioassay, 562  
 Elutriation, 711  
 Emadine, 1548  
 EMBASE, 65  
 Embolism, pulmonary, 1104  
 Emcyt, 1572  
 Emedastine difumarate, 1548  
 Emend, 1310  
 Emergency medicine  
     continuity of care concept, 2266  
     critical pathways, 2268  
     disease scope, 2265  
     drug-related issues, 2265  
     education, 2269  
     future, 2270  
     logistics, 2270  
     overview, 2265  
     patient care challenges, 2268  
     patient evaluation, 2266  
     patient selection, 2265  
     pharmacy practice, 2265  
     pharmacy practice evaluation, 2270  
     pharmacy services, 2267  
     preparedness, 2268  
     re-admission prevention, 2267  
     stress, 2270  
 Emetics, 1309  
 Emetine hydrochloride, 1310, 1668  
 Eminase, 1333  
 Emollients, 1280  
 Emphysema, predominant, 1103  
 Emphysema and predominant bronchitis, 1103  
 Emtricitabine, 1678  
 Emtriva, 1678  
 Emulsification, spontaneous, 327  
 Emulsifying agents, 1072  
     auxiliary, 330, 331  
     chemical types, 328  
     classification, 329t

- concentration, 328  
desirable properties, 327  
electrical potential, 327  
film formation, 327  
finely dispersed solids, 331  
interfacial tension, 327  
mechanism, 328  
mixed, 333  
monomolecular films, 328  
multimolecular films, 328  
natural, 330  
selection, 332  
solid particle films, 328  
synthetic, 329
- Emulsifying agents and emulsion type, 331
- Emulsion, oral, (O/W) containing an insoluble drug, 762
- Emulsion formulations, 881
- Emulsion rheology, 328
- Emulsion type and rate of coalescence, 331
- Emulsion viscosity, factors, 328t
- Emulsions, 325, 759  
aggregation, 335  
bioavailability, 336  
coalescence, 335  
coalescence of droplets, 327  
creaming, 335  
dispersed phase, 326  
dispersion medium, 326  
dispersion process, 326  
emulsifying agent, 326  
flocculation, 335  
formation and breakdown, 326  
formulation ingredients, 760  
HLB values, 760t  
inversion, 335  
means of detection, 326  
method of preparation, 334  
micro-, 763  
multiple, 763  
oil-in-water, 326, 332  
ophthalmic, 857  
phase inversion temperature, 335  
preparation, 332, 761  
processing equipment, 763  
properties and stability, 762  
sedimentation, 335  
stability, 334, 1028  
theories, 759  
type, 326  
water-in-oil, 326
- Emulsoil, 1306
- E-Mycin, 1653
- Enalapril maleate, 1355
- Enalaprilat, 1355
- Enantiomers, 171
- Encephalitis, 1139
- Endocarditis, infective, 1140
- Endocrinology, 1123
- Endodorm, 1267
- Endoplasmic reticulum, 1163
- Endothall, 1738
- Endotoxins, parenterals, 812
- Endrate, 1343
- Enemas, 384, 751
- Energies, activation, 340t  
 Energy, surface free, 281, 319
- Enflurane, 1475
- Enfuvirtide, 1678
- Engerix-B, 1603t
- English systems of weights and measures, 99, 102
- Enlon-Plus, 1395
- Enoxacin, 1657
- Enoxaparin, 1330
- Entacapone, 1419
- Enteral hyperalimentation and osmoticity, 255
- Enteral nutritional fluid, 250
- Enthalpy, 178
- Entropic repulsion, 310
- Entropic stabilization, 310
- Entropy, 204
- Entropy changes, 205
- Enzyme catalysis, 274
- Enzyme-linked immunosorbent assay, 573, 595
- Enzymes, 579, 1685  
nomenclature, 1686  
other, 1687  
pancreatic, 1304, 1304t, 1686t, 1687
- Eosinophils, 569
- Ephedrine sulfate, 1385
- Epidemiology, 54
- Epidermal drug delivery, 871
- Epilepsy, 1116, 1501
- Epimerization, stability, 1031
- Epinephrine, 1386
- Epinephrine bitartrate, 1386
- Epirubicin hydrochloride, 1571
- Epivir, 1680
- Epoetin alfa, 1347
- Epogen, 1347
- Epoprostenol sodium, 1370
- Eprosartan mesylate, 1356
- Epsom salts, 1307
- Eptifibatide, 1335
- Equilibria, electrolytic, 231
- Equilibria, phase, 211
- Equivalents, dose, approximate, 104
- Equivalents, household, 115
- Erbitalux, 1566
- Ergamisol, 1578
- Ergocalciferol, 1697
- Ergomar, 1434
- Ergometrine maleate, 1433
- Ergonovine maleate, 1433
- Ergot alkaloids, 436 (*see* Alkaloids)
- Ergotamine tartrate, 1434
- Erosion-controlled systems, drug delivery, 951
- Ertapenem sodium, 1648
- Erythema multiforme, 1133
- Erythrityl tetranitrate, 1359
- Erythrocyte fragility test, 568
- Erythrocyte sedimentation rate, 568
- Erythrocytes  
analysis, 565  
pharmacodynamics, 1188  
resealed, drug delivery, 956
- Erythroderma syndrome, exfoliative, 1133
- Erythromycin, 1303, 1653
- Erythropoietic mechanisms, analysis, 570
- Erythropoietin, biotechnology, 995t
- Escalol, 106, 1292
- Escharotics, 1286
- Escitalopram oxalate, 1520
- Eserine salicylate, 1395
- Eskalith, 1513
- Esmolol hydrochloride, 1402
- Esomeprazole magnesium, 1300
- Esophageal spasm, diffuse, 1006
- Esophageal stricture, 1106
- Esophagus, diseases of, 1105
- Estazolam, 1495
- Esters, stability, 749
- Estimation, statistical, 127
- Estimation and confidence intervals, 136
- Estimation and inference, 136
- Estrace, 1463
- Estracyte, 1572
- Estradiol, 1463
- Estramustine phosphate sodium, 1572
- Estrogens, conjugated, 1464
- Estropipate, 1464
- Ethacrynone sodium, 1430
- Ethacrynic acid, 1430
- Ethambutol hydrochloride, 1663
- Ethanol, 1080  
dehydrated, 1082  
diluted, 1081
- Ethanol as a solvent, 221
- Ethanolamine, 1082
- Ethanoic acid, 1083
- Ethchlorvynol, 1498
- Ethers, halogenated, 1475
- Ethers, propellants, properties, 1003t
- Ethics  
American Pharmacists Association, 21, 26  
analysis, 23  
application to complex cases, 1747  
approaching dilemmas, 1746  
case studies, 1747  
code of, 21  
codes, 25  
conflicts, 26  
contribution to clinical practice, 1752  
decisionmaking, 22  
drug formularies, 27  
human drug experimentation, 27  
law and, 26  
moral rules, 24  
principles, 24  
rationing of services, 26  
resolving dilemmas, 1746  
suicide, assisted, 27  
theories, 24  
values, 1745
- Ethics and health care, 1745
- Ethics and practice dilemmas, 1745
- Ethinyl estradiol, 1464
- Ethiodized oil, 1264
- Ethiodol, 1264
- Ethiotols, 1561
- Ethmozine, 1363
- Ethohexadiol, 1734
- Ethosuximide, 1504
- Ethotoxin, 1504
- Ethovan, 1064
- Ethrane, 1475
- Ethrel, 1738
- Ethyl chloride, 1484
- Ethyl oleate, 1072
- Ethylcellulose, 1086
- Ethylene oxide, 1628
- Ethylene oxide sterilization, 788
- Ethylenediamine, 1059
- Ethylenediamine hydrate, 1092
- Ethylene-vinyl acetate packaging, 1052
- Ethyhexyl p-methoxycinnamate, 1291
- Ethyhydrocupreine, structure, 435
- Ethylmorphine, structure, 434t
- Ethynorepinephrine hydrochloride, 1386
- Ethylolamine, 1082
- Ethyloparaben, 1628
- Ethylol, 1561
- Etidocaine hydrochloride, 1481
- Etidronate disodium, 1458
- Etodolac, 1536
- Etomidate, 1477
- Etoposide, 1572
- Etretinate, 1291
- Eucalyptol, 1069
- Eucalyptus oil, 1064
- Eudolat, 1531
- Eulexin, 1573
- Eurax, 1598
- Eutectic mixtures, powders, 718
- Eutectic mixtures, simple, 229
- Eutectics, 180
- Evaporative light scattering detector, 618
- Evidence-based pharmacy, 1755t
- Evista, 1465
- Evoxac, 1391
- Ewens-Bassett system of nomenclature, 363
- Exac Tech RSG, 1275
- Excipient interaction, effect on dissolution, 678
- Excipients, 317
- Excretion, renal, pharmacokinetics, 1187
- Exelderm, 1674
- Exelon, 1397
- Exemestane, 1465, 1572
- ex-lax, 1307
- Exna, 1426
- Exocytosis, 1155
- Expectorants, 1376
- Expectorants, chemistry, 384
- Expectorants, combinations, 1377
- Experimental design, 144
- Exponents, 112
- Exporisan, 1738
- Expression, 699
- Exsel, 1629
- Extemporaneous prescription compounding, 1903
- Extended-release and targeted drug delivery systems, 939
- Extended-release drug delivery, 941
- Extended-release drug delivery systems, 939 (*see* Drug Delivery)
- Extracts, 773, 774  
allergenic, 1600, 1615, 1618  
potency units, 1618t  
products, 1620  
dust, 1620t, 1621  
food, 1623, 1623t  
fungal, 1621  
inhalant, miscellaneous, 1620t, 1622  
insect, 1621  
pollen, 1619t, 1621  
preparations, 774
- Extreme value, criteria, 152
- Eye  
anatomy and physiology, 851  
lacrimal system, 853  
rheology, 350  
structure and function, 851
- Eyedrops, how to use, 857
- Eyelids, 851
- Eyring's "hole theory," 342
- EZ Detect, 1275
- EZ Detect for Hidden Blood in Urine, 1276
- Ezetimibe, 1367
- F**
- F* distribution, 128, 143
- F* table, 143t
- F*(*a*b), 1361
- Factor IX complex, 1327
- Factor IX products, 1327t
- Factor VIII products, 1326t
- Factrel, 1271
- Fahraeus-Lindqvist effect, 349
- Famiclovir, 1679
- Famotidine, 1299
- Famvir, 1679
- Fanasil, 1632
- Fanzil, 1632
- Fascia lata, 1976
- Faslodex, 1574
- Fat emulsion, intravenous, 1693
- Fats, animal, 1280
- Fats, chemistry, 424
- Fatty acids, 1693
- FDA Modernization Act of 1997, 1021
- Fecal elimination, 1166
- Fecal softeners, 1308
- Feces, analysis, 591
- Feiba, 1327
- Felbamate, 1504
- Felbatol, 1504
- Feldene, 1540
- Felodipine, 1365

- Femara, 1465, 1577  
 Fennel, 1069  
 Fennel oil, 1064  
 Fennel seed, 1069  
 Fenofibrate, 1367  
 Fenoldopam mesylate, 1352, 1388  
 Fenoprofen calcium, 1536  
 Fenoterol hydrobromide, 1383  
 Fentanyl citrate, 1531  
 Feosol, 1345  
 Ferbam, 1735  
 Feridex, 1267  
 Ferri sulfas, 1345  
 Ferric dimethylidithiocarbamate, 1735  
 Ferric hydroxymate method, 198  
 Ferric oxide, red, 1092  
 Ferric oxide, yellow, 1092  
 Ferrous fumarate, 1345  
 Ferrous gluconate, 1345  
 Ferrous sulfate, 1345  
 Ferrous sulfate syrup, 755  
 Ferrous sulfate tablets, 914  
 Ferumoxides, 1267  
 Ferumoxil, 1267  
 Ferumoxsil, 1267  
 Fexofenadine hydrochloride, 1548  
 Fiberal, 1308  
 Fibrinogen degradation products, 572  
 Fibrinolysis and deoxyribonuclease, 1687  
 Fibrinolytic inhibitors, 1336  
 Fick's first law of diffusion, 212  
 Fick's first law of dissolution, 674  
 Filgrastim, 1347  
 Films, insoluble monomolecular, 287  
 Films, mixed, 288  
 Films, soluble, and adsorption from solution, 287  
 Filter paper, 695  
 Filtering apparatus, rapid, 696  
 Filters  
 cotton, 695  
 glass wool, 696  
 membrane, 695  
 sintered-glass, 696  
 Filtration, 694  
 aids, 696  
 funnels, 696  
 gel, 700  
 mathematics, 694  
 media, 695  
 parenterals, 822  
 ultra-, 701  
 vacuum, 696  
 volatile liquids, 696  
 Filtration sterilization, 793  
 Filtration under pressure, 697  
 Finasteride, 1473  
 Fioricet, 1495  
 Fiorinal, 1495  
 First Response, 1276  
 First Response 1-Step, 1276  
 First-aid supplies, 1994  
 Fission, by-products, 485  
 Fixed oils, chemistry, 424  
 Flagyl, 1669  
 Flavonoids, 439, 1718  
 Flavor, 1061  
 Flavoring, vehicle selection, 1063  
 Flavoring agents, 894, 1060, 1061, 1063t  
 Flavoring methodology, 1062  
 Flavors, preservation, 1062  
 Flavors, selection, 1062  
 Flecainide acetate, 1363  
 Fleet enema, 1307  
 Fleet Phospho-Soda, 1307  
 Flexeril, 1416  
 Flies, control, 1729  
 Flocculation, 320
- controlled, 322  
 degree, 321  
 effect, 321  
 expressions, 321  
 Flocculation by polymers  
 Flocculation in structured vehicles, 324  
 Flocculation using detergents, 323  
 Flocculation using electrolytes, 322  
 Flow, laminar, 339  
 Flow, streamline, 339  
 Floxin, 1658  
 Floxuridine, 1572  
 Fluconazole, 1671  
 Flucytosine, 1671  
 Fludara, 1573  
 Fludarabine phosphate, 1573  
 Fluid, supercritical, 179  
 Fluid disturbances, 111  
 Fluidextracts, 774  
 Fluidity, 338  
 Fluids  
 non-Newtonian, 342  
 shear-thickening, 342  
 shear-thinning, 342  
 time dependent  
 non-Newtonian, 343  
 time-independent  
 non-Newtonian, 342  
 Fluindostatin, 1368  
 Flumadine, 1682  
 Flumazenil, 1499  
 FluMist, 1602t  
 Flunisolide, 1447  
 Fluocortisone acetate, 1447  
 Fluorescein sodium, 1273  
 Fluorescein sodium injection, 1273  
 Fluorescein soluble, 1273  
 Fluorescite, 1273  
 Fluorine, 1715  
 Fluorine, chemistry, 377t, 378  
 Fluoristan, 1293  
 Fluorometry, 655  
 Fluropex, 1573  
 Fluoroquinolones, 1656, 1657t  
 Fluorouracil, 1573, 1680  
 Fluothane, 1474  
 Fluoxetine hydrochloride, 1520  
 Fluoxymesterone, 1471  
 Fluphenazine decanoate, 1512  
 Fluphenazine enanthate, 1512  
 Fluphenazine hydrochloride, 1310, 1512  
 Flurazepam hydrochloride, 1496  
 Flurbiprofen, 1536  
 Flutamide, 1573  
 Fluticasone propionate, 1447  
 Fluvastatin sodium, 1368  
 Fluvirin (purified surface antigen), 1603t  
 Fluvoxamine maleate, 1520  
 Fluzone (subviron or whole-viron), 1603t  
 Focalin, 1555  
 Folacin, 1704  
 Folex, 1580  
 Folic acid, 1703  
 Folmic acid, 1705  
 Folpet, 1735  
 Folvite, 1704  
 Fomivirsen sodium, 1679  
 Fondaparinux sodium, 1330  
 Food and Drug Administration, 46  
 clinical trial design, 965  
 new drug approval, 965  
 Foradil, 1383  
 Forane, 1475  
 Force  
 dispersion, 191  
 London, 191  
 van der Walls', 191  
 Forces  
 attractive, 172  
 Debye, 172  
 dipole-induced dipole, 172  
 electrostatic, 191  
 induced dipole-induced dipole, 173  
 induction, 191  
 intermolecular, 174t  
 intramolecular binding, 172  
 ion-dipole and ion-induced dipole, 173  
 London, 173  
 noncovalent intermolecular, 190  
 polarization, 191  
 repulsive, 172  
 Van der Walls', 172  
 Formaldehyde, 1628  
 melamine, packaging, 1054  
 phenol, packaging, 1054  
 sterilization, 793  
 urea, packaging, 1054  
 Formoterol fumarate, 1383  
 Formularies, 68  
 Formulas, reducing and enlarging, 118  
 Formulation, pre-, 720 (*see* Preformulation)  
 Fortaz, 1646  
 Fosamine ammonium, 1735  
 Fosamprenavir calcium, 1679  
 Foscarnet, 1679  
 Foscavir, 1679  
 Fosfamax, 1457  
 Fosfomycin tromethamine, 1660  
 Fosinopril sodium, 1355  
 Fossil wax, 1092  
 Fraction defective, control chart, 153  
 Fraction of drug inbound, 199  
 Fractions, types, 112  
 Fracture mechanics, 702  
 Fradiomycin sulfate, 1651  
 Fragmin, 1330  
 Francium, chemistry, 365t  
 Free Style, 1276  
 Free-boundary electrophoresis, 630  
 Freeze drying  
 advantages and disadvantages, 828t  
 parenterals, 828  
 practical aspects, 829t  
 Freezing point  
 calculations, 257  
 depressions, 260t  
 depression methods, 257  
 effect of solvents, 257  
 Frequency distribution of rat weights, 131t  
 Friability, tablet, 895  
 Friar's balsam, 1280  
 Friction, internal, 338  
 Frova, 1435  
 Frovatriptan succinate, 1435  
 Fructose, 1692  
 FUDR, 1572  
 Ful-Glo, 1273  
 Fulvestrant, 1574  
 Fumigants, 1730, 1733  
 Fundamentals of medical radionuclides, 479  
 Funduscein, 1273  
 Fungi, control, 1734  
 Fungicides, commonly used, 1735  
 Fungizone, 1670  
 Funnel, 696  
 Furacin, 1629  
 Furadantin, 1665  
 Furosemide, 1430  
 Fusion, heat of, 178  
 Fuzeon, 1678
- G**
- Gabapentin, 1505  
 Gabitril, 1507  
 Gadodiamide, 1268  
 Gadopentetate dimeglumine, 1268  
 Gadoteridol, 1268  
 Gadoversetamide, 1268  
 Galactosemia, 577  
 Galantamine hydrochloride, 1396  
 Galen's cerate, 1078  
 Gallbladder, 1112  
 Gallium, chemistry, 369t, 370  
 Gallium nitrate, 1458  
 Gallotannic acid, 1283  
 Gallstones, 1112, 1316  
 Gammime N, 1613t  
 Gammagard SID, 1613t  
 Gammar-P.I.M., 1613t  
 Gammar-P.I.V., 1613t  
 Gammexane, 1598  
 Gamulin-Rh, 1613  
 Gangciclovir sodium, 1680  
 Ganglionic blockers, 1353  
 Ganite, 1458  
 Gantanol, 1632  
 Gantrisin, 1633  
 Gardinol WA, 1075  
 Gargles, 751  
 Gas chromatography, 605  
 Gas tar, 1285  
 Gases, 181  
 compressed, properties, 1003t  
 inorganic, 1476  
 Gastric, analysis 593  
 Gastric urease test, 1272  
 Gastrocrom, 1547  
 Gastroenterology, 1105  
 Gastroesophageal reflux disease, 1105  
 Gastrografin, 1263  
 Gastrointestinal and liver drugs, 1294  
 Gastrointestinal drugs, 1294  
 acid peptic diseases, 1294  
 decreasing acid, 1295  
 miscellaneous, 1316  
 mucosal protection, 1302  
 prokinetic, 1302  
 Gastrointestinal tract  
 infections, 1139  
 rheology, 351  
 GastroMARK, 1267  
 Gas-X, 1317  
 Gatifloxacin, 1657  
 Gaultheria oil, 1065  
 Gauze, 1973  
 absorbent, 1973  
 adhesive absorbent, 1973  
 impregnated, 1968  
 petrolated, 1278  
 petrolatum, 1278  
 plain, 1968  
 Gefitinib, 1574  
 Gel filtration chromatography, 613  
 Gel formation, 298  
 Gel permeation, 614  
 Gelatin, 1074  
 Chinese, 1073  
 Japanese, 1073  
 type A, emulsion, 762  
 vegetable, 1073  
 white, 1074  
 Gelatin as an emulsifying agent, 330  
 Gelatin powder, absorbable, 1337  
 Gelatin solution, tablets, 892  
 Gelatin sponge, absorbable, 1337  
 Gelation, 298  
 Gelfoam, 1337  
 Gelling agents, 771  
 Gelosa, 1073  
 Gels, 770  
 ophthalmic, 857  
 single-phase, 772  
 two-phase, 771  
 Gemcitabine hydrochloride, 1574

