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Liquid Column Chromatography

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19. PROTEINS

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19k. Urinary proteins

See 4442.

19l. Other proteins

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21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS

21a. Purines, pyrimidines, nucleosides, nucleotides

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23. OTHER SUBSTANCES CONTAINING HETEROCYCLIC NITROGEN

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33. INORGANIC COMPOUNDS

33a. Cations

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7. PHENOLS

See 2665, 2715, 2735.

8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

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See 2630.

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See also 2619.

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See 2683.

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See also 2424.

17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. Amines and polyamines

See 2492, 2714, 2722.

17c. Amine derivatives and amides (excluding peptides)

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23d. Pyridine derivatives

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23e. Other *N*-heterocyclic compounds

See 2641, 2672, 2719.

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See also 2717, 2732, 2736.

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See 2470.

26c. Coordination compounds

See 2490.

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See also 1330, 1345.

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17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. *Amines and polyamines*

See 2120.

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20. ENZYMES

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24. ORGANIC SULPHUR COMPOUNDS

See 1867.

25. ORGANIC PHOSPHORUS COMPOUNDS

See 1866.

26. ORGANOMETALLIC AND RELATED COMPOUNDS

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INDEXES

INTRODUCTION

As in previous years we present here the Subject Index and the Index of Types of Compounds Chromatographed. Because the methodological part differs substantially in individual techniques, we have retained the subdivision system, using the following abbreviations: C = Liquid column chromatography, E = Electrophoresis, G = Gas chromatography, P = Planar chromatography. In the Index of Types of Compounds Chromatographed all types of methods are indicated in the individual entries by appropriate abbreviations. In entries that are heavily populated by chromatographic papers we made a further subdivision into Techniques and Applications. Reviews are clearly indicated. In the Subject Index materials and procedures in common use are not quoted as special entries.

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This Index follows generally identical rules as those published in previous years, i.e. references of general interest and techniques are within a given entry listed first, followed by applications and finally by papers limited to a certain area of applications only. This, however, is applicable only to highly populated entries, where subdivision appeared necessary. As in the past years (see J. Chromatogr. Vol. 335) the individual parts of the Bibliography section, i.e. Liquid column chromatography (C), Gas chromatography (G), Planar chromatography (P) and Electrophoresis (E) were numbered separately. Therefore the respective shortening should direct the reader to one of the techniques first before looking for a particular number (identical numbers occur under different techniques). Please note that this Index refers to the entry numbers in the Bibliography section vol. 372.

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- C: 923 - 925, 1074, 1643, 2471, 4341, 4344, 4354, 4360
- P: 623, 625, 629, 820
- E: 728, 1002, 1003
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- G: 512 - 514, 1001, 1002, 1367, 1936 - 1938, 2651
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- E: 719, 1277, 1278, 1784
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- P: 828, 1247
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- C: 3015, 3023
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- Allergens
- C: 2852
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- C: 383, 384, 3307, 3411, 3564, 3679, 4658
- G: 650, 713, 747, 1003, 1192, 1358, 1860, 1994, 2083, 2294, 2295, 2332, 2350, 2388, 2406, 2640
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- C: 369 - 388, 1213 - 1239, 1950 - 1967, 2776 - 2785, 3660 - 3679
- G: 179 - 182, 557 - 561, 988 - 992, 1355 - 1358, 1915 - 1917, 2556
- P: 112 - 116, 316, 317, 524 - 526, 743 - 747, 942 - 946, 1206 - 1207
- E: 77, 475, 787
- , reviews and books
- G: 791, 1015, 2142, 2173, 2403
- P: 828, 1204
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- C: 118, 136, 370, 1214, 1216, 1221, 1239, 1514, 1741, 1895, 1956, 2776, 2778, 3663, 3665, 4466, 4650, 4661
- G: 26, 75, 370, 406, 418, 422, 561, 988, 1103, 1197, 1355, 1358, 1636, 1921, 2403, 2444, 2448
- P: 207, 525, 587, 594, 746, 1070
- , aliphatic amino alcohols and quaternary bases
- C: 1236, 1238, 1815, 1954, 1967, 3660, 3669, 3674, 3676, 3688
- G: 186, 558, 670, 693, 988, 1918, 1928, 2002, 2158, 2271
- P: 526, 1118
- E: 475
- , alkyl
- C: 95, 1056, 4650, 4661
- G: 4, 75, 578, 760, 825, 988 - 990, 1103, 1159, 1197, 1593, 1916, 1945, 2332, 2492, 2663, 2714
- P: 524, 529, 594, 944, 1203, 1217
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- C: 30, 56, 992, 1050, 1218, 1951, 1953, 3139, 3280, 3295, 3379, 3411, 3478
- G: 60, 80, 357, 373, 378, 382, 418, 422, 442, 800, 813 - 815, 823, 826, 889, 1202, 1231, 1274, 1355, 1356, 1546, 1600, 1626, 1639, 1640, 1650, 1675, 1685, 2424, 2508, 2686
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- C: 99, 374, 1213, 1215, 1217, 1219, 1950, 1952, 2777, 3116, 3347, 3662, 3674, 4301, 4649
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—, —, NBD