- Gemfibrozil, 1367  
 Gemtuzumab ozogamicin, 1574  
 Gemzer, 1574  
 Gendex 75, 1322  
 Gene, peptide-based, drug delivery, 961  
 Gene ABCB1, 1238  
 Gene MDR1, 1238  
 General anesthetics, 1474  
 Genes, drug delivery, 960  
 Gengraf, 1590  
 Genome, human, 1230  
 Genome, human, project, 1230  
 Genome, human, variation, 1231  
 Genotropin, 1440  
 Gentamicin sulfate, 1650  
 Gentian violet, 1672  
 Gentran 40, 1322  
 Gentran 70, 1322  
 Geodon, 1516  
 Geopen, 1639  
 Geref, 1271  
 Germanium, chemistry, 371t, 373  
 Germicides, oxidizing, chemistry, 383  
 Germicides, precipitating, chemistry, 383  
 Gibbs free energy, 206  
 Gibbs free energy, standard molar, 207  
 Ginger, 1069  
 Ginger oleoresin, 1069  
 Gingili oil, 1072  
 Glass, chemistry, 373  
 Glass containers, parenterals, 809  
 Glass graduates, conical, 109  
 Glass graduates, cylindrical, 109  
 Glass measures, graduated, 109  
 Glass solutions of suspensions, 229  
 Glasses, medicinal, 104  
 Gleevec, 1576  
 Glidants, tablet, 893  
 Glimiperide, 1454  
 Glipizide, 1454  
 Globulin  
     anti-thymocyte (equine), 1613t  
     cytomegalovirus immune, intravenous, 1613t  
     hepatitis B immune, 1613t  
 Globulin, immune  
     intramuscular, 1612, 1613t  
     intravenous, 1613t, 1614  
     rabies, 1613t  
     respiratory syncytial virus, 1613t  
     Rh<sub>o</sub>, 1613t  
     Rh<sub>o</sub> (D), 1613t  
     tetanus, 1613t  
     varicinia, 1613t  
     varicella-zoster, 1613t  
 Globulins, 423  
 Globulins, immune, 1325  
     anti-infective, 1613t  
     human, 1613t  
     immunosuppressive, 1613t  
 Glomerular disease, 1113  
 Glomerular filtration rate, 577  
 Glomerulonephritis, 1113  
 Glonoin, 1359  
 Glucagon, 1270, 1450  
     bioassay, 555  
     tolerance, 577  
 Glucometer Dex, Elite, and Elite XL, 1275  
 Glucophage, 1454  
 Glucophage XR, 1454  
 Glucose, 1085, 1086  
     blood, analysis, 576  
     injection of, 1323  
     liquid, 1086  
     medicinal, 1085  
     purified, 1085  
 α-Glucosidase inhibitors, 1452  
 Glucotrol, 1454  
 Glucotrol XL, 1454  
 Glucovance, 1456  
 Gluons, 162  
 Gluside, 1067  
 Gluside, soluble, 1067  
 Glutaral, 1628  
 Glutaraldehyde, 1628  
 Glutelins, 423  
 Glutethimide, 1498  
 Glyburide, 1454  
 Glyburide and metformin, 1456  
 Glycerin, 1081, 1423  
 Glycerin as a solvent, 221  
 Glycerinated gelatin, suppositories, 885  
 Glycerins, 758  
 Glycerol, 1081, 1423  
 Glyceryl guaiacolate, 1376  
 Glyceryl monostearate, 1078  
 Glyceryl trinitrate, 1359  
 Glycine, 1692  
 Glycocol, 1692  
 Glycol ethers and derivatives, 1079  
 Glycoproteins, 423  
 Glycosides  
     cardiac, 1360  
     chemistry, 419  
     composition, 419  
     occurrence, 421  
     official  
     properties, 420  
     secondary, 420  
     selected, 420t  
     structure, 419  
 Glycyrrhiza, 1064  
     elixir, 1071  
     extract, 1069  
     extract, pure, 1065  
     fluidextract, 1065  
     syrup, 1071  
 Glynase Pres Tab, 1454  
 Glyset, 1455  
 GMP regulations, 1021  
 Goat's thorn, 1076  
 Gold, chemistry, 366t, 367  
 Gonadorelin acetate, 1440  
 Gonadorelin hydrochloride, 1271  
 Gonadotropin, chorionic, bioassay, 559  
 Gonadotropin, human chorionic, 1438  
 Good Manufacturing Practices, Current, 1023  
 Goserelin acetate, 1575  
 Gossypium purificatum, 1973  
 Gout, 1120  
 Gouy-Chapman layer, 301  
 Government  
     air force, 43  
     army, 41  
     career opportunities, 41  
     county agencies, 49  
     department of veterans affairs, 48  
     locating current information, 50  
     municipal agencies, 49  
     navy, 44  
     pharmacists, 40  
     public health service, 44  
     state agencies, 49  
     uniformed service requirements, 41  
 Graft rejection, immunomodulators, 1218  
 Graft rejection, types, 1217  
 Granisetron hydrochloride, 1311  
 Granulating agents, effect on dissolution, 676  
 Granulation method, effect on dissolution, 677  
 Granulation, dry, 900, 913  
     fluid-bed, 899, 912  
     wet, 896, 912  
 Granulex, 1687  
 Granulocyte concentrate, 1319  
 Granulomatosis, Wegener's, 1122  
 Granulomatous disease, chronic, 1211  
 Gravimetric methods, assays, 507  
 Griseofulvin, 1673  
 Groundnut oil, 1072  
 Growth factors, hematopoietic, 1346  
 Guaiifenesin, 1376  
 Guanabenz acetate, 1351  
 Guanadrel sulfate, 1403  
 Guanethidine monosulfate, 1404  
 Guanfacine hydrochloride, 1351  
 Guanine, structure, 438t  
 Guillain-Barre syndrome, 1118  
 Gum arabic, 1072  
 Gum arabic, mucilage of, 1072  
 Gum Benjamin, 1280  
 Guncotton, soluble, 1088  
 Gut, surgical, 1978  
 Guthion, 1732  
 Guthrie test, 578  
 Guttae jesuitarium, 1280  
 Guttae nadir, 1280  
 Gyne-Lotrimin, 1671  
 Gypsum, 1084  
 Gyration, radius, 228
- H**
- H<sub>2</sub>-receptor antagonists, 1297, 1299t  
 Hafnium, chemistry, 369t, 373  
 Hair follicles, 871  
 Hairy root cultures, 986t  
 Halcion, 1497  
 Haldol, 1512  
 Haldol decanoate, 1513  
 Half-cells, 247  
 Half-life, pharmacokinetics, 1196  
 Halogenoids, chemistry, 379  
 Haloperidol, 1512  
 Haloperidol decanoate, 1513  
 Haloprogyn, 1672  
 Halotestin, 1471  
 Halotex, 1672  
 Halothane, 1474  
 Haltran, 1537  
 Hartmann's solution, 1323  
 Hashimoto's thyroiditis, 1212  
 Havrix, 1603t  
 HCTZ, 1427  
 Headache, 1118  
 Health accessories, 1979  
     accreditation, 2011  
     certification, 2011  
     future, 2011  
     professional approach, 2011  
     promotion, 2009  
     reimbursement, 2009  
     what to stock, 2008  
 Health care  
     achieving business results, 2148  
     acute, 2136  
     ambulatory pharmacists performing, 2138t  
     asthma management, 2137t  
     background, 2130  
     challenges, 2151  
     diabetes reports, 2138t  
     education, 2140  
     integrated delivery systems, 2130  
     long-term, hospice, and home, 2139, 2140t  
     outcomes management, 2144  
     patient system support, 2141  
     patient-specific, 2131  
     primary, 2131  
     protocol-driven, 2133  
     roles for pharmacists, 2132t  
     symptoms consistent with DVT, 2136t  
     technology and automation integration, 2143t  
     template for deep-vein thrombosis, 2135
- Health Resource and Services Administration, 46  
 Heart, cardiac rhythm disorders, 1099  
 Heart, conduction abnormalities, 1100  
 Heart disease, 1095  
 Heart disease, valvular, 1098  
 Heart failure, 1097  
 Heat of fusion, 178  
 Heat of vaporization, 178  
*Helicobacter pylori* test, 1272  
 Heliotropin, structure, 440  
 Helium, chemistry, 365t  
 Helmholz double layer, 300  
 Helmholz free energy, 206  
 Hemabate, 1432  
 Hematocrit value, 566  
 Hematological drugs affecting blood production, 1344  
 Hematological values, normal, 566t  
 Hematology, 1127  
 Hematology, analysis, 565  
 Hematopoiesis, 1127  
 Hematopoietic growth factors, 1346  
 Hematopeiotics, 1344  
 Hemoglobin, analysis, 565  
 Hemoglobin A1C testing, 1276  
 Hemolytic effects, 260t  
 Hemo-Pak, 1973  
 Hemophilia A, 1130  
 Hemophilia B, 1130  
 Hemorheology, 349  
 Hemostasis, 571  
 Hemostasis, disorders of, 1130  
 Hemostatics, 1336  
 Henderson-Hasselbalch equation, 245, 391  
 Henry's law, 218  
 Heparin, 1328, 1331  
     bioassay, 559  
     low-molecular-weight, 1330  
     substitutes, 1328  
 Heparin sodium, 1331  
 Hepatic function, 584  
 Hepatitis,  
     acute, 1110  
     autoimmune chronic, 1111  
     chronic viral, drugs, 1315  
     comparison of types, 1110t  
     testing, 575  
     viral, 1139  
     viral, prevention, 1110  
 Hepatitis A, 1110  
 Hepatitis B, 1110  
 Hepatitis C, 1110, 1276  
 Hepatitis C Check, 1276  
 Hepsira, 1677  
 Herbal medicines  
     literature, 70  
     popular, 413t  
     published reviews, 2328  
 Herbalism, 2326  
 Herbicides, 1736  
 Herbicides, miscellaneous, 1738  
 Herboxone, 1738  
 Herbs, drug interactions, 2327t  
 Herceptin, 1615t  
 Heroin, structure, 434t  
 Herpes, genital, 1136  
 Herplex, 1680  
 Hespan, 1322  
 Heta starch, 1322  
 Hetrazan, 1596  
 Hexabrix, 1267  
 Hexachlorophene, 1628  
 Hexalen, 1561  
 Hexamine, 1664  
 Hexavitamin tablets, 912  
 Hibiclens, 1627  
 Hibistat, 1627  
 HibTITER, 1602t  
 Hiestand compaction indices, 917t  
 High-alcoholic elixir, 1091  
 High-performance liquid chromatography, 615

- High-throughput screening for polymorphism, 666  
 Hinder, 1734  
*Hirudo medicinalis* isoform HVI, 1336  
 Histamine, 1543  
 Histamine and antihistaminic drugs, 1543  
 Histamine phosphate, 1543  
 Histamine release, inhibitors of, 1546  
 Histogram, 130  
 Histolyn-CYL, 1275  
 Histones, 423  
 Histoplasmosis skin test antigen, 1275  
 History  
 American, 11  
 antiquity, 8  
 bibliography, 15  
 Europe, early modern, 9  
 Middle Ages, 8  
 pharmacy, 7  
 prehistoric, 7  
 Renaissance, 9  
 HIV, universal precautions, 56  
 Hives, 1132  
 Hivid, 1683  
 HLB values, 760t  
 HMG-CoA reductase inhibitors, 1368  
 Hofmeister or lyotropic series, 299  
 Hog gum, 1076  
 Homatropine, structure, 432t  
 Homatropine hydrobromide, 1408  
 Homatropine methylbromide, structure, 432t  
 Home Access, 1276  
 Homeopathy, 2327  
 Homogenizers for emulsions, 765  
 Homologs, 468  
 Homosalate, 1291  
 Honey, 1092  
 clarified, 1092  
 strained, 1092  
 Honeyes, 756  
 Hook's law, 347  
 Hooke's law, 338  
 Hormone  
 adrenal corticotrophic, 1438  
 androgen, inhibitors, 1472, 1472t  
 follicle-stimulating, 1438  
 interstitial cell-stimulating, 1438  
 luteinizing, 1438  
 parathyroid, 1456  
 testicular, 1470  
 thyrotropic, 1438  
 Hormone antagonists, 1437  
 Hormones, 1437  
 estrogenic, natural, 1462  
 estrogenic, synthetic or nonsteroidal, 1462  
 estrogens, major features, 1462t  
 gonadal, 1461  
 gonadal, inhibitors, 1461  
 gonadotrophic, 1438  
 hypothalamic, 1438  
 ovarian, 1461  
 pancreatic, 1449  
 pituitary, 1437  
 summary, 1438t  
 thyroid, 1458, 1459t  
 Hormones and hormone antagonists, 1437  
 Hospital, AHA registration requirements, 2248  
 Hospital pharmacy, 2254  
 ambulatory care services, 2263  
 clinical, 2264  
 facilities, 2258  
 formulary system, 2259  
 future, 2264  
 intravenous admixtures, 2263  
 investigational medications, 2262  
 medication safety, 2258  
 medication-distribution systems, 2260  
 P&T committee, 2258  
 patient self-administration, 2262  
 practice standards, 2254  
 purchasing, 2259  
 responsibilities, pharmacist, 2256  
 responsibilities, technician, 2257  
 technology and automation, 2263  
 Hospital pharmacy practice, 2247  
 Hot Sauce animal repellant, 1734  
 Hr system, 574  
 Hr<sub>o</sub> antigen, 574  
 Humalog, 1451  
 Human growth hormone, biotechnology, 995t  
 Human immunodeficiency virus, 1140, 1219  
 Humate P, 1326  
 Humatin, 1668  
 Humatrop, 1440  
 Humidity, effect on dissolution, 681  
 Humidity, relative, 182  
 Humoral immune dysfunction, 1210  
 Humoral system, immunology, 1207  
 Humorsol, 1394  
 Humulin N, 1451  
 Humulin R, 1451  
 Hund's rule of maximum multiplicity, 163  
 Hyaluronidase for injection, 1687  
 Hybridization, 165  
 Hybridized bonds, 165  
 Hycamtin, 1585  
 Hyclorite, 1630  
 Hydralazine hydrochloride, 1352  
 Hydrates, 178  
 Hydration, 231  
 Hydrex, 1426  
 Hydrodiotic acid syrup, 1071  
 Hydroalcoholic diluting agents, 1071  
 Hydrocarbon blend propellants, 1008t  
 Hydrocarbon propellants, 1008  
 Hydrocarbon propellants, properties, 1003t  
 Hydrochloric acid, 1086  
 Hydrochlorofluorocarbon propellants, 1003t, 1008  
 Hydrochlorothiazide, 1427  
 Hydrocodone bitartrate, 1528  
 Hydrocodone, structure, 434t  
 Hydrocolloid dressings, 1969  
 Hydrocortisone, 1447  
 Hydrocortone, 1447  
 Hydrocupreine, structure, 435  
 Hydroflumethiazide, 1427  
 Hydrofluorocarbon propellants, 1003t, 1008  
 Hydrogels, 884, 1969  
 Hydrogen, chemistry, 365t  
 Hydrogen bonding, 191  
 Hydrogen bonds, 173  
 Hydrogen electrode, 247  
 Hydrogen peroxide plus steam sterilization, 790  
 Hydrogen peroxide solution, 1628  
 Hydrogen peroxide sterilization, 790  
 Hydrogenation, 425  
 Hydrogen-ion concentration chain, 247  
 Hydrolysis, 275, 1030  
 Hydromorphone, structure, 434t  
 Hydromorphone hydrochloride, 1528  
 Hydronium-ion concentrations, 240t  
 Hydrophile-lipophile balance range and surfactant application, 331t  
 Hydrophile-lipophile balance, 331  
 Hydrophile-lipophile balance, group numbers, 333t  
 Hydrophile-lipophile balance system, 332  
 Hydrophile-lipophile balance values  
 emulsifying agents, 331t  
 emulsion ingredients, 332t  
 nonionic blends, 333t  
 Hydrophilic ointment, 1078  
 Hydrophobic association, 221  
 Hydrophobic contribution constants, 176t  
 Hydrophobic effect, 221  
 Hydrophobic interaction chromatography, 620  
 Hydrophobic interactions, 173  
 Hydroquinine, structure, 435  
 Hydroquinol, 1291  
 Hydroquinone, 1291  
 Hydrotherapy, 2331  
 Hydroxocobalamin, 1712  
 Hydroxyamphetamine hydrobromide, 1386  
 Hydroxyanisole, butylated, 1058  
 Hydroxy-ion concentrations, 240t  
 Hydroxyprogesterone caproate, 1575  
 Hydroxytoluene, butylated, 1059  
 Hydroxytoluene, butylated, crystalline, 1059  
 Hydroxyurea, 1575  
 Hydroxyzine hydrochloride, 1491, 1548  
 Hydroxyzine pamoate, 1492  
 Hygroton, 1426  
 Hylidone, 1426  
 Hylorel, 1403  
 Hyoscyamine, structure, 432t  
 Hyoscyamine sulfate, 1408  
 Hypaque-76, 1263  
 Hypaque meglumine, 1263  
 Hypaque sodium, 1264  
 Hyperaldosteronism, primary, 1124  
 Hypercholesterolemia, familial, 1127  
 Hyperconjugation, 393  
 Hyperglycemia, 577  
 Hyperlipoproteinemas, 1127  
 Hyperparathyroidism, secondary, 1226  
 Hypersensitivity reactions, immunology, 1212, 1213t  
 Hyperstat IV, 1352  
 Hypertension, secondary, 1101  
 Hyperthyroidism, 1124  
 Hypertriglyceridemia, familial, 1127  
 Hypnosis, 2331  
 Hypnotics, 1486  
 benzodiazepine, 1495, 1496t  
 miscellaneous, 1497  
 nonbarbiturate, 1495  
 Hypodermic equipment, 1992  
 Hypoglycemia, 577  
 Hypoparathyroidism, 1126  
 Hypophosphorous acid, 1086  
 Hypotensives, 1350  
 Hypothalamus, 1123  
 Hypothyroidism, 1123  
 Hypoxanthine, structure, 438t  
 Hypoxemia, 1102  
 Hyskon, 1273  
 Hytone, 1447  
 Hytrin, 1400
- I**
- Ibuprofen, 1537  
 Ibutilide fumarate, 1363  
 Ichthammol, 1285  
 Ichthymall, 1285  
 Ichthyol, 1285  
 Ictiol, 1285  
 Idarubicin hydrochloride, 1575  
 Idoxuridine, 1680  
 IDU, 1680  
 Ifaxol, 1582  
 Ifex, 1576  
 Ifosfamide, 1576  
 Ilotycin, 1653  
 Ilozyme, 1686t  
 Imaging agents, chemistry, 385  
 Imatinib mesylate, 1576  
 Imidazole alkaloids, 438  
 (see Alkaloids)  
 Imipenem, 1648  
 Imipramine hydrochloride, 1520  
 Imipramine pamoate, 1520  
 Imitrex, 1435  
 Immunity, 1600  
 Immunization  
 adolescent, 1605  
 adults age 65 and over, 1609  
 adults under age 65, 1608  
 pediatric, 1605, 1606t  
 records, 1610  
 Immunization schedule, childhood and adolescent, 1606t, 1607t  
 Immunizing agents, 1600  
 active, characteristics, 1603  
 biologics, characteristics, 1600  
 passive, 1610  
 types, 1611  
 Immunizing agents active, types, 1601  
 Immunizing agents and allergenic extracts, 1600  
 Immunoactive drugs, 1560, 1588  
 Immunochemistry, analysis, 595  
 Immunodeficiency, common variable, 1211  
 Immunodeficiency syndrome, acquired, 1140  
 Immunodeficiency syndromes, cellular, 1211  
 Immunoelectrophoresis, 579, 631  
 Immunoglobulin A deficiency, selective, 1211  
 Immunoglobulin G, 1332  
 Immunoglobulins, 578  
 Immunology  
 activation, 1209  
 allergic reactions, 1212, 1213  
 allergic reactions, agents causing, 1213t  
 antibodies, 1206  
 antirejection agents, 1218  
 autoimmune disorders, 1212, 1212t  
 cells, 1208  
 complement factors, 1208  
 cytokines, effects, 1214t  
 disorders, 1210  
 graft rejection, 1217  
 humoral, 1207  
 hypersensitivity reactions, 1212  
 hypersensitivity reactions, types, 1213t  
 immunomodulators, 1218  
 lymphocytes, 1207t  
 lymphoid organs, 1206  
 myeloid cytokines, 1207t  
 neuro-, 1214  
 principles, 1206  
 research, 91  
 Immunomodulators, immunology, 1218  
 Immunomodulators, other, 1560  
 Immunomodulators in HIV, 1219  
 Immunosuppressants for IBD, 1315  
 Immunosuppressive therapy, 1218  
 Immunotherapy, 1216  
 Immunotherapy, 1617  
 Imodium, 1309  
 Imogam Rabies, 1613t

- Imovax Rabies (human diploid cell), 1603t  
 Imperial, measures, 103t  
 Impetigo, 1133  
 Implantation test, bioassay, 563  
 Implants, magnetism-activated, drug delivery, 951  
 Implants, ophthalmic, 858  
 Imuran, 1563, 1588  
 Inapsine, 1512  
 Incompatibility, parenteral, 847  
 Incompatibility, stability, 1029  
 Incontinence supplies, 2003  
 IND, 967  
 clinical investigations, 967  
 phase I clinical trials, 967  
 phase II clinical trials, 967  
 phase III clinical trials, 968  
 phase IV clinical testing, 968  
 pre-, meetings, 967  
 Indapamide, 1427  
 Independence, 134  
 Inderal, 1403  
 Indian balsam, 1285  
 Indian Health Service, 47  
 Indicator papers, 500  
 Indigo blue, soluble, 1274  
 Indigo carmine, 1274  
 Indigotindisulfone sodium, 1274  
 Indinavir sulfate, 1680  
 Indium, chemistry, 369t, 370  
 Indocin, 1537  
 Indocin SR, 1537  
 Indocyanine green, 1270, 1272  
 Indometacin, 1537  
 InDuo, 1275  
 Industry  
 administration, 38  
 company selection, 38  
 Eli Lilly divisions, 36  
 legal department, 38  
 management, 38  
 marketing, 36  
 medical affairs, 37  
 news sources, 38  
 opportunities, 35  
 pharmaceutical, 35  
 production, 37  
 published information, 84  
 quality control, 37  
 regulatory affairs, 38  
 research and development, 37  
 sales positions, 36  
 Infanrix, 1602t  
 Infasurf, 1378  
 Infectious diseases, 1134  
 InFeD, 1346  
 Inference and estimation, 136  
 Inference, statistical, 127, 133, 136  
 Inflammatory bowel disease drugs, 1313  
 Infliximab, 1315, 1615t  
 Informatics, 1754  
 Information resources, 64  
 (*see* Literature)  
 Information science, research, 93  
 Information sources, special, 67  
 Infusion, 773  
 Infusorial earth, 372  
 Infusorial earth, purified, 1089  
 INH, 1663  
 Inhalants, 758  
 Inhalation administration, 1158  
 Inhalations, 758  
 dry-powdered, stability, 1029  
 nasal, stability, 1029  
 Inhalers, solution-type, 181  
 Inhalers, surface-type, 181  
 Injections  
 intracamerale, 859  
 intraocular, 858  
 intravitreal, 858  
 juxtascleral, 859  
 retrobulbar, 859  
 subconjunctival, 859  
 Injections as diluting agents, 1071  
 Innohep, 1330  
 Innovar, 1531  
 Inocor, 1361  
 Inorganic pharmaceutical chemistry, 361 (*see* Chemistry)  
 Inositol, 1705  
 Insect attractants, 1724  
 Insect control, newer methods, 1733  
 Insect repellants, 1724  
 Insecticides, 1724, 1730  
 application, 1726  
 carbamate, 1732  
 chlorinated hydrocarbon, 1731  
 common, 1730  
 organic phosphorus compounds, 1732  
 supplier qualifications, 1724  
 Insects, control, 1724  
 methods, 1725, 1727  
 mouthparts, 1725  
 Instrumental methods of analysis, 633 (*see* Analysis)  
 Insufflations, 719  
 Insulin, 1449  
 bioassay, 555  
 NPH, 1451  
 regular, 1451  
 Insulin aspart, 1451  
 Insulin combination products, 1452  
 Insulin injection, 1451  
 Insulin lispro, 1451  
 Insulin suspension, isophane, 1451  
 Insulin tolerance, 577  
 Insulin zinc suspension, 1451  
 Insulin zinc suspension, extended, 1452  
 Insulins  
 intermediate-acting, 1451  
 long-acting, 1452  
 rapid-acting, 1451  
 short-acting, 1451  
 Intal, 1547  
 Intaxel, 1582  
 Integrated health care delivery systems, 2130  
 Integrity test  
 containers and closures, 834t  
 parenteral closures, 833  
 parenteral containers, 833  
 Interaction between components, 277  
 Interactions  
 acarbose-food, 1895  
 ACE inhibitors-potassium sparing diuretics, 1901  
 active transport alteration, 1899  
 adsorption, 1894  
 albumin concentrations, reduced, 1896  
 alcohol, 1898  
 alcohol-disulfiram, 1898  
 alcohol-other CNS depressants, 1900  
 aleldronate-food, 1895  
 amphetamines-alkalizing agents, 1899  
 anticholinergics, 1895, 1900  
 anticoagulants-antibiotics, 1895  
 anti-infectives-food, 1895  
 bisacodyl-antacids, 1894  
 calcium channel blockers, 1898  
 captorpril-food, 1895  
 cathartics, 1894  
 cholestyramine-colestipol, 1894  
 cimetidine, 1898  
 CNS depressants, 1900  
 complexion, 1894  
 contributing factors, 1889  
 cytochrome P450 enzymes, 1897t  
 digoxin-antibiotics, 1895  
 digoxin-diuretics, 1901  
 digoxin-quinidine or verapamil, 1899  
 distribution alteration, 1896  
 diuretics, 1900  
 electrolyte concentration alteration, 1901  
 excretion alteration, 1898  
 fluoroquinolones-metals, 1894  
 food effect, 1895  
 gastric emptying rate, 1894  
 GI absorption alteration, 1893  
 GI flora alteration, 1895  
 grapefruit juice, 1895  
 guanethidine-tricyclic antidepressants, 1901  
 HIV protease inhibitors, 1897  
 hypotensives, 1900  
 information, types, 1891  
 ketoconazole-antacids, 1894  
 levodopa-pyridoxine, 1898  
 lithium-diuretics, 1901  
 lithium-NSAIDs, 1899  
 loperamide-P-glycoprotein, 1899  
 malabsorption states, 1896  
 MAOIs, 1898  
 MAOIs-SSRIs, 1901  
 MAOIs-sympathomimetics, 1901  
 MAOIs-tricyclic antidepressants, 1901  
 MAOIs-tyramine, 1895  
 mechanisms, 1893  
 mercaptopurine or azathioprine-allopurinol, 1898  
 metabolism alteration in the GI tract, 1895  
 metabolism inhibition, 1898  
 metabolism stimulation, 1896  
 methotrexate, 1896  
 methotrexate-NSAIDs, 1899  
 metoclopramide, 1895  
 miglitol-food, 1895  
 motility alteration, 1894  
 noncovalent, 190t  
 NSAIDs, 1900  
 opposing effects, 1899  
 oral contraceptives, 1897  
 oral contraceptives-antibiotics, 1896  
 patient variables, 1892  
 penicillamine-metals, 1894  
 penicillins-probenecid, 1899  
 pH alteration, 1894  
 pharmacodynamic, 1899  
 pharmacokinetic, 1893  
 phenytoin-valproic acid, 1896  
 protein-binding site displacement, 1896  
 receptor site, 1901  
 risendronate-food, 1895  
 risk reduction, 1902  
 salicylates-acidifying and alkalinizing agents, 1899  
 similar effects, 1900  
 smoking, 1897  
 tetracyclines-metals, 1894  
 theophylline-fluoroquinolones, 1898  
 theophylline-food, 1895  
 theophylline-macrolide antibiotics, 1898  
 transport alteration, 1899  
 urinary pH alteration, 1899  
 warfarin-phenobarbital, 1897  
 Intercept of zero, fitting a line with, 156  
 Interfacial energetics, 280  
 Interfacial forces, 280  
 Interfacial phenomena, 280  
 adhesional forces, 282  
 adsorption, 285  
 capillarity, 284  
 cohesional forces, 282  
 pressure differences across curved surfaces, 285  
 surface-active agents, 290  
 wetting phenomena, 283  
 Interfacial properties, coarse dispersions, 319  
 Interfacial tension, 280, 281t, 327, 1577  
 Interferon alfa, 1680  
 Interferon alfa-2A, recombinant, 1576  
 Interferon alfa-2B, 1316  
 Interferons, 1219  
 Interferons, biotechnology, 995  
 Interionic compatibility, stability, 1031  
 Interleukin-2, 1219  
 Interleukin-2 recombinant, 1561  
 Interleukins, biotechnology, 995t  
 International Nonproprietary Name, 446  
 International Nonproprietary Name, protection, 450  
*International Pharmaceutical Abstracts*, 66  
 Internet, 1755  
 directories, 72  
 discussion groups, 71  
 educational organizations, 73  
 electronic mail, 71  
 electronic publications, 73  
 government websites, 73  
 health information for the consumer, 73  
 libraries, 73  
 major pharmacy websites, 72  
 medical information, 84  
 online community pharmacies, 73  
 professional development, 72  
 resources, 71  
 search engines, 72  
 website evaluations, 73  
 World Wide Web, 72  
 Intracutaneous test, bioassay, 563  
 Intralipid, 1693  
 Intravenous admixtures, 837  
 Intravenous fluids, 837, 1321  
 additives, 845  
 administration procedures, 839  
 administration sets, 839  
 admixtures, 845  
 biotechnology parenterals, 849  
 common, 838t  
 environment, 845  
 glass containers, 846  
 lyophilized products, 848  
 packaging, 839  
 parenteral incompatibility, 847  
 parenteral prescription, 848  
 prescriptions, 848t  
 product stability, 949t  
 quality control, 847  
 systems, 839t  
 total parenteral nutrition, 847  
 Intron A, 1316  
 Intropin, 1387  
 Inulin, 1274  
 Invanz, 1648  
 Inverse sine transformation, 160  
 Inversine, 1353  
 Investigational New Drug Application, 967 (*see* IND)  
 Invirase, 1682  
 Iodine, 1628, 1716  
 Iodine, chemistry, 377t, 379  
 Iodine value, 425  
 Iodipamide meglumine, 1264  
 Iodipamide meglumine and diaztraoate meglumine, 1264  
 Iodipine, 1382  
 Iodixanol, 1265  
 Iodoquinol, 1668  
 Iohexol, 1265  
 Iomeprol, 1265  
 Iomeron, 1265  
 Ion chromatography, 619  
 Ion-exchange chromatography, 600, 612