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- Antiarteriosclerotics
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G: 2059, 2099, 2296, 2545, 2640
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- E: 417, 418, 722, 995, 996, 1787, 2115
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- Anticoagulants**
C: 1571, 1590, 1625, 2354, 3091, 4256, 4264, 4774
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P: 409, 1318
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- Anticonvulsants**
C: 1569, 1594, 2381, 2384, 3114, 3128, 3143, 3177, 3178, 3182, 4255, 4258, 4281, 4291, 5064, 5072, 5103
G: 243, 1051, 1063, 1064, 1067, 1407, 1411, 1438, 2054, 2080, 2081, 2089, 2108, 2607, 2612, 2648, 2649
P: 175, 211, 417, 594, 806, 1031, 1291
- Antidepressants, non tricyclic**
C: 902, 1578, 2213
G: 630, 634, 639, 671, 1424, 1427, 2051, 2065, 2092, 2098, 2106, 2625
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C: 61, 857, 1577, 1579, 2344, 2390, 2393, 2406, 3107, 3125, 3157, 4226, 5005, 5058
G: 632, 640, 648, 1052, 1656, 1704, 2058, 2105, 2617
P: 158, 170, 175, 597, 598, 600, 602, 613, 1034, 1300, 1306
- Antidiabetics, oral**
C: 831, 863, 2368, 2389, 2399, 2420, 4235, 4236, 5022
G: 2074
P: 589
- Antiemetics**
C: 1595, 2349, 2416, 4206, 4267, 4277, 4292, 5085
- Antiepileptics**
C: 838, 4258, 4291, 5015, 5019, 5050, 5064, 5090
G: 243, 637, 1064, 1425, 2081, 2159
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- Antifertility agents**
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- Antifungal antibiotics**
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- Antihistamines**
C: 844, 1570, 1593, 1595, 1623, 2343, 2348, 2424, 3133, 4268, 5021, 5052
G: 234, 1046, 1407, 2077, 2102, 2616
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- Antiinflammatory agents, *see* Antirheumatics**
- Antimalarial drugs**
C: 899, 1576, 1588, 1613, 1632, 2364, 2394, 3133, 3134, 3175, 4198, 4265, 5039
P: 542, 613
- Antimuscular dystrophy drugs**
C: 4272
- Antimony, *see* Cations, inorganic, analytical group IIB**
- Antimycotics**
C: 1542, 1610, 2434, 3153, 3155, 3468, 5044
P: 801, 826, 845, 1023
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- Antioxidants and preservatives**
C: 208, 211, 948, 1667, 2496, 3228, 3229, 3236, 3520
G: 261, 267, 1108, 1448, 1493, 1495, 2202, 2224, 2257, 2282, 2300, 2666, 2689
P: 194, 195, 207, 211, 392, 638, 639, 653, 823, 824, 1056, 1058, 1069, 1339 - 1341
- Antiparasitic drugs**
C: 812, 1580, 1596, 1607, 2410, 2435, 3111, 3179, 4287
G: 1407, 2068, 2069
P: 562, 1011
see also Anthelmintics; Antimalarial drugs
- Antiparkinsonics**
C: 1592, 2430, 3127, 4187
G: 1411, 2612
P: 1305
- Antiprotozoal agents, *see* Antiparasitic drugs**
- Antipsoriasis drugs**
C: 3510, 4277
- Antipsychotic tranquilizers (non phenothiazine)**
C: 869, 1573, 1618, 2383, 2409, 2427, 2428, 3121, 3160, 3182, 4196, 4219, 4257, 5027, 5033, 5042, 5091, 5098
G: 243, 267, 663, 1053, 1422, 2042, 2094, 2120, 2629
P: 162, 408, 419, 602, 613, 802, 806, 1015, 1032, 1300
E: 419
- Antipyretics, analgesics**
C: 166, 808, 817, 818, 836, 839, 868, 877, 1061, 1556, 1559, 1562, 1563, 1570, 2338, 2345, 2355, 2366, 2371, 2373, 2385, 2402, 2418, 2425, 3129, 3139, 3148, 3150, 3176, 3468, 3510, 4250, 4253, 4271, 4277, 4288, 5006, 5031, 5036, 5045, 5061, 5063, 5065, 5074, 5075
G: 239, 243, 652, 1051, 1062, 1413, 1414, 2050, 2053, 2060, 2102, 2103, 2108, 2115, 2119, 2607, 2628
P: 5, 7, 165, 169, 207, 395, 400, 401, 410, 419, 579, 588, 591, 595, 604, 606, 613, 761, 768, 794, 798, 845, 865, 1013, 1020, 1072, 1293, 1296, 1302