- Ionic solutions, 231  
 Ionic strength, 234, 275  
 Ionic strength and dissociation constants, 239  
 Ionization of water, 238  
 Ionization of weak electrolytes, 233  
 Ionization acids, 236  
 atmospheric pressure types, 636  
 bases, 236  
 chemical, 636  
 drug design, 473  
 matrix-assisted laser desorption, 636  
 negative-ion chemical, 636  
 preformulation, 727  
 packaging, 1053  
 Ion-pairing chromatography, 612  
 Ion-suppression chromatography, 612  
 Iontophoresis, ophthalmic, 859  
 Iopamidol, 1265  
 Iopanoic acid, 1266  
 Iophendylate, 1266  
 Iopromide, 1266  
 Iothalamate meglumine, 1266  
 Iothalamate meglumine and iothalamate sodium, 1266  
 Iothalamate sodium, 1266  
 Iothalamate sodium and iothalamate meglumine, 1266  
 Iothalamic acid, 1267  
 Ioversol, 1267  
*Iowa Drug Information System*, 65  
 Ioxaglate meglumine and ioxaglate sodium, 1267  
 IPC, 1737  
 Ipol, 1603t  
 Ipratropium bromide, 1375, 1408  
 Irbesartan, 1357  
 Iressa, 1574  
 Iretin, 1568  
 Iridology, 2332  
 Irinotecan hydrochloride trihydrate, 1577  
 Iris, 1069  
 Irish moss, 1073  
 Iron, 1345, 1716  
 Iron, chemistry, 378t 380  
 Iron compounds, 1345  
 Iron dextran injection, 1346  
 Irrigation solutions, chemistry, 384  
 Irritable bowel syndrome, 1108  
 Irritancy test, 882  
 Irritants, 1284  
 Irving-Williams order, 197  
 Isomelin sulfate, 1404  
 ISMO, 1359  
 Isomotic, 1424  
 Isoagglutinins, 1324  
 Iso-alcoholic elixir, 1091  
 Isobamate, 1415  
 Isocarboxazid, 1521  
 Isoelectric focusing, 631  
 Isoelectric point, 243  
 Iso-elixir, 1091  
 Isoetharine hydrochloride, 1383  
 Isoetharine mesylate, 1383  
 Isoflurane, 1475  
 Isofluophate, 1395  
 Isolation technology, parenterals, 816  
 Isomerism, 187  
 Isomers, 165  
   *cis*, 170, 187  
   *trans*, 170, 187  
   types, 472  
 Isomorphous replacement, 372  
 Isoniazid, 1663  
 Isonipecaine, 1531  
 Iso-osmotic solutions, 225  
 Isoprenoids, miscellaneous, chemistry, 439, 441  
 Isopropyl alcohol as a solvent, 221  
 Isopropyl myristate, 1086  
 Isopropylarterenol hydrochloride, 1383  
 Isoproterenol hydrochloride, 1383  
 Isoptin, 1366  
 Isopto Carpine, 1392  
 Isopto-Eserine, 1395  
 Isordil, 1359  
 Isosorbide, 1424  
 Isosorbide dinitrate, 1359  
 Isosorbide mononitrate, 1359  
 Isosterism, 471  
 Isosulfan blue, 1273  
 Isotertoin, 1291  
 Isotherm, binding, 195  
 Isotonic solution of three chlorides, 1323  
 Isotonic solution V values, 259  
 Isotonic solutions, 225  
 Isotope, 162  
 Isotopic abundance, 635, 635t  
 Isovue, 1265  
 Isovue-M, 1265  
 Isoxsuprine hydrochloride, 1384  
 Isradipine, 1365  
 Italian juice root, 1064  
 Itraconazole, 1672  
 IV pharmacy, 2000  
 Iveegam, 1613t
- J**
- Janamine, 1520
  - Jefron, 1346
  - Jellies, 756
  - Jerusalem balsam, 1280
  - JE-Vax, 1603t
  - Joule heating, 304
  - Juices, 751
  - Juniper tar, 1285
- K**
- Kabikinase, 1333
  - Kaletra, 1681
  - Kaolin, 1313
  - Kaolin, light, 1313
  - Kaolin-Pectin Suspension, 1313
  - Kaon, 1339
  - Kappadione, 1700
  - Kayexalate, 1344
  - Keflex, 1647
  - Keflin, 1647
  - Kefurox, 1646
  - Kefzol, 1643
  - Kelgin, 1073
  - Keltrol, 1076
  - Kelvin equation, 308
  - Kemadrin, 1420
  - Kenacort, 1448
  - Keppra, 1505
  - Keratolytics, 1288
  - Kerlone, 1401
  - Ketaject, 1477
  - Ketalar, 1477
  - Ketamine hydrochloride, 1477
  - Ketoconazole, 1672
  - Ketone testing, 1276
  - Ketoprofen, 1538
  - KetoStix, 1276
  - Ketotifen fumarate, 1549
  - Kick's law, 703
  - Kidney function, 577
  - Kidney Screen at Home, 1276
  - Kieselguhr, purified, 1089
  - Kinetic energy correction, 353
  - Kinetics
    - catalysis, 272
    - chemical, 266
    - complex reactions, 270
    - drug stabilization, 277
    - effects on reaction rate, 271
    - first-order, 155
    - first-order reactions, 267
    - Kinetics, Michaelis-Menten, 155
    - other effects, 275
    - particle formation, 307
    - pseudo-order reactions, 269
  - reaction rate, 266
  - second-order reactions, 268
  - third-order reactions, 269
  - zero-order, 155
- Kinevac, 1271  
 Kligman "maximization" test, 882  
 Klonopin, 1503  
 Klucel, 1074  
 Knox Out, 1732  
 Konyne, 1327  
 K-Phos, 1340  
 Krenite, 1735  
 Krypton, chemistry, 365t  
 Kytril, 1311  
 Ky-Zyme-HP, 1686t
- L**
- Labetalol hydrochloride, 1402
  - Lac sulfuris, 1598
  - Lacrimal system, 853
  - Lacrisert, 1280
  - Lactaid, 1304, 1687
  - Lactase, 1304, 1687
  - Lactic acid, 1086
  - Lactoflavin, 1709
  - Lactose, 1087
  - Lactrase, 1304
  - Lactulose, 1316
  - Lamasil, 1673
  - Lamictal, 1505
  - Laminar flow, 339
  - Laminar flow enclosures, parenterals, 815
  - Laminar flow hood, false positives, 799t
  - L-Amino acids, 1691t
  - Lamivudine, 1680
  - Lamotrigine, 1505
  - Lamprene, 1662
  - Lana philosophica, 1283
  - Langmuir's molecular adsorption theory, 286
  - Lanolin, 1078
  - Lanolin, anhydrous, 1077
  - Lanoxin, 1361
  - Lansoprazole, 1300
  - Lanthanides, 369
  - Lanthanum, chemistry, 369t
  - Lantus, 1452
  - Lapis calamineria, 1283
  - Laracit, 1568
  - Lariam, 1666
  - L-Ascorbic acid, 1701
  - Laser diffraction, 709
  - Lasix, 1430
  - Latin square design, 132t
  - Lattices, 175
  - Laughing gas, 1476
  - Lavalbuterol, 1384
  - Lavender, 1069
  - Lavender flowers oil, 1065
  - Lavender oil, 1065
  - Lavendula, 1069
  - Law
    - advertising, 2053
    - antitrust and prescription insurance plans, 2053
    - commercial, 2051
    - contract, 2051
    - negligence, 2048
    - prescription ownership, 2052
    - tort, 2048
    - torts, intentional, 2049
  - Laws
    - Federal Anti-Tampering Act, 2040
    - Federal Food, Drug and Cosmetic Act, 2028
    - Federal Hazardous Substances Act, 2040
    - federal, adulteration, 2038
    - Comprehensive Drug Abuse Prevention and Control Act, 2041
- Current Good Manufacturing Practices, 2031  
 DEA inspections, 2048  
 definition of drug, 2029  
 definitions, 2042  
 Dietary Supplement Health and Education Act, 2034  
 dietary supplement regulation, 2034  
 distribution, 2044  
 doctrine of respondent superior, 2032  
 drug approval process, 2030  
 drug efficacy study, 2030  
 Drug Price Competition and Patent Term Restoration Act, 2031, 2037  
 Durham-Humphrey Amendment, 2029  
 Electronic Signatures in Global and National Commerce Act, 2041  
 FDA regulations, other, 2033  
 Food and Drug Administration Modernization Act, 2032  
 inventory, 2044  
 Kefauver-Harris Amendment, 2030  
 liability under the FD&CA, 2032  
 loss or theft, 2045  
 mailing, 2048  
 misbranded or adulterated drug receipt, 2039  
 misbranding, 2037  
 order forms, 2045  
 OTC drugs, 2040  
 patient package inserts, 2034  
 Poison Prevention Packaging Act, 2040  
 poisons, 2040  
 power of attorney, 2045  
 prescription drug labeling, 2033  
 Prescription Drug User Fee Act 1992, 2032  
 prescription drugs, 2039  
 prescription filling, 2044  
 prescription label, 2039  
 prescriptions, 2045  
 recalls, 2035  
 recordkeeping under the FD&CA, 2033  
 records and reports, 2044  
 registration, 2043  
 requirements, miscellaneous, 2047  
 Schedule V retail distribution restrictions, 2043  
 schedules, 2042  
 sulfanilamide tragedy, 2028  
 symbols and labeling, 2043  
 termination, 2043  
 thalidomide tragedy, 2029  
 USP and NF, 2037  
 pharmacy, 2015  
 Prescription Drug Marketing Act, 2036  
 reciprocity, 2020  
 state, 2016
  - compounding, 2025
  - computer regulations, 2025
  - definitions, 2017
  - hypodermic needles and syringes, 2025
  - institutional pharmacy, 2020
  - interstate practice, 2020
  - licensing facilities, 2021
  - licensure exams, 2019
  - minimum requirements for a pharmacy, 2022
  - nuclear pharmacy, 2021
  - pharmaceutical care, 2021

- pharmacy ownership, 2025  
rules and regulations, 2018  
state and federal, relationship, 2015  
supreme court decision, 2026
- Laws governing pharmacy, 2015
- Laxatives, 1305  
bulk, 1305  
bulk-forming, 1307  
chemistry, 384  
combinations, 1309  
hyperosmotic, 1307  
lubricant, 1308  
mixtures, 1306t  
saline, 1307  
stimulant, 1305  
types, 1305
- L-Carnitine, 1713
- LD<sub>50</sub> measurement, 129t
- Lead, chemistry, 371t, 373
- Lead compound selection, 966
- Lecithin as an emulsifying agent, 330
- Legislation, 13
- Leiocom, 1085
- Lemon oil, 1065
- Lemon peel, 1069
- Lemon peel tincture, 1069
- Lemon tincture, 1069
- Lennard-Jones 6–12 potential, 191
- Lente, 1451
- Lepirudin, 1336
- Lescol, 1368
- Letrozole, 1465, 1577
- Leucogen, 1059
- Leucovorin calcium, 1705
- Leukeran, 1566
- Leukine, 1348
- Leukocytes, analysis, 568
- Leukotriene pathway antagonists, 1374
- Leukotriene pathway inhibitors, 1371
- Leuprolide acetate, 1577
- Leustatin, 1567
- Leutral, 1647
- Levamisole hydrochloride, 1578
- Levarterenol bitartrate, 1387
- Levatol, 1403
- Levetiracetam, 1505
- Levigation, 881
- Levobunolol hydrochloride, 1402
- Levcarnitine, 1713
- Levodopa, 1419
- Levo-Dromoran, 1528
- Levofoxacin, 1657
- Levonorgestrel, 1467
- Levophed bitartrate, 1387
- Levorphanol tartrate, 1528
- Levothroid, 1459
- Levothyroxine sodium, 1459
- Levoxyl, 1459
- Levulose, 1692
- Lewis acids and bases, hard-soft classification, 190t
- Lewis bases, 391
- Lewis theory of acids and bases, 391
- Lexapro, 1520
- Lexiva, 1679
- L-Glutamic acid, 1704
- Librax, 1491
- Libritabs, 1489
- Lice, control, 1729
- Licensure, 3
- Licorice, 1069
- Licorice elixir, 1071
- Licorice root, 1064
- Licorice root extract, 1069
- Licorice root extract, pure, 1065
- Licorice syrup, 1071
- Lidocaine, 1484
- Lidocaine hydrochloride, 1363, 1481
- Lidox, 1491
- Lidoxide, 1491
- LifeStream, 1275
- Lifters, patient, 1988
- Ligand, multidentate, 186
- Ligand, unidentate, 186
- Ligand-mediated targeting, drug delivery, 955
- Ligand field theory, 189
- Ligands, 169  
abbreviations, 187t  
multidentate, 187t  
nomenclature, 363t
- Ligation, sterilized surgical, 1978
- Light scattering, 297
- Light scattering, dynamic, 297
- Lignocaine, 1481
- Limbritol, 1491
- Limbritol DS, 1491
- Lime  
chloride of, 1735  
slaked, 1084  
soda, 1089
- Lime-sulfur insecticide, 1730
- Lime-sulfur solution, 1735
- Lime water, 1084
- Limonene, structure, 439
- Linalool, structure, 440
- Lindane, 1598, 1731
- Linezolid, 1660
- Liniments, 758
- Lioresal, 1415
- Liothyronine sodium, 1460
- Lipase, 1686t
- Lipids, 1693  
analysis, 581  
cationic, drug delivery, 960  
chemistry, 424
- Lipins, chemistry, 424
- Liposomes, preparation, 766
- Lipitor, 1368
- Lipoids, chemistry, 424
- Lipoproteins, 423
- Liposomes, 314, 316, 766  
advantages, drug delivery, 955t  
drug delivery, 955
- Liposyn, 1693
- Liquid chromatography, 610
- Liquids, 182
- Liquids, power law, 346
- Liquidus line, 219
- Liquor burrowii, 1282
- Liquorice, liquid extract of, 1065
- Liquorice root, 1064
- Lisadimate, 1292
- Lisinopril, 1355
- Literature  
adverse drug reactions, 70  
clinical drug, 74  
compendia, 68  
cosmetics, 71  
drug information, 74  
drug interactions, 70  
drug nomenclature, 68  
formularies, 68  
herbal medicines, 70  
information resources, 64  
natural products, 70  
organic chemistry, 389  
pharmacopeias, 67  
pharmacy, 64  
poisoning, 70  
primary, 64, 75  
secondary, 66  
summaries, 83  
textbook collections, 67  
toiletries, 71  
toxicology, 70  
trade, 67  
types, 64, 75
- Lithium, chemistry, 365t
- Lithium carbonate, 1513
- Liver, diseases of, 1110
- Liver drugs, 1294
- LMD, 10%, 1322
- Lodine, 1536
- Lodosyn, 1418
- Lofibra, 1367
- Logarithmic transformation, 159
- Logarithms, 113
- Logiparin, 1330
- Lomefloxacin hydrochloride, 1658
- Lomotil, 1309
- Lomustine, 1578
- London attractions, 173
- London force, 191
- London force interactions, 221
- Long-term care, 2272
- Loperamide hydrochloride, 1309
- Lopid, 1367
- Lopinavir, 1681
- Lopressor, 1402
- Lorabid, 1647
- Loracarbef, 1647
- Loratadine, 1549
- Lorazepam, 1490
- Losartan potassium, 1357
- Lotensin, 1355
- Lotio alba, 1283
- Lotio calamina, 1283
- Lotio calaminae composite, 1283
- Lotio sulfurata, 1283
- Lotion, 699
- Lotions, 772
- Lotrimin, 1671
- Lotronex, 1314
- Lovastatin, 1368
- Lovenox, 1330
- Low-alcoholic elixir, 1091
- Loxapine succinate, 1513
- Loxitane, 1513
- Lozol, 1427
- L-PAM, 1579
- L-sarcosylin, 1579
- LSD, structure, 436
- Lubricants, effect on dissolution, 677
- Lubricants, tablet, 892
- Ludomil, 1521
- Lufyllin, 1373
- Lugol's solution, 1377
- Luminal, 1494
- Luminal sodium, 1495
- Lung disease, restrictive, 1103
- Lupron, 1577
- Lupus erythematosus, systemic, 1121
- Lutrepulse, 1440
- Luvox, 1520
- LXN, 1275
- Lye, potash, 1287
- Lye, soda, 1089
- Lymph, rheology, 350
- Lymphazurin, 1273
- Lymphocyte immune anti-thymocyte globulin (equine), 1578, 1591
- Lymphocyte immune anti-thymocyte globulin (rabbit), 1591
- Lymphocytes, frozen, 1319
- Lymphocytes, immunology, 1207t
- Lymphoid organs, immunology, 1206
- Lyophilic dispersions, 294
- Lyophilization, 828
- Lyoprotectants, parenterals, 804
- Lyovac, 1569
- Lyphocin, 1662
- Lysergic acid, structure, 436
- Lysodren, 1581
- M**
- Maceration, 773
- MacMichael viscometer, 354
- Macrodantin, 1665
- Macrodex, 1322
- Macrolides, 1652, 1652t
- Mad cow disease, 1449
- Magmas, 770
- Magnesia, 1296  
calcined, 1296  
heavy calcined, 1296
- light, 1296  
milk of, 1296
- Magnesium, chemistry, 367t, 368
- Magnesium chloride, 1087
- Magnesium hydroxide, 1296
- Magnesium oxide, 1296
- Magnesium oxide, heavy, 1296
- Magnesium silicate, hydrated, 1297
- Magnesium stearate, 1087
- Magnesium sulfate, 1307
- Magnesium trisilicate, 1297
- Magnevist, Gd-DTPA, 1268
- Mag-Ox 400, 1296
- Maize oil, 1071
- Malathion, 1732
- Malt, 1076
- Malt extract, 1076
- Managed care, 15
- Mancozeb, 1735
- Mandelic acid, structure, 433t
- Mandal, 1643
- Mandrake, 1287
- Maneb, 1735
- Mangafodipir trisodium, 1268
- Manganese, 1716
- Manganese, chemistry, 378t, 379
- Manna sugar, 1424
- Mannite, 1424
- Mannitol, 1274, 1424
- Manoplax, 1361
- Mantissa, 240
- Manual healing—massage/body-work, 2332
- Manucol, 1073
- Manzate, 1735
- Maprotiline hydrochloride, 1521
- Marcaine hydrochloride, 1481
- Marinol, 1310
- Marketing pharmaceutical care services, 2107
- Marplan, 1521
- Mass action, law, 266
- Mass spectra and molecular structure, 634
- Massage, 2332
- Massage, therapeutic categories, 2332
- Mathematical principles, 111
- Matter  
changes of state, 178  
glassy state, 184  
states, 162, 178  
visualization of changes of state, 179
- Matulane, 1583
- Mavik, 1356
- Maxair, 1384
- Maxalt, 1435
- Mazaquin, 1658
- Maxipime, 1644
- Maxwell element, 347
- May apple, 1287
- Mazindol, 1554
- MD-76R, 1263
- MD-Gastroview, 1263
- Mean, 129
- Mean, standard error, 130
- Measure  
apotheary, 103t  
metric, linear, 102t  
wine, 103t
- Measures, 99  
approximate, 103  
British, 103t
- English systems, 99, 102  
equivalents, 102t, 103t
- graduated glass, 109  
history, 99  
Imperial, 103t  
metallic, 108  
metric, 100  
metric, liquid, 103t  
relationship to weights, 103t
- systems, 103
- Measuring, 108  
large quantities, 108

- small quantities, 109  
Measuring and weighing, 104  
Measuring error, parallax, 108  
Mebaral, 1494  
Mebendazole, 1596  
Mecamylamine hydrochloride, 1353  
Mechanical systems, drug delivery, 950  
Mechlorethamine hydrochloride, 1578  
Meclizine hydrochloride, 1311, 1549  
Meclofenamate sodium, 1538  
Meconium, 1526  
Media fill, 819, 820t  
Mediator release inhibitors, 1375  
Medicated topicals, 871 (*see also* Topicals)  
Medication use safety, 1840  
Medicine dropper, 110  
Medipren, 1537  
MEDLINE, 65  
Medrol, 1448  
Medroxyprogesterone acetate, 1467  
Mefenamic acid, 1538  
Mefloquine hydrochloride, 1666  
Mefoxin, 1645  
Meglitinides, 1453  
Meglumine, 1087  
Mel, 1092  
Mellaril, 1514  
Mellaril-S, 1514  
Meloxicam, 1538  
Melphalan, 1579  
Melprex, 1735  
Melting, amorphous, 187  
Melting, crystalline, 178  
Melting point, congruent, 219  
Menadiol sodium diphosphate, 1700  
Mendeleyev, 364  
Meningitis, 1139  
Meniscus, 108  
Menomune-A/C/Y/W-135, 1602t  
Menotropins, 1440  
Menrium, 1489  
Mentax, 1673  
Menthol, 1285  
Meperidine hydrochloride, 1531  
Mephentermine sulfate, 1381  
Mephenytoin, 1505  
Mephobarbital, 1494  
Mephyston, 1700  
Mepivacaine hydrochloride, 1482  
Meprobamate, 1492  
Mepron, 1669  
Meractinomycin, 1569  
Mercaptobenzothiazole, 1735  
Mercaptopurine, 1579  
Mercurials, organic, ophthalmics, 865  
Mercuric oxide, yellow, 1674  
Mercury, ammoniated, 1674  
Mercury, chemistry, 366t, 369  
Meridia, 1555  
Meropenem, 1648  
Merrem, 1648  
Meruvax II, 1602t  
Mesalamine, 1314  
Mesna, 1580  
Mesnex, 1580  
Mesoridazine besylate, 1513  
Mestinon, 1396  
Mestranol, 1464  
Meta-analyses, issues and problems, 83t  
Metabolism, drug delivery, 944  
Metabolism, hepatic, pharmacokinetics, 1184  
Metaglip, 1456  
Metahydrin, 1428  
Metallocones, 170  
Metalloproteins, 423  
Metals, stability, 1036  
Metalysse, 1333  
Metamucil, 1308  
Metaprel, 1384  
Metaproterenol sulfate, 1384  
Metaraminol bitartrate, 1381  
Metaxalone, 1416  
Metformin and glipizide, 1456  
Metformin hydrochloride, 1454  
Methacholine chloride, 1273, 1391  
Methadone, 2315  
Methadone hydrochloride, 1532  
Methamphetamine, 1554  
Methanol, 1082  
Methatest, 1471  
Methazolamide, 1424  
Methenamine, 1664  
Methenamine tablets, 914  
Methergine, 1433  
Methicillin sodium, 1639  
Methimazole, 1460  
Methiocarb, 1734  
Methocarbamol, 1416  
Methocel, 1074  
Methohexital sodium, 1476  
Methotrexate, 1315, 1580  
Methoxamine hydrochloride, 1381  
Methoxsalen, 1292  
Methoxychlor, 1731  
Methscopolamine bromide, structure, 432t  
Methsuximide, 1505  
Methyclothiazide, 1427  
Methyl anthranilate, 1292  
Methyl bromide, 1733  
Methyl isobutyl ketone, 1082  
Methyl nonyl ketone, 1734  
Methyl salicylate, 1065  
Methylcarbinol, 1080  
Methylcellulose, 1074  
Methylcellulose, carbomer, 1280  
Methylcellulose, hydroxypropyl, 1074  
Methylcellulose, hydroxypropyl, ophthalmic solution, 1280  
Methylcellulose and carbomer gel base, 772  
Methylcellulose ophthalmic solution, 1280  
Methyldopa, 1351  
Methyldopate hydrochloride, 1352  
Methylene blue, 1348, 1629  
Methylogometrine maleate, 1433  
Methylergonovine maleate, 1433  
Methylmorphine, 1527  
Methylparaben, 1629  
Methylphenidate hydrochloride, 1554  
Methylprednisolone, 1448  
Methyltestosterone, 1471  
Methysergide maleate, 1435  
Metiguanide, 1454  
Metipranol hydrochloride, 1402  
Metoclopramide hydrochloride, 1303  
Metocurine iodide, 1413  
Metolazone, 1427  
Metopirone, 1271  
Metoprolol tartrate, 1402  
Metric, reading, 101  
Metric prefixes, 102t  
Metric system, orthography, 101  
Metri weights, 100, 107, 108  
Metrology, 99  
Metronidazole, 1669  
Metyrapone, 1271  
Metyrosine, 1404  
Mevacor, 1368  
Mexate, 1580  
Mexiletine hydrochloride, 1363  
Mexitil, 1363  
Meyer-Overton narcosis theory, 475  
Mezlin, 1639  
Mezlocillin sodium, 1639  
Miacalcin, 1456  
Micardia, 1357  
Micatin, 1674  
Micellar electrokinetic capillary chromatography, 631  
Micellar solubilization capacities, 316t  
Micelles, 193  
Micelles and solubilization, 315  
Michaelis-Menten equation of enzyme kinetics, 195  
Michaelis-Menten kinetics, 155  
Miconazole, 1674  
MICR<sub>n</sub>GAM, 1613t  
Microbial bioassays, 560 (*see also* Assays)  
Microbiology, analysis, 594  
Microbiology, research, 90  
Microbore chromatography, 621  
Microchip drug delivery, 962  
Microelectrophoresis, 304  
Microemulsion formulations, 314t  
Microemulsions, 313, 316, 763  
Microfluidizers for emulsions, 766  
Micronase, 1454  
Microneedles, microfabricated, drug delivery, 962  
Micronor, 1467  
Microscope, IR, 653  
Microscopy, 707  
Microscopy, polarized light, 657  
Microsomal system, 1163  
Microspheres, 316  
Microzide, 1427  
Midamor, 1428  
Midazolam hydrochloride, 1490  
Mifeprax, 1433  
Mifepristone, 1433  
Miglitol, 1455  
Migranal, 1432  
Milk acid, 1086  
Miller indices, 176  
Milliequivalents, 124  
Milliosmol, 250  
Mills attrition, 704  
ball, 705  
centrifugal-impact, 704  
chaser, 705  
cutter, 704  
fluid-energy, 705  
grinding, 703  
hammer, 704  
pebble, 705  
roller, 704  
vibrating ball, 705  
Milophene, 1465  
Milrinone lactate, 1362  
Mind-body connection, 2334  
Mineral oil, 1308  
Mineral oil, light, 1087  
Mineral oil, light white, 1087  
Mineral oil, white, 1308  
Mineral Oil Emulsion USP, 762  
Mineral oil emulsion, 1278  
Mineral wax, 1092  
Minerals, 1713  
Minerals, dietary reference intakes, 1714t  
Mini-Gamulin-Rh, 1613t  
Minipress, 1400  
Minocin, 1656  
Minocycline hydrochloride, 1656  
Minoxidil, 1353  
Mint, 1067 American, 1066  
brandy, 1066  
lamb, 1066  
Mintezol, 1597  
Miochol, 1390  
Miostat, 1391  
Miradon, 1328  
Mirapex, 1420  
Mirtazapine, 1521  
Miscibility, liquids, 216  
Misoprostol, 1302  
Mites, itch, control, 1729  
Mithracin, 1582  
Mithramycin, 1582  
Miticides, 1732  
Mitocin-C, 1580  
Mitomycin, 1580  
Mitotane, 1581  
Mitoxantrone, 1581  
Mitral insufficiency, 1099  
Mivacron, 1413  
Mivacurium chloride, 1413  
Mixers for mechanical, emulsions, 764  
Mixing different strengths, 122  
M-M-R II, 1602t  
Mohan, 1513  
Mobic, 1538  
Modafinil, 1555  
Moexipril hydrochloride, 1355  
Moisture content, 182t  
Molecular adsorption theory, 286  
Molecular bonds, 170  
Molecular orbital theory, 189  
Molecular properties, 162  
Molecular recognition, 174t  
Molecular size, drug delivery, 942  
Molecular structure, 162, 164  
Molecular weight, 177  
Molecular-sieve chromatography, 613  
Molecules, absolute configuration, 171  
conformation, 172  
Molindone hydrochloride, 1513  
Molybdenum, 1716  
Monistat, 1674  
Monobactams, 1647  
Monobenzzone, 1292  
Monocid, 1644  
Monoclonal antibodies, biotechnology, 995  
Monoethanolamine, 1082  
Monopril, 1355  
Monosaccharides, 417, 418t  
Monosodium glutamate, 1065  
Monosodium methaneaspartate, 1737  
Monteleukast sodium, 1374  
Monurol, 1660  
Moricizine hydrochloride, 1363  
Morphine, 434t, 1526  
Morphine sulfate, 1527  
Morphine sulfate injection, 1527  
Morrhuate sodium injection, 1286  
Mortar, 717  
Mosquitos, control, 1729  
Moths, control, 1729  
Motrin, 1537  
Mouth, rheology, 350  
Mouthwashes, 751  
Moving-boundary electrophoresis, 630  
Moxifloxacin hydrochloride, 1658  
MPR, 1402  
M-R Vax II, 1602t  
Mucilages, 756  
Mucilages as diluting agents, 1071  
Mucocutaneous infections, systemic drugs for, 1672  
Mucocutaneous infections, topical drugs for, 1673  
Mucomist, 1376  
Mucus, cervical, rheology, 351  
Mucus, rheology, 350  
Multiple range table, 146t  
Multiple sclerosis, 1119  
Multiplication, 114  
Multivitamin preparations, 1713  
Multivitamin tablets, chewable, 914  
Mumps skin test antigen, 1275  
Mumpsvax, 1602t  
Muriatic acid, 1086  
Murine, 1381  
Muromonab-CD3, 1592, 1615t  
Muscle relaxants, centrally acting, 1415  
MUSE, 1369  
Mustargen, 1578

- Mutamycin, 1580  
 Mutarotation, 416  
**M** Myambutol, 1663  
*Myasthenia gravis*, 1118  
*Mycelex*, 1671  
*Mycelex-G*, 1671  
*Mycifradin sulfate*, 1651  
*Mycitracin ophthalmic*, 1652  
*Mycitracin triple antibiotic*, 1652  
*Mycobacterial disease*,  
 nontuberculous, 1138  
*Mycobax* vaccine, 1602t  
*Mycobutin*, 1664  
*Mycophenolate mofetil*, 1592  
*Mycophenolic acid*, 1593  
*Mycoplasma*, 1137  
*Mycotic infections*, 1134  
*Mydriacyl*, 1409  
*Myfortic*, 1593  
*Mykrox*, 1427  
*Mylanta*, 1296  
*Myleran*, 1565  
*Mylicon*, 1317  
*Mylocel*, 1575  
*Mylosar*, 1563  
*Mylotarg*, 1574  
*Myocardial infarction*, 1096  
*Myrcene*, structure, 439  
*Myrica oil*, 1069  
*Myristica oil*, 1065  
*Myristyl alcohol*, 1281  
*Mysoline*, 1507  
*Mysuran*, 1394  
*Mytelase*, 1394
- N**  
*Nabam*, 1735  
*Nabi-HB*, 1613t  
*Nabumetone*, 1538  
*N-Acetyltransferase*, 1236  
*Nadolol*, 1402  
*Nafarelin acetate*, 1440  
*Nafcil*, 1639  
*Nafcillin sodium*, 1639  
*Nalbuphine hydrochloride*, 1532  
*Naled*, 1732  
*Nalfon*, 1536  
*Nallpen*, 1639  
*Nalorphine*, structure, 434t  
*Naloxone*, structure, 434t  
*Naloxone hydrochloride*, 1529  
*Naltrexone*, 2314  
*Naltrexone hydrochloride*, 1520  
*Nanoparticles*, drug delivery, 954,  
 960  
*Naphazoline hydrochloride*,  
 1381  
*Naprosyn*, 1539  
*Naproxen*, 1539  
*Naproxen sodium*, 1539  
*Naptalam*, 1737  
*Naqua*, 1428  
*Naratriptan hydrochloride*, 1435  
*Narcan*, 1529  
*Nardil*, 1522  
*Nasal crimp occlusion*, 858  
*Nasalcrom*, 1547  
*Nasalide*, 1447  
*Nasarel*, 1447  
*Nateglinide*, 1455  
*National Childhood Vaccine Injury  
 Act*, 1610  
*National Community Pharmacists  
 Association*, 4  
*National Institutes of Health*, 46  
*Natrecor*, 1370  
*Natriuretic factor-32*, 1370  
*Natrosol*, 1074  
*Natural products*, 410  
 alkaloids, 430  
 amino acids, 421  
 carbohydrates, 412  
 current FDA qualified health  
 claims, 412t  
 glycosides, 419
- history, 410  
 important pharmaceutical  
 examples, 411t  
 isoprenoids, miscellaneous, 439  
 lipids, 424  
 literature, 70  
 peptides, 421  
 phenols, 438  
 popular herbal medicines, 413t  
 proteins, 421  
 resins, 439  
 tannins, 438  
 volatile oils, 439
- Nature's Remedy*, 1306  
*Naturetin*, 1426  
*Naturopathy*, 2335  
*Navane*, 1514  
*Navane hydrochloride*, 1515  
*Navelbine*, 1587  
*Navy*, pharmacy, 44  
*n-Butyl phthalate*, 1733  
*NCE* (new chemical entity), 720  
*NCE paradigms*, 720  
*NDA*, 968  
 changes to approved products,  
 969  
 post-approval activities, 969  
 safety monitoring, 969
- Nebcin* (sulfate), 1652  
*NebuPent*, 1669  
*Nedocromil sodium*, 1375  
*Needles*, parenterals, 812  
*Needles*, surgical, 1977  
*Nefazodone hydrochloride*, 1521  
*Nelfinavir*, 1682  
*Nembutal*, 1494  
*Nembutal sodium*, 1494  
*Neo-Calglucon*, 1338  
*Neocidin*, 1652  
*Neolid*, 1306  
*Neomycin sulfate*, 1651  
*Neon*, chemistry, 365t  
*Neoral*, 1590  
*Neosar*, 1567, 1589  
*Neosporin G.U. irrigant*, 1652  
*Neosporin ophthalmic*, 1652  
*Neostigmine bromide*, 1395  
*Neostigmine methylsulfate*, 1395  
*Nephelometer*, 297  
*Nephridine*, 1386  
*Nephropathy*, diabetic, 1113  
*Nephrotic syndrome*, 1114  
*Nernst equation*, 196  
*Nesacaine*, 1481  
*Nesacaine-MPF*, 1481  
*Nesiritide*, 1370  
*Netilmicin sulfate*, 1651  
*Netromycin*, 1651  
*Neupogen*, 1347  
*Neurohypophysis*, 1441  
*Neuroimmunology*, 1214  
*Neurology*, 1116  
*Neuromuscular blockers*, 1411  
 competitive, 1411  
 depolarizing, 1412  
*Neuromuscular disease*, 1118  
*Neurontin*, 1505  
*Neurosin*, 1338  
*Neut*, 1297  
*Neutra-Phos*, 1340  
*Neutron reactions*, 485  
*Neutrophils*, 568  
*Nevirapine*, 1681  
*New drug application*, 968  
 (*see NDA*)  
*Newton's law*, 338, 340  
*Newtonian fluids*, 340  
*Newtonian viscosities*, 340t  
*Nexium*, 1300  
*Niacides*, 1735  
*Niacin*, 1368, 1705  
*Niacin*, bioassay, 560  
*Niacinamide*, bioassay, 560  
*Niacor*, 1368  
*Niaspan*, 1368  
*Nicardipine hydrochloride*, 1366
- Nickel*, 1716  
*Nickel*, chemistry, 378t, 380  
*Nicotinamide*, 1705, 1706  
*Nicotine*, 1391  
*Nicotinic acid*, 1368, 1705, 1706  
*Nicotinic acid amide*, 1706  
*Nifedipine*, 1366  
*Nihil album*, 1283  
*Nilutamide*, 1581  
*Nimbelex*, 1413  
*Nimodipine*, 1366  
*Nimotop*, 1366  
*Niobium*, chemistry, 375t  
*Nipent*, 1582  
*Nipride*, 1353  
*Nisoldipine*, 1366  
*Nitric acid*, 1087  
*Nitric acid*, concentrated, 1286  
*Nitriles*, substituted, 1738  
*Nitroanilines*, 1737  
*Nitrofurantoin*, 1665  
*Nitrofurazone*, 1629  
*Nitrogen*, 1087  
*Nitrogen*, chemistry, 374t, 374  
*Nitrogen balance*, 577  
*Nitrogen compounds*, heterocyclic,  
 1737  
*Nitrogen compounds*, nonprotein,  
 analysis, 577  
*Nitrogen mustard*, 1578  
*Nitroglycerin*, 1359  
*Nitropress*, 1353  
*Nitrous oxide*, 1476  
*Nivalin*, 1396  
*Nizarol*, 1672  
*Nizatidine*, 1299  
*NMR*, 664  
 Fourier-transform, 643  
 history, 643  
*Nô Dôz*, 1551  
*Nolahist*, 1549  
*Nolamine*, 1549  
*Nolvadex*, 1466  
*Nomenclature*  
 chemical syllables, 388  
 compendial, 387  
 examples of modern, 364t  
 functional group precedence, 387  
 inorganic, 362  
*IUPAC system*, 387  
 ligands, 363t  
 organic, CAS system, 387  
 organic chemistry, 386  
 oxygenated acids, 362t  
 oxygenated salts, 362t  
 permissive ambiguity, 387  
 phosphate salts, 363t  
 phosphoric acids, 362t  
 trivial names, 387  
*United States Adopted Names*,  
 443 (*see USAN*)  
*Nonbarbiturates*, 1477  
*Noncarbon bonds*, 167  
*Nonionic surfactants*, 291  
*Non-Newtonian correction factors*,  
 356t  
*Nordrenaline acid tartrate*, 1387  
*Norepinephrine bitartrate*, 1387  
*Norethindrone*, 1467  
*Norflex*, 1417  
*Norfloxacin*, 1658  
*Norgine*, 1073  
*Norlutin*, 1467  
*Normiflo*, 1330  
*Normodyne*, 1402  
*Noroxin*, 1658  
*Norpace*, 1363  
*Norpramin*, 1519  
*Nor-Q.D.*, 1467  
*Norton capsule machine*, 924  
*Nortriptyline hydrochloride*,  
 1521  
*Norvasc*, 1365  
*Norvir*, 1682  
*Noscipine*, structure, 434t  
*Nose*, rheology, 350
- Novaldex*, 1584  
*Novantrone*, 1581  
*Novatropine*, structure, 432t  
*Noveon*, 1308  
*Novocain*, 1483  
*Novolin N*, 1451  
*Novolin R*, 1451  
*NovoLog*, 1451  
*Novumtrax*, 1568  
*Nubain*, 1532  
*Nuclear equations*, 481  
*Nuclear magnetic resonance*, 643  
 (*see NMR*)  
*Nuclear notation*, 481  
*Nuclear pharmaceutical care*, 1920  
*Nuclear pharmacy*  
 certification, 1920  
 development, 1914  
 drugs affecting disposition,  
 1922t  
 drugs affecting radioiodide  
 uptake, 1921t  
 education, 1920  
 expanded services, 1923  
 practice of, 1913, 1916  
 regulations, 1918  
*Nucleation*, 307  
*Nucleoproteins*, 423  
*Nuclide*, 162  
*Nuclides*, 481, 482  
*Null hypothesis*, 127, 138  
*Numbers*, random, 132t  
*Numorphan*, 1529  
*Nupercainal*, 1484  
*Nuprin*, 1537  
*Nuromax*, 1413  
*Nut oil*, 1072  
*Nutmeg oil*, 1065  
 East Indian, 1065  
 West Indian, 1065  
*Nutrients*, 1688  
 associated substances, 1688  
 dietary guidelines, 1689  
 macro-, dietary reference  
 intakes, 1691t  
 standards, 1689  
 therapy, 1689  
*Nutrition*  
 additives, 1955  
 body weight according to height  
 and body mass index,  
 1950t  
 descriptive words for nutrients,  
 1954  
 diet, 1946  
 dietary guidance, 1925  
 electrolytes and water, reference  
 intakes, 1947t  
 elements, reference intakes,  
 1927t  
 fiber in food types, 1952  
 food guide pyramid, 1951  
 foods and standards, 1925  
 labeling, food, 1952  
 labeling, supplement, 1952  
 macronutrients, reference  
 intakes, 1942t  
 misinformation, 1955  
 NIH guidelines for weight loss,  
 1951t  
 nutraceuticals, 1955  
 pharmacotherapy, 1955  
 pyramid guide, 1934  
 resources, 1956  
 serving sizes, 1952t  
 suggested adult weight, 1950t  
 therapy for health conditions,  
 1956t  
 vitamins, reference intakes,  
 1935t  
 weight loss/management  
 approaches, 1951t  
*Nutrition* 101, 1925  
*Nutrition in pharmacy practice*,  
 1925  
*Nutrition support*, 1689

- Nutritional supplements, disintegration and dissolution, 686  
**N**  
 Nutropin, 1440  
*Nylidrin hydrochloride*, 1384  
 Nylon packaging, 1053  
 Nystatin, 1674
- O**  
 Octreotide, 1440  
 Ocular inserts, 857  
 Occupress, 1402  
 Ocusert, 1392  
 Odrik, 1356  
*Ofloxacin*, 1658  
 Ogen, 1464  
 Ohms, reciprocal, 232  
 Oil spray insecticides, 1730  
 Oils  
   animal, 1280  
   drying, 425  
   essential, 425  
   ethereal, 425  
   nondrying, 425  
   petroleum, 1736  
   vegetable, 1281  
 Volck, 1736  
   white, 1736  
 Ointment, 1077  
 Ointment bases, 1076  
   absorbent, 1077  
   absorption, 880  
   classification and properties, 880  
   components, 1076  
   emulsion, 1078  
   hydrocarbon, 880  
   oleaginous, 880, 1076  
 USP, 880  
   water-removable, 881  
   water-soluble, 1079  
   water-washable, 881  
 Ointments, ophthalmic, 857  
 Ointments, stability, 1028  
 Olanzapine, 1516  
 Oleic acid, 1077  
 Oleinic acid, 1077  
 Oleovitamins, 758  
 Oleum gadi, 1697  
 Oleum jecoris aselli, 1697  
 Oleum morrhuae, 1697  
 Oleyl alcohol, 1075  
 Oligosaccharides, 418  
 Olive oil, 1278, 1281, 1693  
 Olmesartan, 1357  
*Olopatadine hydrochloride*, 1549  
 Olsalazine sodium, 1314  
 Omalizumab, 1374  
 Omepazole, 1301  
 Omnicef, 1644  
 Omnipaque, 1265  
 Omniscan, Gd-DTPA-NMA, 1268  
 Oncaspars, 1582  
 Onclast, 1457  
 Oncodocel, 1570  
 Oncovin, 1586  
*Ondansetron hydrochloride*, 1311  
 One Touch Basic, Profile, and Ultra, 1275  
 Onxol, 1582  
 Ophthaine, 1485  
 Ophthalgan, 1423  
 Ophthalmic preparations, 850  
 Ophthalmics  
   anatomy and physiology of the eye, 851  
   antimicrobial preservatives, 864  
   bioavailability, 854  
   cap color coding, 863  
   characteristics, 861  
   contact lenses, 866  
   corneal absorption and drug access, 854  
   efficacy testing, 869  
   osmoticity, 254  
   OTC products, 866  
   packaging, 863  
   preparation, 858, 859, 860  
   preservatives, 865t  
   safety testing, 869  
   sterilization, 860  
   topical administration, 857  
   types, 856  
   Ophthalmic, 1485  
   Opioid agonist/antagonist, synthetic, 1530  
   Opioid antagonists, 1529  
   Opium, 1526  
   crude, 1526  
   gum, 1526  
   powdered, 1526  
   raw, 1526  
   Opium alkaloids, 433 (see Alkaloids)  
   Opium tincture, camphorated, 1526  
   Oprelvekin, 1347  
   Optical rotation, 171  
   Optical rotatory dispersion, 171  
   Opticrom, 1547  
   OptiMARK, 1268  
   OptiPranolol, 1402  
   Optiray, 1267  
   Optison, 1269  
   Oral administration, 1156  
   Oral solid dosage forms, 889  
   Orange, bigarade, 1069  
   Orange, bitter, 1069  
   Orange flower water, 1070  
   Orange oil, 1066  
   bitter, 1069  
   sweet, 1066  
   Orange peel  
   bitter, 1069  
   Curacao, 1069  
   sweet, 1069  
   Orange peel tincture, sweet, 1066  
   Orange spirit, compound, 1066  
   Orange syrup, 1066  
   Orap, 1514  
   Orasone, 1448  
   Orciprenaline sulfate, 1384  
   Organ function tests, analysis, 584  
   Organic pharmaceutical chemistry, 386 (see Chemistry)  
   Organonitrates, 1358  
   Orgaran, 1330  
   Orinase, 1456  
   Orinase diagnostic, 1270  
   Orlistat, 1317  
   Orphan drug approval, 969  
   Orphenadrine citrate, 1417  
   Orris, 1069  
   Orris, Florentine, 1069  
   Orris root, 1069  
   Orthoboric acid, 1083  
   Orthoclone OKT3, 1592, 1615t  
   Ortho-Est, 1464  
   Orthopedic supports and braces, 2005  
   Orthophosphate, 1307  
   Orudis, 1538  
   Oseltamivir phosphate, 1681  
   Osmitol, 1424  
   Osmoglyn, 1423  
   Osmol, 250  
   Osmolality, 250  
   Osmolality, determination, 256  
   Osmolality and osmolarity, 251  
   Osmolarity, 250  
   computation, 252  
   theoretical, 252  
   Osmolarity and osmolality, 251  
   Osmometry, 253  
   Osmosis, 224  
   Osmosis, reverse, 701, 808  
   Osmotic effects, therapeutic considerations, 251  
   Osmotic pressure  
   biological aspects, 224  
   electrolytes, 224  
   nonelectrolytes, 224  
   Osmotic systems, drug delivery, 950  
   Osmoticity, 250  
   abnormal, undesirable effects, 254  
   clinical applications, 254  
   serum, 253  
   urine, 253  
   Osmoticity and enteral hyperalimentation, 255  
   Osmotic-pressure elevation, 224  
   Osteomalacia, 1226  
   Osteoporosis, 1127  
   Ostomy appliances and supplies, 2000  
   Ostwald ripening, 308, 325  
   Ostwald-de Waele equation, 346  
   Ostwald-Freundlich equation, 308  
   OTC drug approval, 969  
   OTC products, ophthalmic, 866  
   Otrivin hydrochloride, 1382  
   Outliers, 128  
   Ovidrel, 1439  
   Ovulation test  
   CVS, Ecker, Target, and Walgreen brands, 1276  
 Oxacillin sodium, 1640  
 Oxaliplatin, 1581  
 Oxamniquine, 1597  
 Oxandrin, 1471  
 Oxandrolone, 1471  
 Oxazepam, 1490  
 Oxazolidinones, 1660  
 Oxcarbazepine, 1506  
 Oxiconazole nitrate, 1674  
 Oxidation, 277  
 Oxidation-reduction, stability, 1030  
 Oxidizing agents, ophthalmics, 865  
 Oxirane, 1628  
 Oxistat, 1674  
 Oxsoralen, 1292  
 Oxtriphylline, 1373  
 Oxybenzone, 1292  
 Oxycecl, 1973  
 Oxycodeone, structure, 434t  
 Oxycodone hydrochloride, 1529  
 OxyContin, 1529  
 Oxygen, chemistry, 376t, 376  
 Oxymetazoline hydrochloride, 1381  
 Oxymetholone, 1472  
 Oxymorphine, 434t  
 Oxymorphine hydrochloride, 1529  
 Oxyphenbutazone, 1539  
 Oxytetracycline, 1656  
 Oxytocics, 1432  
 Oxytocin, 1433  
 Oxytocin, bioassay, 558  
 Ozokerite, 1092  
 Ozone therapy, 2335
- P**  
 P.V. Carpine Liquifilm, 1392  
 PABA, 1290  
 Packaging for sterilized items, 798  
 Packaging, plastic  
   additives and modifiers, 1050  
   applications, 1054  
   classification, 1050  
   environmental considerations, 1056  
   material properties, 1047  
   permeability rates, 1048t  
   physicochemical properties, 1048  
   processing, 1050  
   safety testing, 1049  
   sterilization, 1056  
   types and uses, 1051  
   ophthalmic, 859  
 Paclitaxel, 1582  
 Padimate A, 1292  
 Padimate O, 1293  
 Pain, adjuvants for, 1542, 1542t  
 Pain, other drugs to relieve, 1542  
 Palonosetron hydrochloride, 1311  
 PAM chloride, 1397  
 Pamelor, 1521  
 Panafil, 1687  
 Pancreas, diseases of, 1107  
 Pancrease-MT, 1686t  
 Pancreatic function tests, 577  
 Pancreatic tumors, 1108  
 Pancreatin, 1686t  
 Pancreatitis, acute, 1107  
 Pancreatitis, chronic, 1108  
 Pancuronium bromide, 1414  
 Pantoprazole sodium, 1301  
 Pantothenic acid, 1707  
 Panwarfin, 1329  
 Papain, 1687  
 Papaverine, structure, 434t  
 Paper chromatography, 628  
 Paracetaldehyde, 1498  
 Paraffin, 1077  
   hard, 1077  
   light liquid, 1087  
   liquid, 1308  
   white soft, 1077  
   yellow soft, 1077  
 Paraffin wax, 1077  
 Parafon Forte, 1416  
 Para-hydroxybenzoic acid esters, ophthalmics, 865  
 Paral, 1498  
 Paraldehyde, 1498  
 Parallax, error of measuring, 108  
 Parallel design, 139  
 Parallel line assay, 158  
 Paramethadione, 1506  
 Paraplatin, 1566  
 Paraquat, 1738  
 Parasiticides, pediculocides, 1598  
 Parasiticides, 1595  
   anti-infectives, 1595  
   scabicides, 1598  
 Parathion, 1732  
 Parathion, methyl, 1732  
 Parathyroid, bioassay, 558  
 Paredrine, 1386  
 Pregoritc, 1526  
 Pregoritc elixir, 1526  
 Parenteral administration, 1157  
 Parenteral fluids, miscellaneous, 1323  
 Parenteral nutrition, total, 255  
 Parenteral preparations, 802 (see Parenterals)  
 Parenterals, 802  
   administration, 805  
   antimicrobials, 803  
   clean rooms, 814  
   combinations, 805  
   components, 807  
   container compatibility properties, 810t  
   container types, 809  
   containers and closures, 809  
   endotoxins, 812  
   filling, 823  
   filtration, 822  
   formulation, 802, 804  
   freeze drying, 828  
   general considerations, 806  
   general manufacturing process, 806  
   incompatibility, 847  
   lyophilization, 828  
   matter limits, 833t  
   needles, 812  
   new, formulation steps, 805t  
   osmoticity, 254  
   packaging and labeling, 833  
   particulate evaluation, 832  
   prescriptions, 848  
   product preparation, 822  
   production facilities, 814  
   production procedures, 820  
   pyrogens, 812  
   QA and QC, 831  
   rubber closures, 810