Antirheumatics

- C: 822, 829, 839, 846, 853, 890, 891, 895, 1572, 1584, 1585, 1619, 2353, 2396, 2418, 2421, 2423, 2438, 2443, 3110, 3122, 3145, 3176, 3468, 3574, 3696, 4141, 4197, 4201, 4225, 4228, 4233, 4249, 4253, 4257, 4262, 4271, 4278, 4283, 5060, 5076, 5089, 5106
 G: 232, 1743, 2053, 2613, 2628, 2675
 P: 169, 172, 393, 400, 401, 419, 845, 865, 1029, 1031, 1057, 1112, 1256, 1296

Antiseptics, *see* Antibacterials

Antisclerotics

- C: 852, 4291
 G: 226, 554, 2110

Antitumor antibiotics

- C: 95, 859, 1498, 1509, 2274, 2276, 2297, 2298, 2300, 3070, 3074, 3077, 3081 - 3085, 4145, 4959, 4968
 P: 989, 1263
 E: 418

Antitussives

- C: 2355, 3164
 P: 419, 761, 1295

Antiulcer compounds

- C: 2334, 3133, 4274, 5016, 5066, 5067, 5077
 G: 1406
 P: 160, 1030

Antiviral agents

- C: 834, 879, 880, 1566, 1586, 2360, 2365, 5003
 G: 234
 P: 130, 398, 826, 1314
 E: 2120

Appetite depressants

- C: 865, 3142, 3439

Arsenic, *see* Cations, inorganic, analytical group IIB

—, organo-compounds

- G: 371, 1617

Asphalts, *see* Coal, tar and bitumens, hydrocarbons in

Aza heterocyclics

- C: 4933, 4935
 G: 851, 1355, 1498, 2672, 2719

Azo and related compounds

- C: 1063, 1966
 G: 902, 1159, 1196, 1502, 1612, 2316, 2508
 P: 451, 678

Azulenes

- G: 747

B

Bacteria

- G: 998, 1077, 1145, 1160, 1335, 1360, 1373, 1445, 1492, 1513, 1806, 1842, 1845, 1858, 1914, 2149, 2161, 2172, 2179, 2192, 2319, 2402, 2527, 2610, 2706, 2708, 2709

- P: 197 - 199, 641, 1346

- E: 1291

—, metabolites and taxonomy, *see* Cells, viruses and microorganisms, metabolites

Barbiturates, sedatives, hypnotics and narcotics

- C: 828, 833, 886, 892, 2403, 3282, 4280, 4291, 4298, 5018, 5049
 G: 1048, 1068, 1197, 1268, 1401, 1423, 1432, 1706, 2087
 P: 166, 592, 788, 1012, 1018, 1069, 1072