- sealing, 825  
 solutes, 803  
 sterilization, 826  
 tests, 831  
 types of processes, 806  
 vehicles, 802  
 water, 802
- Parenterals derived by biotechnology, 849
- Parents' Alert and Home Drug Testing, 1276
- Pariprazole, 1301
- Parkinsonism, 1117
- Parlodol, 1418
- Parnate, 1522
- Paromomycin, 1668
- Paroxetine, 1521
- Parson MCX, 1291
- Particle distribution, 706
- Particle size, 706  
 classification, 706, 709  
 counters, automatic, 708  
 distributions, 706, 1016t  
 effect on dissolution, 675  
 gas adsorption, 708  
 impaction and inertial impaction techniques, 708  
 measurement, 706, 707  
 microscopy, 707  
 permeability, 708  
 reduction, 702, 703  
 sieving, 709  
 statistical diameters, 706t
- Partition chromatography, 599, 611
- Partition coefficient, drug delivery, 941
- Parts per million, 121
- PAS, 1314
- Paser, 1314
- Pastes, 886
- Patanol, 1549
- Pathocil, 1639
- Patient  
 behavior in health, 1762  
 behavioral determinants, 1762  
 factors influencing behavior, 1762  
 health professional interaction, 1787  
 models of health utilization, 1762  
 models of preventive behavior, 1762  
 noncompliance consequences, 1783  
 noncompliance detection, 1784  
 noncompliance factors, 1786  
 noncompliant, 1784
- Patient behavior, drug factors, 1763
- Patient behavior, provider-patient interaction effects, 1763
- Patient care  
 alternative medicine, 2318  
 ambulatory, medication needs, 2179  
 barriers, 2191  
 complementary medicine, 2318  
 health education, 2193  
 information collection, 2181  
 information interpretation, 2181  
 information synthesis, 2181  
 long-term  
 age-related changes, 2283t  
 antipsychotics, 2278t  
 Beers' criteria, 2275  
 clinical guidelines, 2284t  
 diagnosis, 2278t  
 disease considerations, 2283  
 ethics, 2281  
 geriatric care references, 2285  
 geriatric diseases, 2284t  
 geriatric pharmacology, 2282  
 government and private programs, 2273
- medicare, history, 2274  
 medication error regulation, 2280t  
 multidisciplinary approach, 2281t  
 nursing home characteristics, 2272, 2273t  
 pharmacy practice, 2275  
 policy and procedure topics, 2276t  
 population, 2272  
 psychoactive drug doses, 2279  
 quality indicators, 2281  
 quality of life, 2281  
 regulations and standards, 2276t  
 selected programs and regulations, 2273  
 unnecessary drug regulations, 2278t  
 web sites, 2284t
- patient information, 2181t
- pharmacist's responsibility, 2180  
 preventive, 2223  
 ACS dietary recommendations, 2226t  
 ADA evidence grading system, 2233t  
 Alzheimer's disease, 2240  
 aspirin and anticoagulation, 2236  
 atrial fibrillation, 2237t  
 blood pressure management, 2235t  
 cancer, 2226  
 breast, 2228, 2229t  
 cervical, 2230  
 prostate, 2230  
 skin, 2231  
 cardiovascular disease, 2234  
 counseling, 2244t  
 depression, 2240  
 diabetes mellitus, 2232  
 diabetes screening  
 recommendations, 2233t  
 disease prevention drugs, 2245t  
 glucose tolerance categories, 2232t  
 health focus areas, 2224t  
 hormone replacement therapy, 2238  
 hyperlipidemia, 2235  
 hypertension, 2235  
 immunizations, 2243  
 MI prevention, 2238t  
 optimal weight, 2224  
 osteoporosis, 2239  
 osteoporotic fracture, risk factors, 2239t  
 precautions, universal, 2243  
 prenatal, 2242  
 risk categories, LDL-C goals, 2237  
 risk factors, LDL-C goal modification, 2236t  
 screening recommendations, 2244  
 sexual behavior, responsible, 2241  
 thyroid disease, 2240  
 USPSTF definitions, 2224t  
 weight classifications, 2225t
- self, 2197  
 cooperation, 2204  
 counseling tips, 2203  
 diagnostic  
 Alzheimer's disease, 2209  
 asthma, 2211  
 blood glucose monitors, 2219t  
 cholesterol, 2213  
 colon cancer, 2212  
 colorectal cancer screening, 2212t  
 consumer's responsibility, 2207
- diabetes tests, 2218  
 drug abuse kits, 2218t  
 drug abuse, 2217  
 FDA concerns, 2208  
 FDA recommendations, 2208  
 FDA regulatory centers, 2207  
 future innovations, 2220  
 growing market, 2209  
 HCV testing, 2210t  
 hepatitis C, 2210, 2211t  
 HIV tests, 2217, 2217t  
 infertility, 2211  
 life-style change guidelines, 2214t  
 NCEP guideline changes, 2214t  
 objectives, 2206  
 ovulation prediction tests, 2215  
 pharmacist, 2206  
 pharmacist's responsibility, 2221  
 pregnancy tests, 2214  
 professional opportunity, 2207  
 urinary tract exams, 2216, 2216t  
 urine ketone detection products, 2220t  
 medical conditions-referrals, 2201t  
 nonprescription products, 2197  
 nonprescription products-contraindications, 2202t  
 patient-related factors, 2201  
 pharmacist's responsibilities, 2199  
 pharmacist's role, 2198  
 precautions, 2205  
 prescriptions-age  
 recommendations, 2201t  
 product-related factors, 2199  
 triage function, 2199  
 therapeutic alternatives, 2189
- wound  
 assessment, 2342  
 chronic, 2342  
 debriding ointments, 2346t  
 dressings, 2347t, 2347t  
 growth factors, 2349  
 infection, 2348  
 management by type, 2342  
 necrotic tissue, 2346  
 nutrition, 2349  
 pharmacy involvement, 2349  
 treatment considerations, 2345  
 types, 2343t  
 ulcers  
 autoimmune, 2345  
 food, education, 2345t  
 hematologic, 2345  
 neoplastic, 2345  
 neuropathic, 2344  
 pressure, nomenclature, 2343t  
 vascular, 2343
- Patient communication, 1770  
 barrier techniques, 1776  
 barriers, 1771  
 emotional, 1779  
 functional, 1777  
 counseling children and adolescents, 1778, 1778t  
 counseling on refills, 1774  
 counseling the elderly, 1778  
 cultural factors, 1772  
 empowerment, 1770  
 environment optimization, 1771  
 formulating a reflective response, 1779  
 information gathering, 1770  
 medication interview, 1780
- model counseling, 1773  
 refusal to counseling, 1780  
 techniques, 1775  
 why pharmacists counsel, 1771  
 words misunderstood, 1776t
- Patient compliance, 1782  
 aids, 1790  
 APhA statement, 1793t  
 improving, 1788  
 motivation, 1790  
 NCPIE statement, 1794t  
 therapy monitoring, 1791
- Patient empowerment program, 1771t
- Patient medication questions, 1789t
- Patient noncompliance, types, 1782
- Patient problem solving, 2170
- Patient self-care, 2197
- Pauli exclusion principle, 163, 165
- Pauling's valence bond theory, 189
- Pavlivizumab (humanized), 1615t
- Paxene, 1582
- Paxil hydrochloride, 1521
- PBZ, 1549
- PCNB, 1736
- Peanut oil, 1072
- Pebulate, 1737
- Pectin, 1313
- Pediculocides, 1598
- PedvaxHIB, 1602
- Pefloxacin, 1658
- Peganone, 1504
- Pegaspargase, 1582
- Pegasys, 1681
- Peginterferon alfa-2A, 1681
- Pellets, 925
- Pemoline, 1555
- Penbutolol sulfate, 1403
- Penciclovir, 1681
- Penetration enhancement, drug delivery, 959, 959t
- Penetrex, 1657
- Penetrometers, 355
- Penicillamine, 1343
- Penicillin G benzathine, 1640
- Penicillin G potassium, 1640
- Penicillin G procaine, 1640
- Penicillin potassium phenoxymethyl, 1641
- Penicillin V potassium, 1641
- Penicillins, 1635, 1635t
- Penitracin, 1653
- Pentachloronitrobenzene, 1736
- Pentaerythritol tetrinitrate, 1359
- Pentagastrin, 1272
- Pentam 300, 1669
- Pentamidine isethionate, 1669
- Pentasa, 1314
- Pentazocine, 1533
- Pentobarbital, 1494
- Pentobarbital, soluble, 1494
- Pentobarbital sodium, 1494
- Pentobarbitone sodium, 1494
- Pentostatin, 1582
- Pentothal sodium, 1476
- Pentoxifylline, 1349
- Pepcid, 1299
- Peppermint, 1066
- Peppermint oil, 1066
- Peppermint spirit, 1066
- Peppermint water, 1070
- Peptavlon, 1272
- Peptic ulcer disease, 1006
- Peptidase inhibitors, drug delivery, 959t
- Peptides  
 biotechnology, 995t  
 chemistry, 421  
 drug delivery, 958
- Peptization, 306
- Pepto-Bismol, 1296
- Percentage, 118
- Percentages  
 volume-in-volume, 121

- weight-in-volume, 119  
weight-in-weight, 120
- Percolation, 773
- Percutaneous drug delivery, effects and extent, 872
- Perdiem, 1308
- Perflutren lipid microspheres, 1269
- Pergolide mesylate, 1420
- Pergonal, 1440
- Periactin, 1547
- Peri-Colace, 1306
- Perindopril erbumine, 1356
- Periodic table, 162, 363
- Peritrate, 1359
- Permapen, 1640
- Permax, 1420
- Permitil, 1512
- Perphenazine, 1514
- Persantine, 1269
- Persian balsam, 1280
- Persic oil, 1281
- Pertofrane, 1519
- Peru balsam, 1285
- Pesticides, 1719
- law
- federal, 1720
  - international, 1722
  - state, 1721
- suggestions to pharmacists, 1723
- Pestle, 717
- Pethidine hydrochloride, 1531
- Petrolatum, 1077
- amber, 1077
  - heavy liquid, 1308
  - hydrophilic, 1078
  - light liquid, 1087
  - liquid, 1308
  - red, 1281
  - white, 1077
  - yellow, 1077
- Petroleum jelly, white, 1077
- PGA, 1704
- PGE<sub>1</sub>, 1369
- PGE<sub>2</sub>, 1432
- pH, 240
- calculations, 242
  - determination, 246
  - dissolution medium, 680
  - ophthalmics, 862
  - optimum, for stabilization, 278
  - partition principle, 1161
  - pharmaceutical significance, 248
  - physiological control, 382
  - proton-balance equation, 241
  - solubility profiles, preformulation, 733
  - species concentration, 241
- Pharmaceutical calculations, 99, 111
- Pharmaceutical care, 15, 32
- billing
    - general payment principles, 2121
    - selected E&M codes, 2121t
    - using the CMS-1500, 2120
    - documentation, 2114
    - limitations of the PPS standard, 2118
    - marketing, 2107
    - features and benefits, 2109, 2110t
    - implementing and controlling activities, 2111
    - management process, 2107
    - mission, goals, and objectives, 2108t
    - planning, 2108
    - promotional strategies, 2110t
    - questions using the SPIN model, 2111t
    - SWOT analysis, 2108t
    - tasks and timeline, 2112t
    - reimbursement, HIPAA and related events, 2122
- SOAP system, 2114
- standardized coding systems, 2115
- Pharmaceutical necessities, 1058, 1082
- Pharmaceutical problems, types, 113
- Pharmaceutical risk management, 2124
- Pharmaceutical solvents, 221
- Pharmaceuticals
- alcohols, 746
  - emulsions, 759
  - extracts, 773
  - solutions, 749
  - solvents for liquid, 745
  - stability, 747, 1025
  - suspensions, 767
  - water, 746
- Pharmacist, oath, 22
- Pharmacists
- government, 40
  - industry, 35
  - public health, 51
- Pharmacists and disease state management, 2163
- Pharmacodynamic considerations, drug delivery, 942
- Pharmacodynamic relationship, creating, 1249
- Pharmacodynamics
- basic, 1171
  - clinical, 1191
  - drug development, 1249
- Pharmacoeconomics, 2070
- approaches, 2075t
  - comparison of methods and calculations, 2072t
  - consult form, 2078
  - cost-benefit analysis, 2071
  - cost-benefit measurement, 2073
  - cost-effectiveness analysis, 2074, 2074t, 2075t
  - cost minimization analysis, 2075t
  - costs, types, 2073
  - cost-utility analysis, 2075t
  - decision analysis, 2075
  - decision tree analysis, 2076t
  - discount rates, 2073
  - discussion, 2078
  - evaluation types, 2071t
  - expected utility calculations, 2076t
  - formulary development, 2076
  - glossary, 2071t
  - health economic selections, 2077t
  - incremental analysis, 2077
  - interventions comparison, 2077t
  - overview of methods, 2070
  - patient preferences, 2074
  - quality of life outcomes, 2074
  - sample comparison, 2074t
  - study checklist and scoring form, 2078
  - study evaluation criteria, 2080t
- Pharmacopidemiology, 1226, 1958
- bias, 1964
  - future, 1966
  - measurements, 1963, 1963t
  - MedWatch, 1961
  - news breaks and fanaticism, 1966
  - study types, 1959, 1959t
- Pharmacogenetics of drug transporters, 1238
- Pharmacogenetics of Phase II drug metabolism, 1236
- Pharmacogenomics, 1225, 1230
- applied, 1242
  - molecular diagnostics, 1244
  - technological considerations, 1242
- cytochrome P450 enzyme, 1232
- drug deposition influence, 1232
- drug development, 1245
- genetic polymorphisms, 1232
- genetic variations, 1231
- human genome, 1230
- Phase I drug metabolism, 1232
- public health tool, 1245
- Pharmacokinetic considerations, Pharmacokinetics
- absorption, 1181, 1192
  - absorption/bioavailability, 1193
  - analytical considerations, 1172
  - basic, 1171
  - body composition, 1193
  - clearance, 1195
  - clinical, 1191
  - concentration vs effect, 1171
  - concentration vs time, 1171
  - digoxin case history, 1201
  - distribution, 1192
  - distribution volume, 1193, 1194
  - dosage adjustment, 1199
  - dose- and time-dependent, 1186
  - drug, 1167
  - drug delivery, 942
  - drug development, 1249
  - drug-drug interactions, 1196
- drugs eliminated by hepatic metabolism, 1184t
- elimination, 1192
- elimination rate constant, 1196
- exposure-response relationships, 1256t
- half-life, 1196
- individualized dosage regimens, 1197
- input, 1178
- input with distribution, 1174, 1176
- integrating variability sources, 1254
- kinetics of effect, 1187
- microbiological variability, 1253
- models, 1171, 1198
- multiple-dose administration, 1179
- optimal sampling times, 1201
- organ-specific clearance, 1182
- overview, 1191
- parameters, 1180
- pharmacodynamics in erythrocytes, 1188t
- Phase II dose validation for Phase III, 1256
- plasma protein binding, 1191
- protein binding, 1253
- reaction rates and orders, 1172
- renal excretion, 1187
- statistical moments, 1180
- stereochemical considerations, 1187
- therapeutic range, 1191
- variability, 1253
- Pharmacokinetics, aminoglycoside case history, 1203
- Pharmacokinetics/  
pharmacodynamics in drug development, 1249
- Pharmacology, research, 92
- Pharmacopeias, 67
- Pharmacovigilance, 1226
- Pharmacy
- clinical drug literature, 74
  - (see Literature)
  - clinical, emergence, 14
  - community, 30
  - complexes in, 198
  - count and pour era, 14
  - education, 3, 4
  - ethics, 20
  - evolution, 7
  - future, 15
  - history, 7
  - information resources, 64
  - journals, 86
  - literature, 64
- professional characteristics, 20
- professionalism, search for, 12
- research, 87 (*see Research*)
- scope, 3
- transition to modern profession, 13
- Pharmacy care
- comparison to clinical pharmacy, 2170
  - documentation form, 2173t, 2176t
  - drugs requiring monitoring, 2175
  - importance, 2177
  - patient adherence, 2177
  - patient education, 2177
  - patient problem solving, 2170
  - pharmacist's role, 2171
  - plan development, 2170, 2172
  - prevention, 2175
  - problem solving, 2176
  - problems encountered by monitoring, 2176
  - student responsibilities, 2171
  - who provides it?
- Pharmacy practice
- barriers to pharmaceutical care, 2057, 2059t
  - differentiating the models, 2064
  - evolution, 2055
  - evolution, stages (1860–2005), 2055
  - facilitating change, 2065
  - Holland-Nimmo Model, 2065
  - professional resocialization, 2067
  - re-engineering, 2055
  - specialization, 2155
  - added qualifications process, 2161
  - BPS specialty certification process, 2161
  - credentialing, 2162
  - current types, 2157
  - future of, 2162
  - history in medicine, 2155
  - history in pharmacy, 2156
  - nuclear, 2157
  - nutrition support, 2159
  - oncology, 2160
  - other credentials, 2162
  - pharmacotherapy, 2159
  - psychiatric, 2160
  - recognized areas, 2161
  - value, 2161
  - value in medicine, 2155
  - strategies to overcome barriers, 2060
  - total care, 2063
  - varying knowledge, skills, and attitudes, 2064
- Pharmorubicin, 1571
- Phase inversion temperature, 335
- Phase-solubility analysis, 216
- Phazyme, 1317
- Phemitone, 1494
- Phenacemide, 1506
- Phenazopyridine hydrochloride, 1665
- Phenelzine sulfate, 1522
- Phenergan, 1545
- Phenindamine tartrate, 1549
- Phenobarbital, 1494
- Phenobarbital, soluble, 1495
- Phenobarbital elixir, 757
- Phenobarbital sodium tablets, 913
- Phenobarbital sodium, 1495
- Phenobarbital USP tablets, 30 mg, 914
- Phenobarbitone, 1494
- Phenobarbitone sodium, 1495
- Phenol, 1087
- Phenol, liquefied, 1088
- Phenol derivatives, 1738
- Phenolic substances, common dietary, 1718t

- Phenolphthalein, 1306  
 Phenols, chemistry, 438  
 Phenols, ophthalmics, 865  
 Phenols and phenol ethers, chemistry, 440  
 Phenoxybenzamine hydrochloride, 1400  
 Phenoxiimidine, 1506  
 Phenotolamine mesylate, 1400  
 Phenylalanine mustard, 1579  
 Phenylbutazone, 1539  
 Phenylephrine hydrochloride, 1381  
 Phenylethyl alcohol, 1066  
 Phenylketonuria, 589  
 Phenylmercuric acetate, 1629  
 Phenylmercuric nitrate, 1059, 1629  
 Phenylpropanolamine hydrochloride, 1387  
 Phenytoin, 1506  
 Phenytoin, soluble, 1506  
 Phenytoin sodium, 1363, 1506  
 Phorate, 1732  
 Phos-Cal, 1338  
 Phosphatides, chemistry, 426  
 Phosphodiesterase inhibitors, 1361  
 Phospholine iodide, 1395  
 Phospholipid surfactants, 291  
 Phospholipids, chemistry, 426  
 Phosphoproteins, 423  
 Phosphoric acid, 1086, 1088  
     concentrated, 1088  
     dilute, 1088  
     diluted, 1088  
     syrupy, 1088  
 Phosphorus, chemistry, 374t, 374  
 Photoallergic reaction, 1133  
 Photochemical decomposition, 277  
 Photoelectrolytes, 228  
 Photofrin, 1583  
 Photoirradiation-activated drug delivery, 952  
 Photometry, flame, 653, 654  
 Phototherapy, 1992  
 Photozone sensing, 709  
 pH-sensitive drug delivery, 952  
 Phthalylsulfathiazole, 1632  
 Physical properties, additive, 173  
 Physostigmine salicylate, 1395  
 Phytonadione, 1700  
 Pi bonds, 165  
 Pi constant, 174, 175t  
 Pigments, inorganic, chemistry, 384  
 Pills, 924  
 Pilocarpine, 1392  
 Pilocarpine hydrochloride, 1392  
 Pilocarpine nitrate, 1392  
 Pilosebaceous units, 872  
 Pilosebaceous uptake, 875  
 Pimenta oil, 1069  
 Pimento oil, 1069  
 Pimozide, 1514  
 Pindolol, 1403  
 Pine tar, 1286  
 Pinene, structure, 439  
 Pinocytosis, 1155  
 Pioglitazone, 1455  
 Piperacillin sodium, 1641  
 Piperazine, 1596  
 Piperonal, structure, 440  
 Pipracil, 1641  
 Pirbuterol hydrochloride, 1384  
 Piroxicam, 1540  
 Pitocin, 1433  
 Pitressin, 1442  
 Pituitary, anterior, disorders, 1123  
 Pituitary, anterior, secretion, regulation, 1438  
 Pituitary, posterior, 1441  
     bioassay, 558  
     disorders, 1123  
 Pix carbonis, 1285  
 Pix liquida, 1286  
 Pix lichenanthracis, 1285  
 Pix pini, 1286  
 pK effects, 395t  
 pKa, drug delivery, 941  
 Placebo effect, 133  
 Placetyl, 1498  
 Plant regulators, 1738  
 Plants, control, 1736  
 Plasbumin, 1321  
 Plasma  
     antihemophilic, 1320  
     direct-current argon, 654  
     human, 1319  
         freeze dried, 1320  
         fresh frozen, 1320  
         frozen, 1320  
     inductively coupled argon, 654  
     single-donor, 1319  
         freeze dried, 1320  
         fresh frozen, 1320  
         frozen, 1320  
 Plasma emission, 654  
 Plasma expanders, 1321  
 Plasma extenders, 1322  
 Plasma Plex, 1321  
 Plasma protein fraction, 1321  
 Plasma protein fraction, human, 1321  
 Plasma volume expanders, 1322Dextran 40, 1322  
 Plasmanate, 1321  
 Plasmatein, 1321  
 Plasmid/polycation particles, drug delivery, 960t  
 Plasters, 887  
 Plastic, parenterals, 812  
 Plastic packaging materials, 1047  
     (see *Packging*)  
 Plasticity, 343  
 Plastics, stability, 1035  
 Platelet concentrate, 1320  
 Platinol, 1567  
 Plenaxis, 1560  
 Plendil, 1365  
 Plicamycin, 1582  
 Pneumonia, 1137  
 Pneumovax-23, 1602t  
 Pnu-Imune-23, 1602t  
 Podofilox, 1287  
 Podophyllum, 1287  
 Podophyllin resin, 1287  
 Poison control, 1881  
     annual observance, 1888  
     antidotes and stocking levels, 1886t  
     centers, 1887  
     epidemiology, 1881  
     exposure, management site, 1883t  
     exposure, medical outcomes, 1883t  
     exposure, substances involved, 1883t  
     exposure by age, 1882t  
     exposure by route, 1882t  
     exposure cases reported, 1882t  
     factors, 1882  
     federal law, 1887  
     first-aid principles, 1884  
     first-aid treatment, 1885t  
     pharmacist's role, 1888  
     prevention, 1886  
     toxic exposure surveillance, 1882t  
         treatment, 1884  
 Poisoning, literature, 70  
 Polacrilin potassium, 1092  
 Polar bonds, 168  
 Polarimetry, 657  
 Polarizability, 392  
 Polarization, 168  
 Poliovax, 1602  
 Polocaine, 1482  
 Polonium, chemistry, 376t  
 Poloxalene, 1092  
 Poloxamers, 330  
 Polyacrylamide gel electrophoresis, 630  
 Polyarteritis nodosa, 1122  
 Polycarbonate packaging, 1053  
 Polycarbophil, 1308  
 Polyelectrolytes, 200, 306  
 Polyethylene glycol ointment, 1080  
 Polyethylene glycols, 1079  
 Polyethylene packaging, 1051  
 Polyethylene terephthalate packaging, 1053  
 Polyferose, 1346  
 Polygam SID, 1613t  
 Polymerase chain reaction, automated, 586  
 Polymers, 223  
     biological, 228  
     crosslinked, 314  
     drug delivery, 961  
     flocculating agents, 323  
     fluorine-containing, packaging, 1053  
     natural, 305  
     solutions, 228  
     water-soluble, 305  
 Polymorphism, 184, 666  
     effect on dissolution, 676  
     genetic, 1232  
         B<sub>2</sub>-adrenergic receptor, 1240  
         effects on drug response, 1240  
         effects on toxicity, 1240  
         in drug targets, 1240  
         in genes, 1233t, 1241t  
 Polymorphs, preformulation, 732  
 Polymyositis, 1122  
 Polymyxin B sulfate, 1654  
 Polyoxyl 40 stearate, 1080  
 Polypeptides, 1653  
 Polypropylene packaging, 1052  
 Polysorbates, 1080  
 Polystyrene packaging, 1052  
 Polytetrafluoroethylene packaging, 1053  
 Polythiazide, 1427  
 Polyurethane foam packaging, 1053  
 Polyvinyl alcohol, 1075  
 Polyvinyl alcohol ophthalmic solution, 1280  
 Polyvinyl chloride, packaging, 1052  
 Polyvinylpyrrolidone, 1075  
 Polyvinylpyrrolidone, tablets, 892  
 Pompholyx, 1283  
 Ponstel, 1538  
 Pontocaine, 1485  
 Poractant alfa, 1378  
 Porfimer sodium, 1583  
 Potash, caustic, 1287  
 Potash, sulfurated, 1090  
 Potash lye, 1287  
 Potassium, chemistry, 365, 365t  
 Potassium acetate, 1339  
 Potassium and sodium phosphates, 1340  
 Potassium and sodium phosphates, monobasic, 1340  
 Potassium benzoate, 1059  
 Potassium chloride, 1339  
 Potassium gluconate, 1339  
 Potassium hydroxide, 1287  
 Potassium iodide, 1377  
 Potassium iodide, solubility in alcohols and acetone, 222t  
 Potassium metabisulfite, 1059  
 Potassium metaphosphate, 1088  
 Potassium mixtures, 1339  
 Potassium oxalate, 1331  
 Potassium permanganate, 1283, 1629, 1675  
 Potassium phosphate, dibasic, 1340  
 Potassium phosphate, monobasic, 1088, 1340  
 Potassium phosphates, 1340  
 Potassium sorbate, 1059  
 Potential-energy functions, 190t  
 Potentiometry, 196, 246  
 Poultices, 886  
 Povidone, 1075  
 Povidone-iodine, 1629  
 Powder, rates of mixing, 714  
 Powder boxes, 718  
 Powder compaction, tablet, 894  
 Powder method of identification, 177  
 Powder papers, 718  
 Powders, 702  
     angles of repose, 711  
     bulk, 718  
     bulk density, 711  
     bulk properties, 713  
     degree of homogeneity, 714  
     deliquescent substances, 718  
     dentifrices, 718  
     divided, 717  
     dividing, 717  
     douche, 719  
     dusting, 719, 1277  
     elutriation, 711  
     eutectic mixtures, 718  
     extemporaneous techniques, 716  
     flow, 716  
     flow patterns, 716  
     folding, 717  
     hygroscopic substances, 718  
     insufflations, 719  
     large-scale mixing equipment, 714  
     liquids, 718  
     mixing, 714  
     mixing mechanisms, 714  
     oral, 718  
     packaging, 717  
     packing and bulk properties, 716  
     particle-size classification, 706  
     particle-size measurement, 706  
     pneumatic transport, 716  
     production methods, 702  
     rates of segregation, 714  
     sedimentation, 710  
     segregation mechanisms, 714  
     small-scale mixing equipment, 715  
     solids handling, 711  
     special problems, 718  
     statics, 712  
     storage, 716  
     topical, 886  
     triturations, 719  
     volatile substances, 718  
 Powders for solution, ophthalmic, 856  
 Powders as a dosage form, 716  
 Power law, liquids, 346  
 Powers, 112  
 Pralidoxime chloride, 1397  
 Pramiprexole dihydrochloride, 1420  
 Pramoxine hydrochloride, 1485  
 Prandin, 1455  
 Pravachol, 1369  
 Pravastatin sodium, 1369  
 Prax, 1485  
 Praxel, 1582  
 Praziquantel, 1597  
 Prazosin hydrochloride, 1400  
 Precipitation reactions, assays, 503  
 Precipitation, 700  
     amorphous, 230  
     powders, 702  
 Precision, 130  
 Precision Extra, 1276  
 Precision Extra and QID, 1275  
 Precose, 1453  
 Prednisolone, 1448  
 Prednisone, 1448  
 Prefar, 1738  
 Preference tests, 129t  
 Preformulation, 720  
     absorption and particle size, 736t  
     absorption assessment, 734  
     acceptance criteria, 736  
     active permeability theories, 725  
 API classification, 742

- API specifications, 742  
 API-based design, 730  
 application of knowledge, 742  
 attrition, 722  
 chemical stability, 739, 740  
 consistency assessment, 736  
 cost reduction, 721  
 crystal formation, 734  
 crystal packing, 723  
 crystalline interactions, 723  
 crystalline space groups, 724t  
 decision-tree, 740  
 degradation sequences, 739, 740  
 discovery and development, 721  
 discovery and development of an API, 732  
 dissolution, 736  
 excipient, 741  
 formulation compatibilities, 741  
 forward-focus vision, 723  
 goal-oriented, 740  
 growth cycle determinants, 720  
 H-bonds and solubility, 726  
 high-throughput decision-making, 722  
 hydrate stability, 738  
 hydrogen bond comparison, 724t  
 ionization, 727  
 IVIV correlations, 743t  
 machine learning systems, 728  
 membrane interactions, 724  
 membrane transporter systems, 727  
 molecular forms, 732t  
 molecular principles, 723  
 molecule size, 727  
 multi-tiered selection, 740  
 particle-size acceptance criteria, 742  
 passive diffusion design, 725  
 passive permeability theories, 74  
 permeability, 724  
 pH solubility profiles, 733  
 pharmaco-economic constraints, 721  
 polymorph characterization, 737  
 polymorphic forms and hydrates, 742  
 polymorphic stability, 736  
 polymorphs, 732  
 poor dissolution, 728  
 poor membrane permeability, 725  
 poor solubility, 727  
 produg design, 725  
 product and regulatory requirements, 742  
 property-based design, 722  
 salt properties, 733  
 salt-forming reactivity potential, 733  
 salt selection, 734  
 salt selection decision-making, 740  
 solid state, 730  
 symbols, 730t  
 toxicity reduction, 728  
 water, 731  
 water of hydration, 727  
 Prealone, 1448  
 Premarin, 1464  
 Pre-Pen, 1274  
 Prepeditil, 1432  
 Prescription, 1823  
 abbreviations, 1826t  
 adverse-reaction reporting programs, 1827  
 balances, 106  
 compounding, extemporaneous, 1903  
 computer systems, 1836  
 form of order, 1824  
 hospital medication order, 1825  
 legal considerations, 1827  
 look-alike names, 1828t  
 monitoring, 1837  
 patient compliance, 1835  
 processing, 1827  
 product defect reporting programs, 1837  
 sound-alike names, 1828t  
 Preservatives, 1058  
 ophthalmics, 864, 865t  
 stability, 747  
 topicals, 887, 877t  
 Preservatives in pharmaceuticals, 748t  
 Press hydrostatic or hydraulic, 699  
 roller, 699  
 spiral twist, 699  
 Pressonex, 1381  
 Pressure differences across curved surfaces, 285  
 Pressure sores, cushions and supplies for, 1981  
 Prestige IQ and XL, 1275  
 Prevacid, 1300  
 Preventive care, 2223  
 Preveon, 1677  
 Prevnar, 1602t  
 Prilocaine hydrochloride, 1482  
 Prilosec, 1301  
 Primacor, 1362  
 Primaquine phosphate, 1666  
 Primaxin, 1648  
 Primidone, 1507  
 Principles of immunology, 1206  
 Prinivil, 1355  
 Privine hydrochloride, 1381  
 Proaqua, 1426  
 Probabilities, binomial, 135t  
 Probabilities, computing from the normal distribution, 135  
 Probability, 142t  
 Probenecid, 1431  
 Procainamide hydrochloride, 1364  
 Procainamide tablets, sustained-release, 913  
 Procaine hydrochloride, 1483  
 Procan, 1364  
 Procaptan, 1356  
 Procarbazine hydrochloride, 1583  
 Procardia, 1366  
 Process simulation testing, 819  
 Procetophene, 1367  
 Prochlorperazine, 1312, 1514  
 Prochlorperazine edisylate, 1312  
 Prochlorperazine maleate, 1312  
 Procrit, 1347  
 Proctofoam, 1485  
 Procyclidine hydrochloride, 1420  
 Prodrugs, drug delivery, 958  
 Product recalls and withdrawals, 2098  
 Professional communications, 1808  
 Progesterone, 1468  
 Progesterone antagonists, 1467  
 Gestins, 1466  
 Progestins, antago-nists, 1466  
 Progestins, major features, 1467t  
 Prograf, 1590  
 ProHance, 1268  
 Prokine, 1348  
 Prokinetic drugs, 1302  
 Prolactin, 1438  
 Prolamines, 423  
 Prolastin, 1378  
 Proleukin, 1561  
 Prolixin, 1512  
 Prolixin decanoate, 1512  
 Prolixin enanthate, 1512  
 Proloprim, 1661  
 Promazine hydrochloride, 1514  
 Promethazine hydrochloride, 1545  
 Prometrium, 1468  
 Prominal, 1494  
 Pronestyl, 1364  
 Proof spirit, 123  
 Prop Job, 1737  
 Propacil, 1461  
 Propafenone hydrochloride, 1364  
 Propanil, 1737  
 Propanoic acid, 1086  
 Proparacaine hydrochloride, 1485  
 Property-based drug design and preformulation, 720  
 Propham, 1737  
 Propine, 1385  
 Propofol, 1477  
 Proportions, tests for, 141  
 Propoxyphene hydrochloride, 1533  
 Propoxyphene napsylate, 1533  
 Propranolol hydrochloride, 1403  
 Propulsid, 1302  
 Propylene glycol, 1082  
 Propylene glycol as a solvent, 221  
 Propylene glycol monostearate, 1075  
 Propylene oxide, 1629  
 Propylhexedrine, 1387  
 Propylparaben, 1629, 1675  
 Propylthiouracil, 1461  
 Proscar, 1473  
 ProSom, 1495  
 Prostaglandin E<sub>1</sub>, 1369  
 Prostaglandins, chemistry, 426, 427t  
 Prostaglandins, structure, 428t  
 Prostaphlin, 1640  
 Prostigmin bromide, 1395  
 Prostigmin methylsulfate, 1395  
 Prostin E<sub>2</sub>, 1432  
 Prostin VR, 1369  
 Protamine sulfate, 1336  
 Protamine sulfate, bioassay, 559  
 Protamines, 423  
 Protease, 1686t  
 Protease inhibitors, drug delivery, 959  
 Protectives, 1277  
 chemical, 1278  
 chemistry, 383  
 mechanical, 1278  
 Protein, enhancing, drug delivery, 958t  
 Protein-binding of drugs, 199  
 Protein binding, 209  
 drug delivery, 942  
 pharmacokinetics, 1191  
 Protein-bound iodine, 585  
 Protein drugs, recombinant, 849t  
 Protein solutions, 1321  
 Protein surfactants, 290  
 Proteins, 1690  
 analysis, 578  
 blood-clotting, 1325  
 chemistry, 421  
 conjugated, 423  
 drug delivery, 958  
 simple, 423  
 Proteone, 1321  
 Proteolytic reaction, 235  
 Protirelin, 1271  
 Proton-balance equation, 241  
 Proton concept, 235  
 Proton pump inhibitors, 1300, 1300t  
 Protonix, 1301  
 Protopam chloride, 1397  
 Protriptyline hydrochloride, 1522  
 Protropin, 1440  
 Proventil, 1382  
 Provera, 1467  
 Providing a framework for ensuring medication use safety, 1840  
 Provigil, 1555  
 Provocholine, 1391  
 Prozac, 1520  
 Prozine, 1514  
 Pseudoephedrine hydrochloride, 1387  
 Pseudogout, 1120  
 Pseudohalogens, chemistry, 379  
 Pseudoplasticity, 342  
 Psoriasis, 1131  
 Psychiatric disturbances, immunology, 1215  
 Psychopharmacologic agents, 1509  
 Psychostimulants, 1553  
 Psyllium, 1308  
 Pteroylglutamic acid, 1704  
 Public health alcohol/substance abuse, 60  
 chronic disease management, 57  
 communicable disease control, 56  
 disease prevention, 55  
 education, 55  
 environmental, 59  
 epidemiology, 54  
 guidelines, 52  
 history, 51  
 international/global, 57  
 maternal and child, 58  
 measurement, 55  
 mental, 60  
 nutrition, 59  
 objectives, 52t  
 oral, 59  
 pharmacists, 51  
 priorities in 2010, 53t  
 programs, 54  
 research, 61  
 universal precautions, 56  
 Public health service agreements with other departments, 47  
 organization, 45  
 pharmacy, 44, 48  
 Pulegone, structure, 440  
 Pulmicort, 1446  
 Pulmonary diseases, 1101  
 Pulmozyme, 1686  
 Pulsed light sterilization, 797  
 Pulverizers, centrifugal-impact, 706  
 Pumex, 1088  
 Pumice, 1088  
 Pumps, breast, 1999  
 Purge, 1306  
 Purine, structure, 438t  
 Purinethol, 1579  
 PVP, 1075  
 Pyopen, 1639  
 Pyrantel pamoate, 1597  
 Pyrazinamide, 1663  
 Pyrazophos, 1735  
 Pyrethrins with piperonyl butoxide, 1599  
 Pyrethrum, 1730  
 Pyribenzamine, 1549  
 Pyridium, 1665  
 Pyridostigmine bromide, 1396  
 Pyridoxine, 1707  
 Pyridoxine hydrochloride, 1708  
 Pyrilamine maleate, 1498  
 Pyrimethamine, 1666  
 Pyritihome zinc, 1629  
 Pyrogen test, bioassay, 562  
 Pyrogen test, parenterals, 832  
 Pyrogens, parenterals, 812  
 Pyroxylin, 1088  
 Pytest, 1272

## Q

- Q table, 146t  
 Quality assurance, 1018  
 biotechnology, 1020  
 contemporary issues, 1021  
 documentation, 1020  
 FDA modernization, 1021  
 functions, 1918  
 GMP regulations, 1021  
 organization/responsibilities, 1018  
 total product quality, 1019  
 total quality management, 1019  
 Quality assurance and control, 1018  
 Quality control, 1018  
 biotechnology, 1020  
 contemporary issues, 1021  
 defects, 1297

- documentation, 1020  
 FDA modernization, 1021  
 functions, 1019  
 GMP regulations, 1021  
 IV fluids, 847  
 organizations/responsibilities, 1018  
 total product quality, 1019  
 total quality management, 1019
- Quality control methods in statistics, 152
- Quantitative structure-activity relationship, 177
- Quantum number, principle, 361
- Quarks, 162
- Quazepam, 1496
- Quelicin, 1414
- Questran, 1367
- Quetiapine fumarate, 1516
- Quibron, 1373
- Quick Pep, 1551
- Quick Stick, 1276
- QuickScreen A, 1276
- QuickTek, 1275
- Quilan, 1737
- Quinacrine hydrochloride, 1667
- Quinaglute, 1364
- Quinalbarbitone sodium, 1495
- Quinapril hydrochloride, 1356
- Quinethazone, 1427
- Quinhydrone electrode, 247
- Quinidine, structure, 435
- Quinidine gluconate, 1364
- Quinidine polygalacturonate, 1364
- Quinidine sulfate, 1364
- Quinine, structure, 435
- Quinine ethylcarbonate, structure, 435
- Quinine sulfate, 1667
- Quinol, 1291
- Quinupristin, 1661
- R**
- RabAvert (purified chicken embryo cell), 1603
- Rabavirin in combination with interferon alfa-2B, 1316
- Rabeprazole sodium, 1301
- Racemic modification, 171
- Racemization, 277
- Racemization, stability, 1031
- Radiation
- EM, 646
  - EM, nonabsorption interaction of matter, 656
  - extranuclear, 480
  - how it kills microorganisms, 795
  - particles, 480
- Radiation and radioactivity, 480
- Radiation from radioactive nuclei, 480
- Radiation sterilization, 794
- Radioactive decay, 481
- kinetics, 483
  - modes, 484
  - statistics, 481
- Radioactive disintegration theory, 479
- Radioactivity, units, 484
- Radioactivity and radiation, 480
- Radioisotopes, 479
- Radiolabeling, methods, 488
- Radionuclides
- applications in medicine and pharmacy, 479
  - atomic structure, 480
  - Becquerel units, 484t
  - cyclotron-produced, 485
  - fission, 485
  - fundamentals, 479
  - generators, 488, 488t
  - isotopes, 481
  - neutron reactions, 485
  - nuclides, 481
- physical characteristics, 487t
- production, 485
- radiation, 480
- radioactive decay, 481
- radioactivity, 480
- radiolabeling, 488
- radiopharmaceuticals, 488
- radiotracers, 488
- the atom, 480
  - theories, 479
  - types, 479
- Radiopaqes, chemistry, 385
- Radiopharmaceuticals, 479
- design, 489
  - names, 490t
  - preparation, 492
  - technetium, 489
- Radiotracers, 488
- Radium, chemistry, 367t
- Radius of gyration, 228
- Radon, chemistry, 365t
- Raloxiphen hydrochloride, 1465
- Ramipril, 1356
- Random numbers, 132t
- Random selection, 127
- Randomized design, patient allocation, 133t
- Ranitidine, 1299
- Rank sum table, 151t
- Rank sum test of significance, 149
- Ranked means, 147
- Raoult's law, 226
- Rapamune, 1593
- Rapamycin, 1593
- Rast method, 226
- Rate-controlled drug delivery, 946
- Ratio strength, 119
- Rauwolffia alkaloids, 436
- (see Alkaloids)
- Rayleigh's theory, 297
- Rayon, purified, 1974
- Razoxin, 1570
- Reaction kinetics, stability, 1029
- Reaction rate, 266
- effects on, 271
  - temperature effect, 271
- Reactions
- complex, 270
  - consecutive, 271
  - first-order, 267
  - pseudo-order, 269
  - second-order, 268
  - simultaneous, 270
  - third-order, 269
- Reagents, 1261
- Reagents, reaction capacity values, 498t
- Rebetron, 1316
- Recalls, 2098
- action, 2100
  - action steps, 2103
  - background information, 2104
  - classes, 2104
  - communication, 2098
  - distribution channels, 2105
  - future direction, 2104, 2106
  - implications, 2104, 2106
  - levels, 2105
  - lot numbers, 2104
  - notification, 2100, 2103
  - procedures, 2098
  - product handling, 2099, 2104
  - reasons, 2105, 2105t
  - recordkeeping, 2100, 2104
  - reimbursement, 2104
- Rectal administration, 1156
- Rections, reversible, 270
- Red blood cells, 1320 (see Blood cells)
- Red cell concentrate, 1320
- Red cells fresh frozen, 1320
- Red squill, 1734
- Redox reactions, assays, 503
- Reducitil, 1555
- Re-engineering pharmacy practice, 2055
- Refractions, atomic, 168t
- Regitine mesylate, 1400
- Reglan, 1303
- Regional, 1396
- Regression analysis, 128
- Reichstein's "Substance M," 1447
- Relafen, 1538
- Relenza, 1684
- Relpax, 1434
- Remeron, 1521
- Remicade, 1315, 1615t
- Reminyl, 1396
- Renal agents, miscellaneous, 1431
- Renal clearance, 577
- Renal disease, 1113
- Renal failure, 1114
- Renese, 1427
- Renin-angiotensin drugs, 1354
- Reno, 1263
- RenoCal-76, 1263
- Reno-DIP, 1263
- Renografin-60, 1263
- ReoPro, 1332, 1615t
- Repaglinide, 1455
- Repellants, 1730
- Repellants, insect, 1733
- Reproductive tract, rheology, 351
- Requip, 1421
- Rescriptor, 1678
- Research, 87
- chemical libraries, 89
  - drug development, 93
  - evolution, 98
  - functions of scientists, 90
  - natural product sources, 89
  - organizations, 88
  - public health, 61
  - sample collections, 89
  - search for new drugs, 89
- Research and development spending, 88t
- Reserpine, 1404
- Resina, 1089
- Resins, chemistry, 439, 441
- Resonance, 166
- effects, 392
  - no-bond, 393
- RespiGam, 1613t
- Respirable dust, 372
- Respiratory distress syndrome, adult, 1104
- Respiratory drugs, 1371, 1378
- Respiratory syndrome, severe acute, 1138
- Respiratory therapy, 1989
- Respiratory tract, rheology, 350
- Respiratory tract infections, 1136
- Restoril, 1496
- Retavase, 1333
- Reteplase, 1333
- Reticulocytes, analysis, 570
- Retin-A, 1288
- Retinoic acid, 1288
- Retinol acetate, 1696
- Retinol palmitate, 1696
- Retrovir, 1684
- Reverse-phase chromatography, 620
- Reyataz, 1677
- R-Gene 10, 1690
- Rh factor, 1324
- Rh system, 574
- Rhenium, chemistry, 378t, 379
- Rheology, 338
- bio-, 349
  - cerebrospinal fluid, 352
  - computational, 349
  - disperse systems, 348
  - elastic solids, 339
  - emulsion, 328
  - eye, 350
  - fundamentals, 338
  - gastrointestinal tract, 351
- hemo-, 349
- lymph, 350
- measurements, 352
- models, 346
- mouth, 350
- mucus, 350
- Newtonian fluids, 340
- nose, 350
- other empirical equations, 347
- other models, 347
- reproductive tract, 351
- respiratory tract, 350
- time-dependent non-Newtonian fluids, 343
- time-independent non-Newtonian fluids, 342
- viscoelastic materials, 347
- viscometers, 352
- Rheomacrodex, 1322
- Rheopexy, 345
- Rheumatology, 1119
- Rhinocort, 1446
- Rh<sub>o</sub> antigen, 574
- Rh<sub>o</sub>GAM, 1613t
- Rhus toxicodendron, 2330
- Rhythmol, 1364
- Ribavirin, 1682
- Riboflavin, 1708
- Rickets, 1126
- RID, 1599
- Rifabutin, 1664
- Rifadin, 1664
- Rifampicin, 1664
- Rifampin, 1664
- Righting reflex, loss, 141t
- Rimactane, 1664
- Rimantadine hydrochloride, 1682
- Ringer's injection, 1323
- Ripenthal, 1738
- Risk management
- assessment, 2125
  - behavioral control systems, 2128
  - communication, 2127
  - distribution systems, 2128
  - FDA and, 2128
  - four pillars, 2125
  - history, precursor, 2124
  - patient forms, 2127t
  - qualification, 2126
  - the new era, 2124
  - tool effectiveness, 2129
  - withdrawn drugs, 2125t
- Risperdal, 1516
- Risperidone, 1516
- Ritalin, 1554
- Ritodrine hydrochloride, 1384
- Rittinger's law, 703
- Rituxan, 1615t
- Rituximab (chimeric), 1615t
- Rivastigmine tartrate, 1397
- RizatRIPTAN benzoate, 1435
- Robaxin, 1416
- Rocaltrol, 1458
- Rocephin, 1646
- Rocuronium bromide, 1414
- Rodents, control, 1734
- Rodine, 1734
- Roentenographic drugs, 1262
- Rofecoxib, 1541
- Rogaine, 1353
- Rolaids, 1296
- Romazicon, 1499
- Rondec, 1547
- Roots, 112
- Ropinirole hydrochloride, 1421
- Rose, attar of, 1066
- Rose, Otto of, 1066
- Rose oil, 1066
- Rose water, stronger, 1067
- Rose water, triple, 1067
- Rose water ointment, 1078
- Rose water ointment, petrolatum, 1078
- Rosemary oil, 1069
- Rosiglitazone and metformin, 1456

- Rosiglitazone maleate, 1455  
 Rosin, 1089  
   Georgia pine, 1089  
   yellow pine, 1089  
 Rosuvastatin calcium, 1369  
 Rotating disk system, 674  
 Rotenone, 1731  
 Rowasa, 1314  
 Roxadimate, 1293  
 Rozol, 1734  
 Rubefacients, 1284  
 Rubex, 1571  
 Rubidium, chemistry, 365t, 366  
 Rubilem, 1569  
 Rufen, 1537  
 Rynatuss, 1376, 1545
- S**
- S.V.R., 1080  
 Saccharin, 1067  
 Saccharin calcium, 1067  
 Saccharin sodium, 1067  
 Sacred bark, 1306  
 Sacrosidase, 1304  
 Safety  
   action steps for change, 1871  
   administration recommendations, 1859  
   administrative error potential, 1859  
   changing systems, 1860  
   dispensing error potential, 1859  
   dispensing recommendations, 1858  
   drug delivery, 945  
   errors, types, 1844  
   failures, 1856  
   health care as a system, 1850  
   health care system rules, 1852t  
   identifying risk, 1843  
   impact, 1855t  
   improvement barriers, 1872  
   learning methods, 1865t  
   medication, microsystem targeting, 1852  
   medication use, 1840, 1856  
   monitoring and outcomes, 1860  
   organizational rules, 1866  
   patient, learning sources, 1873  
   patient's role in medication use, 1849  
   prescribing error potential, 1857  
   prescribing improvements, 1857  
   principles, 1855t  
   risk tools, 1868  
   root cause analysis, 1869  
   storage and selection, 1857  
   success, 1855t  
   teamwork training, 1864  
   thinking skills, 1853t  
   understanding error, 1843  
   understanding the medication use process, 1854  
 Safety culture, 1862  
 Safety program, scope, 1841  
 Safety test, biologicals, 563  
 Safety test, parenterals, 833  
 Safrol, structure, 440  
 Saint Victor's balsam, 1280  
 Sal ammoniac, 1423  
 Salagen, 1392  
 Salicylaldehyde, structure, 440  
 Salicylates for IBD, 1313  
 Salicylic acid, 1288  
 Salmeterol xinafoate, 1385  
 Salt, 1341  
   rock, 1341  
   sea, 1341  
   spirit of, 1086  
   table, 1341  
 Salting-in, 213  
 Salting-out, 213, 299  
 Salting-out constants, 235t  
   barbiturates, 235t
- Salting-out effect, 235  
 Sampling, acceptance, 154  
 Sampling times, optimal, pharmacokinetics, 1201  
 Sandimmune, 1590  
 Sandoglobulin, 1613t  
 Sandostatin, 1440  
 Sandostatin LR, 1440  
 Santyl, 1686  
 Saponification, 425  
 Saponification value, 425  
 Saponins, chemistry, 429  
 Saquinavir mesylate, 1682  
 Sargramostim, 1348  
 Sassafras, 1069  
 Sassafras oil, 1069  
 Seabicides, 1598  
 Scandium, chemistry, 369t  
 Scatterplot, 185  
 Schizophrenia, immunology, 1215  
 Scleroderma, 1122  
 Scleromate, 1286  
 Sclerosing agents, 1286  
 Scopolamine, structure, 432t  
 Scopolamine hydrobromide, 1408  
 Sebum, composition, 872t  
 Secobarbital, 1495  
 Secobarbital sodium, 1495  
 Seconal, 1495  
 Seconal sodium, 1495  
 SecreFlo, 1272  
 Secretin, 1272  
 Sectral, 1401  
 Sedimentation, 710  
   colloids, 296  
   expressions, 321  
   rate, 321  
   volume, 321  
 Seizures, generalized, 1501  
 Seizures, partial, 1501  
 Selegiline hydrochloride, 1421  
 Selenium, 1716  
 Selenium, chemistry, 376t, 377  
 Selenium sulfide, 1629  
 Self-care, 2197  
 Self-care, diagnostic, 2206  
 Self-regulated drug delivery, 953  
 Selsun, 1629  
 Selsun Blue, 1629  
 Semen, rheology, 351  
 Semprex-D, 1547  
 Sennosides, 1307  
 Senokot, 1307  
 Sensorcaine, 1481  
 Sentry Dimethicone, 1278  
 Separation, 691  
   centrifugation, 693  
   clarification, 697  
   collation, 699  
   countercurrent distribution, 691  
   decantation, 699  
   decoloration, 697  
   expression, 699  
   filtration, 694  
   immiscible liquids, 700  
   lotion, 699  
   precipitation, 700  
   specialized techniques, 700  
 Septra, 1632  
 Sequestering agents, calcium, 1327  
 Sera, immune, 1325  
 Serafem, 1520  
 Serax, 1490  
 Serentil, 1513  
 Serevent, 1385  
 Sermorelin acetate, 1271  
 Serophene, 1465  
 Seroquel, 1516  
 Sertraline hydrochloride, 1522  
 Serutan, 1308  
 Serzone, 1521  
 Sesame oil, 1072  
 Sevin, 1732  
 Sevoflurane, 1475  
 Sexually transmitted disease, 1135  
 Shark liver oil, 1281
- Shear, deformation, 339  
 Shear, rate, 339, 339t  
 Shear strain, 339  
 Shelf life, predicting, 1032  
 Shewhart and fraction defective control charts, 128  
 Sibutramine hydrochloride, 1555  
 Sieves  
   centrifugal-impact, 704  
   dimensions, 710t  
   molecular, 373  
 Sieving, 709  
 Sigma bonds, 165  
 Sigma effect, 349  
 Signed-rank sum table, 151t  
 Significance  
   alpha level, 138  
   level of the first kind, 138  
   nonparametric tests, 149  
   tests of, 143  
 Significance level, 128  
 Significant figures, 111  
 Silaceous earth, purified, 1089  
 Silanes, chemistry, 373  
 Silastic, 1278  
 Silica fume, 372  
 Silica gel, 372  
 Silicates  
   insoluble, 372  
   lattice, 373  
   three-dimensional, 373  
 Siliceous earth, 372  
 Silicon, 1717  
 Silicon, chemistry, 371t, 372  
 Silicon dioxide, colloidal, 1089  
 Silicone rubber, 1278  
 Silicones, 1278  
 Silk, sterilized surgical, 1978  
 Silk, surgical, 1978  
 Siloxanes, chemistry, 373  
 Silver, chemistry, 366t, 367  
 Silver nitrate, 1287  
 Silver protein, mild, 1629  
 Silver sulfadiazine, 1629  
 Silverfish, control, 1729  
 Simazol, 1737  
 Simethicone, 1278, 1317  
 Simple elixir, 1071  
 Simple ointment, 1077  
 Simvastatin, 1218, 1594  
 Simvastatin, 1369  
 Sincalide, 1271  
 Sinemet, 1418, 1419  
 Sinequan, 1520  
 Singulair, 1374  
 Sinograftin, 1264  
 Sionin, 1067  
 Sirdalud, 1414  
 Sirolimus, 1593  
 Size-exclusion chromatography, 600, 613  
 Skelaxin, 1416  
 Skeletal muscle relaxants, 1411  
 Skin, 871, 879  
   adverse drug reactions, 1133  
   hydration, 875  
   temperature, 875  
 Skin diseases, allergic, 1132  
 Skin infections, 1133  
 Skin irritation test, 148t  
 Skin ulceration, syndromes, 2345  
 Slopes of two lines, comparison, 157  
 Smithsonite, 1279  
 Smoluchowski equation, 304  
 Soap, mineral, 1073  
 "Soap" chromatography, 612  
 Soap clay, 1073  
 Soapstone, 1091  
 Soda, caustic, 1089  
 Sodium, chemistry, 365, 365t  
 Sodium-D light, 168  
 Sodium acetate, 1340  
 Sodium acid carbonate, 1297  
 Sodium alginate, 1073  
 Sodium alginate gel base, 772
- Sodium ascorbate, 1701  
 Sodium benzoate, 1059, 1630, 1675  
 Sodium borate, 1089  
 Sodium bicarbonate, 1297, 1340  
 Sodium bisulfite, 1059  
 Sodium borate, 1089  
 Sodium carbonate, 1089  
 Sodium carbonate, monohydrate, 1089  
 Sodium chloride, 1341  
   solubility in alcohols and acetone, 222t  
 Sodium chloride and dextrose injection, 1324  
 Sodium chloride equivalent method, 258, 260t  
 Sodium chromoglycate, 1547  
 Sodium citrate, 1331  
 Sodium citrate and citric acid solution, 1341  
 Sodium fluoride, 1293  
 Sodium folate, 1705  
 Sodium hydroxide, 1089  
 Sodium hypochlorite solution, 1630, 1675  
 Sodium lactate injection, 1341  
 Sodium lauryl sulfate, 1075  
 Sodium mercaptoacetate, 1092  
 Sodium metabisulfite, 1060  
 Sodium monofluorophosphate, 1293  
 Sodium nitrite, 1349  
 Sodium nitroprusside, 1353  
 Sodium oxalate, 1332  
 Sodium phosphate  
   dibasic, 1307  
   monobasic, 1341  
   secondary, 1307  
 Sodium phosphates, 1307  
   enema, 1307  
   injection, 1341  
   oral solution, 1307  
 Sodium polystyrene sulfonate, 1344  
 Sodium pyrborate, 1089  
 Sodium stearate, 1090  
 Sodium sulfosuccinate, dioctyl, 1308  
 Sodium tetraborate, 1089  
 Sodium tetradecyl sulfate, 1286  
 Sodium thioglycollate, 1092  
 Sof-Tact, 1275  
 Solaqin, 1290  
 Solids, 184  
   elastic, 339  
   high-energy, 282  
   low-energy, 282  
   surface tensions, 284t  
 Solubility, 196, 211  
   aqueous, drug delivery, 941  
   buffers, 229  
   complexation, 229  
   cosolvents, 229  
   descriptive terms, 212  
   determination, 216  
   effect of salts, 213  
   effect of temperature, 213  
   effect on dissolution, 675  
   effecting solution of solids, 215  
   expressing, 211  
   following a chemical reaction, 214  
   methods to increase, 229  
   phase, 216  
   poor, preformulation, 727  
   quantitative treatment, 227  
   reversible, without chemical reaction, 211  
   solid dispersions, 229  
   surfactants, 229  
   temperature dependency, 212  
   temperature effect, 213  
 Solubility of solutes, two or more species, 214  
 Solubility rules, 223t  
 Solution  
   adsorption from, 286  
   freezing point, 226