Barium, *see* Alkaline earthsBeryllium, *see* Cations, inorganic, analytical group III

Benzodiazepines

- C: 4196, 4237, 4248, 4285, 4296, 4297, 4300
 G: 2066, 2070, 2082, 2088, 2120, 2122, 2627
 P: 791, 1025, 1026, 1034, 1299, 1313

Bile acids and alcohols

- C: 347 - 354, 1206 - 1209, 1939, 1940, 2227, 2765 - 2767, 3438, 3645, 3646, 4637 - 4640
 G: 172, 173, 536 - 539, 1079, 1082, 1101, 1877, 1878, 2542
 P: 102 - 106, 308 - 310, 519, 734, 735, 929 - 935, 1015, 1189 - 1195

Bile pigments

- C: 709, 710, 2224 - 2228, 4077, 4081 - 4084, 4924
 P: 767, 971, 974, 975
 E: 720

Biopolymers

—, reviews

- C: 981, 2519

—, techniques

- G: 2740

- E: 393, 1415

—, applications

- G: 491, 1124, 1800, 2018
see also DNA; Enzymes; RNA; Proteins

Biphenyl and derivatives

- C: 142, 2302
 G: 93, 129, 130, 245, 420, 480, 481, 483, 716, 722, 744 - 746, 764, 765, 773, 810, 834, 843, 849, 898, 1166, 1193, 1194, 1197, 1245, 1259, 1312, 1385, 1481, 1497, 1715, 1787, 1914, 2131, 2265, 2270, 2329, 2357, 2369, 2377, 2390, 2392, 2477, 2572, 2577, 2579 - 2581, 2684, 2685, 2739

Bismuth, *see* Cations, inorganic, analytical group I and IIA

Bitter substances

- C: 365, 3657
 P: 618, 741, 1199

 α -Blocking agents

- C: 2372

 β -Blocking agents, *see* Adrenergic and adrenergic blocking agents

Boranes and derivatives of boric acid

- G: 1499, 2018, 2200
 P: 142

Boron compounds, inorganic

G: 2200

P: 633

Bronchodilators

C: 811, 1621, 1626, 3013, 4227, 4290, 4293, 5110

P: 1008, 1015, 1027

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Cadmium, *see* Cations, inorganic, analytical group I and IIACaesium, *see* Alkali metalsCalciferols, *see* Vitamins, D groupCalcium, *see* Alkaline earths