- heat, 212  
 ideal, 220  
 nonideal, 219, 220  
 rate, 212  
 regular, 220  
 regular, theory, 222  
 true, 294
- Solutions, 749  
 activity, 227  
 activity coefficient, 227  
 aqueous, 749  
 aqueous, other, 754  
 aqueous, sweet, 754  
 binary systems, 217  
 boiling-point elevation, 225  
 colligative properties, 224  
 contact lens, types 868  
 deviations, 226  
 electrolytes, 231  
 emulsions, suspensions, and extracts, 745  
 flavored alcoholic, 1071  
 gases in liquids, 218  
 gel-forming, ophthalmic, 856  
 glass, suspensions, 229  
 ideal behavior, 226  
 indicator, 499  
 ionic, 231  
 irrigating, ophthalmic, 858  
 irrigation, 752  
 irrigation, chemistry, 384  
 liquids in liquids, 217  
 nasal, 752, 752t  
 nonaqueous, 756  
 ophthalmic, 856  
 osmotic-pressure elevation, 224  
 otic, 752, 753t  
 powders for, ophthalmic, 856  
 preparation, 753  
 saturated, 124  
 solid, 229  
 solids in liquids, 211  
 solids in solids, 219  
 stability, 1028  
 stock, 121  
 ternary systems, 218  
 thermodynamics, 219  
 types, 211  
 vapor-pressure lowering, 225
- Solutions and phase equilibria, 211  
 Solutions and solubility, 211  
 Solutions for assays, preparation, 498  
 Solutions of polymers, 228  
 Solvates, 178  
 Solvation, 224  
 Solvent  
   dielectric constant, 275  
   freezing point, 225  
   leveling effect, 236  
 Solvent action, mechanism, 222  
 Solvent for acids, differentiating, 236  
 Solvent for bases, differentiating, 236  
 Solvent types, 221  
 Solvents  
   “brown,” 193  
   acetone, 222  
   alcohols, 221  
   classification, 192t  
   hydroalcoholic, 221  
   liquid pharmaceuticals, 745  
   nonpolar, 221, 222  
   pharmaceutical, 221, 1080  
   polar, 221  
   semipolar, 221  
   water, 221  
 Solvolysis, 275  
 Soma, 1415  
 Somatotropin, 1437  
 Somatrem, 1440  
 Somatropin, 1437, 1440  
 Sonata, 1498  
 Soothe, 1381  
 Sorbic acid, 1060
- Sorbitan esters, 1075  
 Sorbitol, 1067  
 Sorbitol solution, 1067  
 Sorbitrate, 1359  
 Sorbo, 1067  
 Sorption, effect on dissolution, 681  
 Sotalol hydrochloride, 1364, 1403  
 Sotradecol, 1286  
 $sp^2$  orbitals, 166  
 Spanish juice root, 1064  
 Spanish white, 1083  
 Spans, 1075  
 Sparfloxacin, 1658  
 Sparine, 1514  
 Spearmint, 1067  
 Spearmint herb, 1067  
 Spearmint leaves, 1067  
 Spearmint oil, 1067  
 Specialization in pharmacy practice, 2155  
 Specific gravity, 110  
 Specific gravity, calculations, 110  
 Spectinomycin hydrochloride, 1661  
 Spectracide, 1732  
 Spectazole, 1673  
 Spectrometric methods, assays, 507  
 Spectrometric techniques, modern, 650  
 Spectrometry, 195  
   absorption, 646  
   atomic absorption, 654, 655  
   emission, 653  
   flame emission, 654  
   fluorescence, 655  
   Fourier transform IR, 652  
   IR, 650  
   light-scattering, 656  
   mass, 664  
   mass, instrumentation, 637  
   mass, ionization methods, 636  
   quantitative IR, 652  
   Raman, 656  
   tandem mass, 638  
   UV, 647  
   visible absorption, 647  
 Spectrophotometry, diode-array  
   UV-visible, 650  
 Spectrophotometry, UV and visible, 648  
 Spectroscopic methods of analysis, comparative characteristics, 649t  
 Spectroscopy, 646  
   2-D NMR, 643, 645t  
   absorption and relaxation, 640  
   nuclear magnetic resonance, 639  
 Spermaceti, synthetic, 1077  
 Spheronization, 903  
 Spherulin, 1275  
 Spirits, 759  
 Spiritus vini rectificatus, 1080  
 Spironolctone, 1428  
 Split-plot design, 149  
 Sporanox, 1672  
 Spray-congealing, tablets, 904  
 Spray-drying, powders, 702  
 Spray-drying, tablets, 904  
 Square-root transformation, 160  
 Stability  
   chemical reactions, 1030  
   closures, 1036  
   containers, 1034  
   dosage forms, 1027  
   drug delivery, 942  
   emulsions, 762  
   ICH recommended evaluation, 1032  
   incompatibility, 1029  
   ionizing radiation, 1032  
   ophthalmics, 861  
   overage addition, 1034  
   pharmaceuticals, 747, 1025  
   photochemical reactions, 1031  
   predicting shelf life, 1032  
   product, 1027
- protocols, 1026t  
 pull schedule, 1026t  
 reaction kinetics, 1029  
 regulatory requirements, 1026  
 temperature effect, 1032  
 ultrasonic energy, 1032
- Stadol, 1530  
 Standard deviation from range, 153t  
 Stannous fluoride, 1293  
 Stanozolol, 1472  
*Staphylococcus aureus* densities in mice, 1251t  
 Starch, 1090  
   corn, 1090  
   potato, 1090  
   wheat, 1090  
 Starch gum, 1085  
 Starch paste, tablets, 892  
 Starch syrup, 1086  
 Starlix, 1455  
 State, equation, 201  
 Statics, 712  
 Statins, 1368  
 Stationary disk system, 674  
 Statistical inference and the *T* distribution, 137  
 Statistics, 127  
   accuracy, 130  
   bias, 130  
   data collection, 131  
   data transformations, 159  
   design of experiments, 131  
   discrete and continuous data, 129t  
   distributions, 130 (see Distributions)  
   estimation, 136  
   overview and introduction, 127  
   precision, 130  
   “proof,” 127  
   quality control methods, 152  
   samples and populations, 129  
   sampling methods, 131  
   variability and variables, 128  
 Statistics of the straight line, 154  
 Stavudine, 1683  
 Stearic acid, 1079  
 Stearyl alcohol, 1076  
 Steatite, 1091  
 Stelazine, 1515  
 Stenosis  
   aortic, 1099  
   mitral, 1098  
   tricuspid, 1099  
 Stereochemistry, 187  
 Stereochemistry, drug design, 472  
 Stereoisomerism, 165, 170  
 Steric stabilization, 310, 323, 334  
 Sterility as a total system, 777  
 Sterility test, parenterals, 831  
 Sterilization, 776  
   bacteria used as indicators, 800t  
   chemical “cold,” 788  
   contamination, 777  
   definitions, 776  
   dry heat, 785  
   methods, 777  
   moist heat, 778  
   ophthalmics, 860  
   packaging, 797  
   parenterals, 826  
   probabilities of acceptance, 800t  
   steam, kinetics, 778  
   steam, saturated, 790  
   testing, 799  
   training personnel, 801  
   unidirectional airflow equipment, 798  
 Sterilization and depyrogenation, 785  
 Sterilizers, dry heat batch, 786  
 Sterilizers, dry heat tunnels, 787  
 Stern layer, 301  
 Steroids  
   adrenocortical, 1442
- anabolic, major features, 1470t  
 chemistry, 427  
 Steroids and other hormones, analysis, 582  
 Sterols, chemistry, 427  
 Stills, multiple-effect, 807  
 Stimate, 1441  
 Stimulants  
   CNS, 1551, 1552t  
   psycho-, 1553  
   respiratory, chemistry, 384  
 Stirring device, effect on dissolution, 679  
 Stoichiometric models, 194  
 Stokes’ law, 321  
 Stokes’ law of viscosity, 296  
 Stomach, diseases of, 1106  
 Storax, 1090  
 Stormer viscometer, 354  
 Stoxil, 1680  
 Stratification, 133  
 Stratum corneum, 872, 1154  
 Stratum corneum, barrier efficacy, 876  
 Streaming potential, 304  
 Streptase, 1333  
 Streptococcal infections, 1136  
 Streptogramins, 1660  
 Streptokinase, 1333  
 Streptomycin, 1736  
 Streptomycin sulfate, 1651  
 Stretozocin, 1583  
 Stress, effects and responses to, immunology, 1215  
 Stroke syndromes, 1117  
 Strontium, chemistry, 367t, 368  
 Structure-activity relationship  
   addition of functional groups, 470  
   analog approach, 468  
   drug design and, 468  
   drug disposition, 474  
   homologs, 468  
   ionization, 473  
   isosteric replacements, 471, 471t  
   molecular fragmentation, 469  
   quantitative relationships, 475  
   stereochemistry, 472  
 STS, 1286  
 Studentized range procedure, 146  
 Studies  
   case-control, 76  
   cohort, 76  
   cost and time, 94t  
   criteria for evaluation, 78t  
   cross-sectional, 76  
   data analysis, 81  
   descriptive, 76  
   design, 80  
   experimental, 78  
   explanatory, 76  
   follow-up, 77  
   introduction/background, 79  
   issues and problems, 83t  
   journals/authors, 78  
   methods, 79  
   observational, 76  
   outcome measures, 81  
   patients/subjects, 79  
   prevalence, 77  
   results, 82  
   treatment considerations, 81  
 Study, controlled, 127  
 Styptics, 1336  
 Styrax, 1090  
 Sublimation, 178  
 Sublimation curve, 179  
 Sublingual administration, 1157  
 Substance abuse, 60  
   addicted patient recognition, 2303  
   addicted pharmacists, 2315  
   alcohol dependence, 2313  
   CAGE questions, 2313t  
   standard drink, 2313t  
   brief interventions, 2303, 2304t

- criteria, 2304t  
 disorders, 2303  
 disulfiram reaction medications, 2314t  
 drug interactions with cigarettes, 2305t  
 nicotine replacement therapy, 2310  
 nicotine replacement transdermal patches, 2309  
 nicotine withdrawal criteria, 2304t  
 opiate addiction, 2315  
 opiate withdrawal criteria, 2304t  
 pharmacist's role, 2303, 2315  
 smoking cessation  
     benefits, 2306t  
     bupropion SR, 2311t  
     counseling cues, 2305t  
     motivation, 2307t  
     patient resources, 2312t  
 smoking relapse prevention, 2310  
     willingness to change, 2304  
 Substance Abuse and Mental Health Services Administration, 47  
 Substitution, degree, 305  
 Subtraction, 114  
 Succimer, 1344  
 Succinylcholine chloride, 1414  
 Sucraid, 1304  
 Sucralfate, 1302  
 Sucrose, 1067  
 Sucrose octaacetate, 1090  
 Sufenta, 1534  
 Sufentanil, 1534  
 Sugar, 1067  
     beet, 1067  
     bread, 1085  
     cane, 1067  
     confectioner's, 1068  
     corn, 1085  
     grape, 1085  
     invert, 1692  
     milk, 1087  
     starch, 1085  
     wood, 1272  
 Sugars, other, 1692  
 Suicide, assisted, 27  
 Solar, 1366  
 Sulbactam sodium, 1649  
 Sulconazole nitrate, 1674  
 Sulfacetamide, 1632  
 Sulfacetamide sodium, 1632  
 Sulfadiazine, 1632  
 Sulfadoxine, 1632  
 Sulfamethoxazole, 1632  
 Sulfamethoxazole and trimethoprim, 1632  
 Sulfasalazine, 1314, 1633  
 Sulfathaladine, 1632  
 Sulfisoxazole, 1633  
 Sulfonamides, 1630, 1630t  
 Sulfonlyureas, 1452  
 Sulfonlyureas, interactions, 1454t  
 Sulfur, 1736  
     chemistry, 376t, 376  
     liver of, 1090  
     milk of, 1598  
     precipitated, 1598  
 Sulindac, 1540  
 Sulphur, precipitated, 1598  
 Sultrin, 1632  
 Sumatriptan succinate, 1435  
 Supercritical fluid, 179  
 Supercritical fluid chromatography, 619  
 Supersaturation, relative, 307  
 Suppositories  
     bases, 884  
     dissolution, 686  
     packaging and storage, 886  
     preparation, 885  
     types, 883  
 vehicles, 884  
 Suprane, 1475  
 Suprarenalin, 1386  
 Suprax, 1644  
 Suramin, 1683  
 Suramin sodium, 1597  
 Sure Step, 1275  
 Surface free energy, 281  
 Surface potential, 319  
 Surface tension, liquids, 281t  
 Surface tension, solids, 284t  
 Surface tension of the dissolution medium, 680  
 Surface-active agents, 290  
 Surface-free energy, 319  
 Surfactant application, hydrophilic-lipophile balance and, 331  
 Surfactant micelles, formation, 311  
 Surfactants  
     for stabilization, 278  
     oriented physical adsorption, 309  
     respiratory, 1378  
     solubility, 229  
 Surfak, 1308  
 Surgical supplies, 1968  
     absorbents, 1969  
     adhesive tapes, 1971  
     bandages, 1970  
     dressings, 1968, 1969, 1973  
     gauzes, 1969  
     operating room supplies, 1972  
     protectives, 1972  
     suture materials, 1974  
 Surgicel, 1973  
 Surgicel Fibrillar, 1973  
 Surgicel Nu-Knit, 1973  
 Surmontil, 1522  
 Survanta, 1378  
 Survival rates in swine dysentery, 142t  
 Suspending agents, 1072  
 Suspensions, 320, 767  
     bioavailability, 336  
     chemical stability, 325  
     commercial, 767t  
     deflocculation, 320  
     dissolution, 684  
     extemporaneous preparations from tablets and capsules, 770  
     flocculation, 320  
     for stabilization, 278  
     formation, 321  
     glass solutions, 229  
     ingredients, 768  
     nonaqueous, 325  
     ophthalmic, 856  
     particle properties, 320t  
     particle size and distribution, 324  
     physical characteristics, 767  
     preparation, 325, 769  
     quality considerations, 769  
     sedimentation rate, 321  
     settling and its control, 320  
     stability, 1028  
     structured vehicles, 322  
     suspending agents, 324t  
     sustained release, 770  
 Sustiva, 1678  
 Sutilains, 1687  
 Suture  
     absorbable surgical, 1978  
     catgut, 1978  
     nonabsorbable surgical, 1978  
 Sutures, 1974  
     absorbable, 1974  
     absorbable, synthetic, 1975  
     gut, surgical, 1974  
     metallic, 1977  
     nonabsorbable, 1976  
     nonabsorbable, synthetic, 1976  
     surgical, 1978  
 Suturing, other techniques, 1977  
 Suxamethonium chloride, 1414  
 Sweat glands, 871, 872  
 Swedish balsam, 1280  
 Sweet gum, 1090  
 Sweetwood, 1064  
 Swelling systems, drug delivery, 950  
 Symadine, 1677  
 Symmetrel, 1417, 1677  
 Sympathomimetics, 1379  
     agonists, indirect, 1385  
     dopamine drugs, 1387  
      $\alpha_1$ -agonists, 1380  
      $\alpha_2$  agonists, 1382  
      $\alpha$ - $\beta$  agonists, mixed, 1385  
      $\beta$  agonists, 1382  
 Synagis, 1615t  
 Synarel, 1440  
 Synercid, 1660, 1661  
 Synkavite, 1700  
 Synovial fluid, rheology, 351  
 Synthroid, 1459  
 Syphilis, 1135  
 Syprine, 1344  
 Syringes, bulb, 1994  
 Syrup, 1071  
 Syrup, simple, 1071  
 Syrups  
     diluting agents, 1070  
     flavoring, 1063  
     medicated, 754t  
     preparation, 754  
 Syrupus Cerasi, 1070  
 Systemic injection test, bioassay, 562
- T**
- T* distribution, 137  
*T* table, 138t  
*T* test, 128, 137  
     paired, 140  
     two independent, 139  
 Tablet machines  
     high-speed rotary, 908t, 909  
     instrumented, 910  
     multilayer rotary, 909  
     rotary, 906  
     single punch, 906, 906t  
 Tablet triturates, 914  
     compressed, 916  
     formulation, 915  
     hand-molding, 915  
     machine-molding, 915  
     preparation, 915  
 Tablets, 889  
     capping and splitting, 909  
     changes during compression, 895, 896  
     characteristics, 916  
     coated, quality control, 937  
     compressed, 889, 890, 930  
     contamination control, 911  
     direct compression, 900  
     disintegration, 917  
     dissolution test, 918  
     formulations, 912  
      friability, 895  
     granulation methods, 896  
     hardness, 916  
     hot melt extrusion, 928  
     ingredients, 891  
     lubricants, 892  
     machines, 905  
     made by electrostatic deposition, 926  
     molded, 914 processes, 903  
     powder compaction, 894  
     rapidly dissolving, 926  
     related granulation 1027  
     stability,  
     strength, 895  
     thickness, 917  
     three-dimensional printing, 927  
 types, 889  
 uniformity, 917  
 validation, 918  
 wet-coated systems, 927  
 Tabloid, 1584  
 Tacrine hydrochloride, 1397  
 Tacrolimus hydrate, 1590  
 Tagamet, 1298  
 Talc, 1091  
 Talc, purified, 1091  
 Talcum, 1091  
 Talwin, 1533  
 Tambocor, 1363  
 Tamiflu, 1681  
 Tamoxifen citrate, 1466, 1584  
 Tannic acid, 1283  
 Tannin, 1283  
 Tannins, chemistry, 438  
 Tantalum, chemistry, 375t  
 Tapazole, 1460  
 Tape, adhesive, 1974  
 Tar, 1286  
     coal, 1285  
     gas, 1285  
     juniper, 1285  
     pine, 1286  
 Targretin, 1564  
 Tartaric acid, 1091  
 Tasmar, 1421  
 Tavist, 1547  
 Taxol, 1582  
 Taxotere, 1570  
 Tazicef, 1646  
 Tazidime, 1646  
 Tazobactam sodium, 1649  
 $T_D$  table, 147t  
 Te Anatoxal Berna, 1602t  
 Teaberry oil, 1065  
 Teaspoon, 110  
 Teaspoon, medicinal, 104  
 Technetium, chemistry, 378t, 379  
 Technetium radiopharmaceuticals, 489  
 Technology, 1753  
     computerized prescriber order entry, 1755  
     computers, 1753  
     CPOE attributes and functions, 1756t  
     documentation principles, 1757t  
     emerging types, 1761  
     informatics, 1754  
     internet, 1755  
     interventions, documentation of, 1757  
     outcomes measurement, 1756  
     point of care, 1755  
     telepharmacy, 1756  
 Technology and automation, 1753  
 Technology and HIPAA, 1757  
 Teel oil, 1072  
 Tegaserod maleate, 1315  
 Tegison, 1291  
 Tegopen, 1639  
 Tegretol, 1503  
 Telepaque, 1266  
 Telepharmacy, 1756  
 Tellurium, chemistry, 376t, 377  
 Telmisartan, 1357  
 Temazepam, 1496  
 Temodar, 1584  
 Temozolomide, 1584  
 Temperature  
     calculations, 125  
     dependency on heat of solution, 213  
     effect on dissolution, 680  
     solubility effect, 213  
 Tenecteplase, 1333  
 Tenex, 1351  
 Teniposide, 1584  
 Tenofovir disoproxil fumarate, 1683  
 Tenormin, 1401  
 Tenox BHA, 1058

- Tenox BHT, 1059  
 TENS, 1999  
 Tensile testers, 355  
 Tensilon, 1395  
 Tequin, 1657  
 Terazosin hydrochloride, 1400  
 Terbinadine hydrochloride, 1673  
 Terbutaline sulfate, 1385  
 Teriparatide acetate, 1270  
 Terpenes, chemistry, 439  
 Terpin hydrate, 1377  
 Terpin hydrate and codeine elixir, 1377  
 Terpin hydrate and dextromethorphan hydrobromide elixir, 1377  
 Terpinol, 1377  
 Terpinum, 1377  
 Terra alba, 1084  
 Terraclor, 1736  
 Terramycin, 1656  
 Teslascan, 1268  
 Tessalon, 1375  
 Testolactone, 1584  
 Testosterone, 1470, 1472  
 Testosterone propionate, 1584  
 Tetracaine, 1485  
 Tetracycline, 1656  
 Tetracyclines, 1654, 1654t  
 Tetrahydrozoline hydrochloride, 1381  
 Tetranitrol, 1359  
 Teveten, 1356  
 Thalleioquin reaction, 436  
 Thallium, chemistry, 369t, 370  
 THAM, 1342  
 Thebaicum, 1526  
 Theine, 1551  
 Theobroma oil, 1085  
 Theobromine, structure, 438t  
 Theobromine-phenobarbital tablets, 912  
 Theophylline, 1373  
 elixir, 758  
 ephedrine hydrochloride, and Phenobarbital, 1553  
 structure, 438t  
 TheraCys, 1563  
 Thermal analysis, differential, 662  
 Thermochemistry, 203  
 Thermodynamics, 201  
 carnot cycle, 204  
 Clapeyron equation, 208  
 entropy, 204  
 entropy changes, 205  
 equilibria, 207  
 equilibrium constant, 208  
 first law, 201  
 free energy, 206  
 heat, 202  
 heat of reaction, 203  
 heat of reaction as a function of temperature, 203  
 heat of solution, 204  
 heat reservoir, 205  
 irreversible processes, 205  
 nonideality, 207  
 partitioning behavior, 209  
 protein binding, 209  
 reversible processes, 205  
 second law, 204  
 solubility, 209  
 temperature dependence, 208  
 third law, 206  
 work, 201  
 Thermodynamics of the solution process, 219  
 Thermogravimetric analysis, 661  
 Thermogravimetry, 661  
 Thermometers, 1996  
 Thermoplastic packaging, types, 1051  
 Thermoresponsive drug delivery, 952  
 Thermoset packaging, types, 1053  
 Thiabendazole, 1597  
 Thiamine, 1709  
 Thiamine hydrochloride, 1710  
 Thiamine mononitrate, 1711  
 Thiazolidinediones, 1453  
 Thibenzole, 1597  
 Thiethylperazine malate, 1312  
 Thiethylperazine, maleate, 1312  
 Thimet, 1732  
 Thin-layer chromatography, 626  
 Thiocarbamates, 1737  
 Thioguanine, 1584  
 Thiopental sodium, 1476  
 Thiopentone sodium, 1476  
 Thioplex, 1585  
 Thiopurine methyltransferase, 1237  
 Thioridazine, 1514  
 Thioridazine hydrochloride, 1514  
 Thiotepa, 1585  
 Thiothixene, 1514  
 Thiothixene hydrochloride, 1515  
 Thiram, 1734  
 Thixotropy, 344  
 Thixotropy, anti-, 345  
 Thixotropy, negative, 345  
 Thorazine hydrochloride, 1511  
 Thrombin, 1337  
 Thrombinair, 1337  
 Thrombocytes, analysis, 569  
 Thrombocytopenia purpura, idiopathic, 1130  
 Thrombocytopenia, 1130  
 Thrombogen, 1337  
 Thrombolytic agents, 1332  
 Thrombolytic agents, biotechnology, 995t  
 Thrombosis, deep venous, 1104  
 Thrombotstat, 1337  
 Thujone, structure, 440  
 Thymoglobulin, 1591  
 Thyrogen, 1271  
 Thyroid, 1460  
 Thyroid, Armour, 1460  
 Thyroid, desiccated, 1460  
 Thyroid disorders, 1123  
 Thyroid function, 584  
 Thyroiditis, Hashimoto's, 1212  
 Thyrotropin, 1438  
 Thyrotropin alfa, 1271  
 Tiagabine hydrochloride, 1507  
 Tizac, 1365  
 Ticar, 1641  
 Ticarcillin disodium, 1641  
 Tice BCG vaccine, 1602t  
 TICE BCG, 1563  
 Ticks, control, 1729  
 Ticlid Hydrochloride, 1334  
 Ticlopidine hydrochloride, 1334  
 Tigan, 1312  
 Tikosyn, 1363  
 Tilade, 1375  
 Timentin, 1649  
 Timolol maleate, 1403  
 Timoptic, 1403  
 Tin, 1717  
 Tin, chemistry, 371t, 373  
 Tinctura balsamica, 1280  
 Tinctura opii benzoica, 1526  
 Tinctura thebaica benzoica, 1526  
 Tinctures, 774  
 Tinzaparin sodium, 1330  
 Tiren, 1551  
 Tirofiban hydrochloride, 1335  
 Tissue-engineered drug delivery, 961  
 Titanium, chemistry, 369t, 373  
 Titanium dioxide, 1293  
 Titrilac, 1296  
 Titrimetric procedures, assays, 501  
 Tizanidine hydrochloride, 1414  
 TMP-SMZ, 1632  
 TNKase, 1333  
 Tobramycin, 1652  
 Tobrex, 1652  
 Tocainide hydrochloride, 1364  
 Tofranil, 1520  
 Tofranil-PM, 1520  
 Toiletries, literature, 71  
 Tolazamide, 1456  
 Tolbutamide, 1456  
 Tolbutamide sodium, 1270  
 Tolbutamide tolerance, 577  
 Tolcapone, 1421  
 Tolectin, 1540  
 Tolectin DS, 1540  
 Tolinase, 1456  
 Tolmetin sodium, 1540  
 Tolterodine tartrate, 1409  
 Tolu balsam, 1068  
 Tolu balsam syrup, 1068  
 Tolu balsam tincture, 1068  
 Tolu syrup, 1068  
 Tolu tincture, 1068  
 Tonicity, 250  
 methods of adjusting, 257  
 ophthalmics, 862  
 Tonicity agents, parenterals, 804  
 Tonicity testing by observing erythrocyte changes, 257  
 Tonocard, 1364  
 Topamax, 1507  
 Topical administration, 1158  
 Topical agents, chemistry, 383  
 Topical drugs, 1277 (*see* Topicals)  
 Topicals, 1277  
 biopharmaceutic aspects, 871  
 dosage forms, 879, 880  
 drug delivery systems, 879  
 evolution of systems, 882  
 irritancy testing, 882  
 medicated, 871  
 preparation, 881  
 preservatives, 887, 887t  
 rectal absorption, 877  
 routes of administration, 871  
 suppositories, 883  
 vaginal absorption, 878  
 Topiramate, 1507  
 Topitracin, 1653  
 Topitrol, 1458  
 Topotecan, 1585  
 Toprol XL, 1402  
 Tornalate, 1383  
 Torsion balances, 105  
 Torsion testers, 355  
 Total parenteral nutrition, 847  
 Total product quality, 1019  
 Total quality management, 1019  
 Tourniquet test, 572  
 Toxicodendron radicans, 2330  
 Toxicodynamics, 1224  
 Toxicokinetics, 1224  
 Toxicology  
 analysis, 592  
 clinical, 1221  
 literature, 70  
 research, 92  
 Trace elements, 1713  
 distribution in foods, 1714t  
 essential, chemistry, 382  
 Tracleer, 1369  
 Tracrium, 1412  
 Traction equipment, 1988  
 Tragacanth, 1076  
 Tragacanth, gum, 1076  
 Tragacanth mucilage, 1076  
 Tramadol hydrochloride, 1534  
 Trandate, 1402  
 Trandolapril, 1356  
 Tranexamic acid, 1336  
 Transdermal drug delivery, 871  
 Transdermal patches, drug delivery, 948  
 Transdermal patches, stability, 1029  
 Transdermal systems, 1289  
 Transderm-Scop, 1408  
 Transference number, 233  
 Transformation  
 inverse sine, 160  
 logarithmic, 159  
 square-root, 160  
 Transformations, 128  
 Transformations, data, 159  
 Transplantation, organ, immunology, 1216  
 Transporters, organic ion, 1240  
 Tranxene, 1489  
 Tranylcypromine sulfate, 1522  
 Tratuzumab (humanized), 1615t  
 Travase, 1687  
 Trazadone hydrochloride, 1522  
 Trental, 1349  
 Tretinoin, 1288, 1585  
 Trexan, 1530  
 Triamcinolone, 1448  
 Triamterene, 1429  
 Triazines, 1737  
 Triazolam, 1497  
 Tri-Chlor, 1288  
 Trichlormethiazide, 1428  
 Trichloroacetic acid, 1288  
 Trichloromonofluoromethane, 1091  
 Trichloronitromethane, 1733  
 TriCor, 1367  
 Tridione, 1507  
 Trientine hydrochloride, 1344  
 Triethanolamine, 1082  
 Trifluoperazine hydrochloride, 1515  
 Trifluridine, 1683  
 Trihexyphenidyl hydrochloride, 1421  
 Tri-Immunol, 1602t  
 Trilafon, 1514  
 Trileptal, 1506  
 Trimethadione, 1507  
 Trimethaphan camsylate, 1354  
 Trimethobenzamide hydrochloride, 1312  
 Trimethoprim, 1661  
 Trimethoprim and sulfamethoxazole, 1632  
 Trimetrexate, 1670  
 Trimipramine maleate, 1522  
 Trimipex, 1661  
 Trinalin, 1546  
 Trinitrin, 1359  
 Triostat, 1460  
 Trioxsalen, 1293  
 Tripedia, 1602t  
 Tripleennamine citrate, 1549  
 Triplennamine hydrochloride, 1549  
 Triple antibiotic, 1652  
 Triprolidine hydrochloride, 1550  
 Tricuspid insufficiency, 1099  
 Trisenox, 1562  
 Trisoralen, 1293  
 Trisulfapyridimines oral suspension, 769  
 Triturations, 719  
 Trixilem, 1569  
 Trobicin, 1661  
 Troches, 925  
 Troemner balances, 105  
 Trolamine, 1082  
 Tromethamine, 1342  
 Tronothane, 1485  
 Tropane, structure, 433t  
 Tropic acid, structure, 433  
 Tropicamide, 1409  
 Trovafloxacin, 1658  
 Trovan, 1658, 1659  
 Troy, weight, 102t  
 Trusses, 2004  
 Trypsin, crystallized, 1687  
 Trysul, 1632  
 Tuberculin purified protein derivative, 1275  
 Tuberculin skin test, 1275  
 Tuberculosis, 1138  
 Tubersol, 1275

Tubocurarine chloride, 1414  
 Tumor necrosis factor, biotechnology, 995t  
 Tungsten, chemistry  
 Turbidimetric method, bioassay, 561  
 Burlington's balsam of life, 1280  
 Burlington's drops, 1280  
 Tussizone-12, 1376, 1545  
 Tweens, 1080  
 Twinrix, 1603t  
 Tyloxapol, 1091  
 Typhim Vi, 1602t  
 Tyvek packaging, 1052  
 Tyzine, 1381

**U**

Udicil, 1568  
 Udicil CS, 1568  
 Ultane, 1475  
 Ultracentrifuge, 694  
 Ultrafiltration, 701  
 Ultra-Lente, 1452  
 Ultram, 1534  
 Ultrase MT, 1686t  
 Ultrasonic devices for emulsions, 765  
 Ultrasound-modulated drug delivery, 952  
 Ultraviolet terminologies, 648t  
 Ultravist, 1266  
 Unasyn, 1649  
 Unidron, 1737  
 Unipen, 1639  
 Unitroid, 1459  
 Univasc, 1355  
 Uracil mustard, 1585  
 Uracils, 1737  
 Uramustine, 1585  
 Uranin, 1273  
 Uranine yellow, 1273  
 Urea, 1091, 1424  
 Ureaphil, 1424  
 Ureas, substituted, 1737  
 Urebeth, 1390  
 Urecholine chloride, 1390  
 Uric acid, structure, 438t  
 Uridine diphosphate-glucuronosyl transferases, 1237

Urinalysis  
 appearance, 588  
 bacteria, 590  
 bilirubin, 589  
 calculi, 591  
 color, 588  
 glucose (reducing substances), 589  
 hematuria, 590  
 hemoglobinuria, 590  
 instrumentation, 587  
 ketone bodies, 589  
 microscopic examination, 590  
 myoglobinuria, 590  
 odor, 588  
 pH, 588  
 phenylpyruvic acid, 589  
 protein, 588  
 specific gravity-osmolality, 587  
 urobilinogen, 590  
 volume, 587  
 Urinary tract infections, 1134  
 Urine, analysis, 587  
 (*see* Urinalysis)  
 Urine, normal constituents, 587t  
 Urine osmoticity, 253  
 Urine testing for infections, 1276  
 Urine testing for protein, 1276  
 Ursed, 1664  
 Uritone, 1664  
 Urokinase, 1334  
 Urology supplies, 2003  
 Uro-Mag, 1296  
 Ursø, 1303  
 Ursodiol, 1303

Urtica urens, 2330  
 Urticaria, 1132  
 USAN  
 approval process, 447t  
 coining principles, 451  
 common name, 445  
 contractions for adducts, 465t  
 contractions for radicals, 465t  
 Council, 444  
 drug name types, 443  
 established name, 445  
 generic name, 443  
 global name, 445  
 international nonproprietary name, 448  
 liaison with FDA, 446  
 nomenclature rules, 451  
 nonproprietary name, 443  
 official name, 445  
 procedure for obtaining, 445  
 program philosophy, 448  
 protection, 450  
 stems used, 455t  
 trivial names, 443  
 usual name, 445  
 USP wood apparatus, 674  
 USP/NF dissolution test methods, 681  
 Uterine drugs, 1432  
 UTI, 1276  
 UV radiation sterilization, 797

**V**

V values, isotonic solution, 259  
 Vaccine  
 anthrax, adsorbed, 1602t  
 Bacillus Calmette Guerin, 1602t  
 cholera, 1602t  
 diphtheria, tetanus, pertussis, 1606t, 1607t  
 diphtheria and tetanus toxoids, 1602t  
 diphtheria CRM<sub>197</sub> conjugate, 1602t  
*haemophilus influenzae Type B*, 1606t, 1607t  
 hemophilus influenza type b conjugate, 1602t  
 hepatitis A, 1603t, 1606t, 1607t, 1611t, 1612t  
 hepatitis A and hepatitis B combination, 1603t  
 hepatitis B, 1603t, 1606t, 1607t, 1611t, 1612t  
 HIB conjugate and hepatitis B virus, 1602t  
 influenza, 1602t, 1606t, 1607t, 1611t, 1612t  
 Japanese encephalitis, 1603t  
 Lyme disease, 1602t  
 Massachusetts Public Health Biologic Lab, 1602t  
 measles, mumps, rubella, 1606t, 1607t, 1611t, 1612t  
 measles virus, 1602t  
 meningococcal polysaccharide, groups A, C, Y, and W-135, 1602t, 1611t  
 meningococcal protein conjugate, 1602t  
 mumps virus, 1602t  
 pertussis, adsorbed, 1602t  
 pneumococcal, 1606t, 1607t  
 pneumococcal, 23-valent, 1602t  
 pneumococcal conjugate, 7-valent, 1602t  
 pneumococcal (polysaccharide), 1611t, 1612t  
 poliovirus, inactivated, 1603t, 1606t, 1607t  
 poliovirus, oral trivalent, 1602t  
 rabies virus, 1603t  
 rubella virus, 1602t  
 smallpox, 1602t

tetanus, diphtheria, 1611t, 1612t  
 tetanus toxoid, adsorbed, 1602t  
 tetanus toxoid, conjugate, 1602t  
 typhoid, inactivated, 1602t  
 typhoid, live oral, 1602t  
 typhoid Vi capsular polysaccharide, 1602t  
 varicella, 1602t, 1606t, 1607t, 1611t, 1612t  
 yellow fever virus, 1602t  
 Vaccines  
 bacterial, 1602t  
 biotechnology, 995t  
 conjugate, 1602t  
 inactivated, 1602t  
 influenza virus, trivalent types A & B, 1603t  
 live attenuated, 1602t  
 measles and rubella virus, 1602t  
 MMR virus, 1602t  
 virus, inactivated, 1603t  
 virus, live attenuated, 1602t  
 Vaccines for medical conditions, 1612t  
 Vacuum constriction devices, 2000  
 Vaginal fluid, rheology, 351  
 Valacyclovir hydrochloride, 1683  
 Valecyte, 1683  
 Valdecoxib, 1541  
 Valence bond theory, electronic configurations, 189t  
 Valence bond theory, Pauling, 189  
 Valence-shell electron-pair repulsion theory, 189  
 Valgancyclovir hydrochloride, 1683  
 Valium, 1489  
 Valproate sodium, 1508  
 Valrubicin, 1586  
 Valsartan, 1357  
 Valstar, 1586  
 Valtrex, 1683  
 Van der Waals attractive energy, 303  
 Van der Waals' forces, 172, 191  
 Van't Hoff factor, 231  
 Vanadium, 1717  
 Vanadium, chemistry, 375t  
 Vanceril, 1446  
 Vancocin, 1662  
 Vancoled, 1662  
 Vancomycin hydrochloride, 1662  
 Vanilla, 1068  
 Vanilla, extract of, 1068  
 Vanilla bean, 1068  
 Vanilla tincture, 1068  
 Vanillal, 1064  
 Vanillin, 1068  
 Vanillin, ethyl, 1064  
 Vanirome, 1064  
 Vansil, 1597  
 Vantin, 1645  
 Vapor adsorption, solid surfaces, 285  
 Vapor pressure, 178  
 Vapor pressures, observed to expected, 285t  
 Vaporizations, heat of, 178  
 Vaporole, 1358  
 Vapor-pressure curve, 179  
 Vapor-pressure lowering, 225  
 Vaqta, 1603t  
 Variability and variables, 128  
 Variable, continuous, 129  
 Variance, analysis of, 128, 144  
 Variation, coefficient, 130  
 Variation, measures, 129  
 Varivax, 1602t  
 Vascor, 1365  
 Vasculitis, 1122  
 VasoClear A, 1280  
 Vasodilan, 1384  
 Vasodilators, direct, 1352  
 Vasodilators, peripheral, 1357, 1358t  
 Vasopressin, 1442

Vasopressin, bioassay, 558  
 Vasopressors, 1360  
 Vasotec, 1355  
 Vasotec IV, 1355  
 Vasoxyl hydrochloride, 1381  
 Vecuronium bromide, 1415  
 Vee M-26, 1584  
 Velban, 1586  
 Velcade, 1565  
 Velocity gradient, 339  
 Velosef, 1647  
 Vencenase, 1446  
 Venlafaxine hydrochloride, 1522  
 Venoglobulin-1, 1613t  
 Venoglobulin-5, 1613t  
 Ventolin, 1382  
 Veralan, 1366  
 Verapamil hydrochloride, 1366  
 Vermax, 1596  
 Versed, 1490  
 Vervain balsam, 1280  
 Vesanoid, 1585  
 Vesicants, 1284  
 Vespid, 1572  
 Veterans affairs, 48  
 employment, 49  
 pharmacy, 49  
 Vfend, 1672  
 Vibramycin, 1655  
 Vidaza, 1563  
 Videx, 1678  
 Vigamox, 1658  
 Vinblastine sulfate, 1586  
 Vinca alkaloids, 437 (*see* Alkaloids)  
 Vincasar PFS, 1586  
 Vincristine sulfate, 1586  
 Vinegar acid, 1083  
 Vinorelbine, 1587  
 VioKase, 1686t  
 Vioxx, 1541  
 Viracept, 1682  
 Viramune, 1681  
 Virazole, 1682  
 Viread, 1683  
 Virology, research, 91  
 Viroptic, 1683  
 Virus, human immunodeficiency, 1219  
 Viscoelastic materials, 347  
 Viscoelasticity, 345  
 Viscometer  
 coaxial-cylinder, 354  
 companies, 352t  
 cone-and-plate, 355  
 infinite gap, 354  
 MacMichael, 354  
 parallel-plate, 355  
 parameters, 352t  
 Stormer, 354  
 Viscometers  
 capillary, 353  
 comparison, 356  
 falling ball, 355  
 needle, 355  
 non-Newtonian corrections, 356  
 rotational, 354  
 types, 352  
 Viscosities, Newtonian, 340t  
 Viscosity, 298, 338  
 dissolution medium, 681  
 Einstein's law, 296, 348  
 ophthalmics, 862  
 plastic, 343  
 Stokes' law, 296  
 Visipaque, 1265  
 Visken, 1403  
 Vistaril, 1492  
 Vistide, 1678  
 Vitamin A, 1695  
 Vitamin A acetate, 1696  
 Vitamin A palmitate, 1696  
 Vitamin B complex tablets, 913  
 Vitamin B<sub>1</sub> hydrochloride, 1710  
 Vitamin B<sub>2</sub>, 1709  
 Vitamin B<sub>6</sub>, 1707  
 Vitamin B<sub>6</sub> hydrochloride, 1708

- Vitamin B<sub>12</sub>, 1711, 1712  
 Vitamin B<sub>12</sub> activity, bioassay, 561  
 Vitamin B<sub>12a</sub>, 1712  
 Vitamin C, 1700  
 Vitamin D, 1696  
 Vitamin D<sub>2</sub>, 1697  
 Vitamin E, 1698  
 Vitamin K, 1699  
 Vitamin K deficiency, 1130  
 Vitamin K<sub>1</sub>, 1700  
 Vitamins, 1693  
 B, 1702  
 bioassay, 559  
 fat-soluble, 1694t, 1695  
 microbial bioassays, 560  
 oleo-, 758  
 water-soluble, 1694t, 1700  
 Vitravene, 1679  
 Vivactil, 1522  
 Vivarin, 1551  
 Vivotif Berna, 1602t  
 Voigt-Kelvin element, 347  
 Volatile oils, chemistry, 439  
 Voltaren, 1536  
 Volume, molar, 174  
 Volume-in-volume percentages, 121  
 von Willebrand's disease, 1130  
 Voriconazole, 1672  
 VP16, 1572  
 Vumon, 1584
- W**  
 Wade's drops, 1280  
 Walkers, 1983  
 Ward's balsam, 1280  
 WARF-42, 1734  
 Warfarin, 1734  
 Warfarin sodium, 1329  
 Water, 802, 1070, 1693  
 chemistry, 380  
 dissociation constants, 237t  
 heavy, chemistry, 381  
 ion product, 238  
 ionization, 238  
 leveling effect, 236  
 potable, chemistry, 381  
 preformulation, 731  
 purified, 381, 1070  
 Water-soluble polymers, 305  
 Water as a solvent, 221  
 Water for hydration,  
   preformulation, 727  
 Water for injection, 807, 1070  
 bacteriostatic, 809, 1070  
 sterile, 809, 1070  
 Water for irrigation, sterile, 1070  
 Water for parenterals, 1070  
 Water in pharmaceuticals, 746  
 Waters  
 aromatic, 749  
 flavoring, 1063
- natural, chemistry, 380  
 Waters used in pharmacy,  
   chemistry, 381  
 Waxes, 1281  
 Waxes, chemistry, 426  
 Websites, 72  
 Weed-B-Gone, 1737  
 Weeds, control, 1736  
 Wegener's granulomatosis, 1122  
 Weighing, 104  
 Weighing and measuring, 104  
 Weight  
   apothecary, 102t  
   avoirdupois, 102t  
   metric, 102t  
   Troy, 102t  
 Weight-in-volume percentages,  
   119  
 Weight-in-weight percentages, 120  
 Weight gains in food regimens,  
   145t  
 Weights, 99  
   aluminum wire and aluminum  
     grain, 108  
   apothecary, 107, 108  
   avoirdupois, common, 107  
   English systems, 99, 102  
   equivalents, 103t  
   history, 99  
   metric, 100, 101, 107, 108  
   relationship to measures, 103t  
 Weights used in pharmacy, 107  
 Weissenberg effect, 346  
 Weissenberg number, 346  
 WelChol, 1367  
 Wellbutrin, 1519  
 Wet screening, 710  
 Wet screening, surfaces, 710  
 Wetting phenomena, 283  
 Wheelchairs, 1979  
 White blood cells, 568  
 White bole, 1313  
 White lotion, 773, 1283  
 White ointment, 1077  
 Wilhinite, 1073  
 Wilson's disease, 1111  
 Wine, spirit of, 1080  
 Wine measure, 103t  
 WinRho SDF, 1613t  
 Winstrol, 1472  
 Wintergreen oil, 1065  
   artificial, 1065  
   synthetic, 1065  
 Wiswesser line notation, 390  
 Withdrawals, classes, 2104  
 Wool fat, 1077  
   hydrous, 1078  
   refined, 1077  
 Work, surface energy, 281  
 World Health Organization,  
   nomenclature program,  
   448
- World Wide Web, 72 (*see Internet*)  
 Wound care, chronic, 2342  
 Wound elixir and balsamic  
   tincture, 1280  
 Wyamine Sulfate, 1381  
 Wydase, 1687  
 Wytensin, 1351
- X**  
 Xanax, 1488  
 Xanthan gum, 1076  
 Xanthine, structure, 438t  
 Xanthine alkaloids, 437 (*see*  
   Alkaloids)  
 Xanthine derivatives, 1551  
 Xanthotoxin, 1292  
 Xeloda, 1565  
 Xenical, 1317  
 Xenon, chemistry, 365t  
 Xiratuss, 1376, 1545  
 Xolair, 1374  
 Xopenex, 1384  
 X-ray analyses, 175  
 X-ray contrast agents, 1262  
 X-ray diffraction, 175  
   application, 177  
   automated, 664  
   for identification, 177  
   intramolecular bonding and con-  
   figurations, 177  
   powder method, 177  
   structure determination, 177  
 Xylocaine, 1484  
 Xylometazoline hydrochloride, 1382  
 Xylose, 1272
- Y**  
 Yates continuity correlation, 136  
 Yellow ointment, 1077  
 YF Vax, 1602t  
 Yodoxin, 1668  
 Young's modulus, 340, 347  
 Yttrium, chemistry, 369t  
 Yutopar, 1384
- Z**  
 Zaditor, 1549  
 Zafirlukast, 1374  
 Zagam, 1658  
 Zalcitabine, 1683  
 Zaleplon, 1498  
 Zanaflex, 1414  
 Zanamivir, 1684  
 Zanosar, 1583  
 Zantac, 1299  
 Zarontin, 1504  
 Zaroxolyn, 1427  
 Zavedos, 1575  
 Zebeta, 1401
- Zefazone, 1644  
 Zeldox, 1516  
 Zelnorm, 1315  
 Zemaira, 1378  
 Zemuron, 1414  
 Zenapax, 1594, 1615t  
 Zephiran chlophride, 1626  
 Zerit, 1683  
 Zero, intercept, fitting a line with,  
   156  
 Zeta potential measurements, 310  
 Zeta sedimentation ratio, 568  
 Zetia, 1367  
 Zetran, 1489  
 Ziagen, 1676  
 Zibactin medicated, 1283  
 Zidovudine, 1684  
 Zileuton, 1374  
 Zinacef, 1646  
 Zinc, 1717  
   butter of, 1283  
   chemistry, 366t, 368  
   flowers of, 1283  
 Zinc caprylate, 1283  
 Zinc carbonate, 1279  
 Zinc chloride, 1283  
 Zinc octanoate, 1283  
 Zinc oxide, 1283  
 Zinc phosphide, 1734  
 Zinc pyrithione, 1284  
 Zinc stearate, 1278  
 Zinc sulfate, 1284, 1717  
 Zinc undecylenate, 1284  
 Zinc white, 1283  
 Zincspar, 1279  
 Zineb, 1736  
 Zinecard, 1570  
 Zingiber, 1069  
 Ziprasidone hydrochloride, 1516  
 Ziram, 1736  
 Zirconium, chemistry, 369t, 373  
 Zithromax, 1653  
 Zocor, 1369  
 Zofran, 1311  
 Zoladex, 1575  
 Zolmitriptan, 1435  
 Zoloft, 1522  
 Zolpidem tartrate, 1499  
 Zomig, 1435  
 Zone electrophoresis, 630  
 Zonegran, 1508  
 Zonisamide, 1508  
 Zosyn, 1649  
 Zovirax, 1676  
 Zutracin, 1653  
 Zwitterion, 243  
 Zyban, 1519  
 Zydol, 1534  
 Zymase, 1686t  
 Zyprexa, 1516  
 Zyrtec, 1547  
 Zyvox, 1660