Calcium antagonists

C: 806, 1603, 2408

G: 2116, 2620

Cannabis constituents, *see* Hallucinogens

Capsaicin

P: 810

Carbamates, *see* Pesticides, carbamates

Carbazoles

C: 202

G: 720, 741, 1146, 1155, 1371, 1559, 1675, 2058, 2307, 2723

Carbohydrates

C: 232 - 258, 111 - 1125, 1865 - 1894,

2681 - 2711, 3512 - 3562, 4540 - 4574

G: 144 - 150, 511 - 514, 933, 934, 1316, 1317, 1794 - 1809, 2523 - 2527

P: 22 - 38, 228 - 240, 468 - 474, 662 - 674, 853 - 862, 1092 - 1104

E: 38 - 56, 446 - 465, 770 - 775, 1043 - 1055, 1347 - 1367, 1835 - 1845

—, reviews and books

C: 241, 4550

G: 112, 148, 866, 1536, 2157, 2402

P: 469, 828, 860, 1096

—, general techniques and theory

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G: 56, 1204, 1794, 2525

P: 32, 232, 853, 859, 1070, 1092, 1097, 1099

—, applications

—, —, non-biological

C: 1125, 2681, 3536, 4545

G: 512, 581, 1802, 2740

P: 25, 228, 230, 231, 469, 663, 855, 1102, 1103

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—, —, food products

C: 1118, 2691, 3522 - 3524, 3528, 3534, 4546

G: 705, 1109, 1112, 1137, 1795, 1799, 1804, 1805, 2259

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—, —, microorganisms

C: 234, 237, 1873; 3519, 3530

G: 514, 1077, 1804, 1806 - 1808, 2149, 2325, 2402

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—, —, plants

C: 1871, 2689, 3525, 4548

G: 145, 847, 933, 970, 1800, 1801, 1805, 1808

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G: 545, 548, 550, 552, 556, 731, 733, 1286, 1331, 1500, 1732, 1734, 1887, 1890, 1895, 1901, 1903, 1906, 2268, 2269, 2549, 2554, 2592
P: 392, 823, 976, 1203
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- C: 219 - 221, 1841, 2354
 G: 136, 178, 347, 2630
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- C: 201, 202, 265, 951(review), 953 - 956, 1094, 1095, 1833, 1834, 4385, 4387, 4392, 4932
 G: 123, 125, 127, 152, 264, 269, 271, 272, 275, 300, 349, 372, 376, 416, 451, 464, 467, 474, 475, 478, 485, 486, 488, 582, 715, 716, 718, 720, 722, 725, 728, 730, 739, 740, 743, 791, 801, 820, 826, 845, 851, 871, 902, 910, 913, 1007, 1142, 1146, 1152, 1181, 1196, 1273, 1280, 1292, 1296, 1301, 1302, 1497, 1521, 1528, 1561, 1604, 1664, 1709, 1761, 1770, 1786, 1947, 2263, 2265, 2274 - 2276, 2285 - 2287, 2297, 2308, 2360, 2383, 2392, 2458, 2459, 2461, 2512, 2516, 2544, 2579, 2691, 2695, 2697, 2700, 2737

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- P: 550, 969

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Cyanides, see Halides and other inorganic halogen compounds

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- G: 1511

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- C: 810, 814, 823, 830, 835, 851, 855, 858, 859, 861, 862, 875, 888, 1449, 1451, 1546, 1582, 1587, 1598, 1600, 1601, 1608, 1611, 1612, 1615, 2260, 2346, 2362, 2380, 2400, 2405, 2414, 3131, 3170, 3188, 3322, 4145, 4194, 4195, 4201, 4211, 4214, 4224, 4242, 4246, 4247, 4254, 4259, 4266, 4269 - 4271, 4273, 4284, 4292, 4504, 4999, 5011, 5032, 5035, 5051, 5070, 5081, 5094, 5108, 5122
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- C: 3165

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- C: 3411, 4028
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- G: 54, 113, 139, 140, 389, 398, 484, 500, 503 - 505, 818, 841, 923 - 931, 1187, 1193, 1198, 1225, 1263, 1312 - 1314, 1522, 1614, 1650, 1686, 1716, 1786, 1789 - 1791, 2574

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- C: 3037
 G: 190, 191, 293, 455, 585, 590, 697, 751, 1009, 1127, 1174, 1373, 1604, 2497, 2658
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- G: 2031

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- C: 845, 856, 867, 868, 893, 1547, 2363, 2411, 2419, 2436, 3013, 3120, 3156, 3159, 3166, 3167, 3468, 4192, 4205, 4238, 4251, 4276, 4281, 5007, 5041, 5056, 5059, 5069, 5071
 G: 2051, 2092, 2106, 2560, 2625
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—, techniques

- C: 2595, 3006, 3007, 3009, 4044, 4052, 4911
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—, chemically modified

- C: 1441

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—, —, non-biological applications (in vitro reactions)

- C: 693, 2208
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—, —, microorganisms

- C: 2205
 G: 571, 998, 1183
 P: 964
 E: 212, 392, 399, 400, 405 - 407, 411, 416, 706, 715, 940, 987, 1738, 1747, 1750, 1753, 1761, 1762, 1780, 2097, 2100 - 2102, 2104

—, —, plants

- C: 692, 3008
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—, —, animal material

- C: 694, 2207, 2208, 2595, 4051
 G: 1366
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—, complex mixtures of DNA and RNA and DNA-RNA hybrids

C: 3006, 3007

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—, reviews and books

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—, theory and techniques

C: 104, 1524, 4988
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—, applications

C: 790, 791, 1523, 2318, 3095-3097, 3232, 4169, 4170, 4985, 4986, 4989
 G: 1502, 2266, 2278, 2294, 2302, 2304, 2686, 2694
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Ecdysones and other insect hormones of steroid nature

C: 355, 356, 3647, 4601
 G: 978
 P: 936

Elemental analysis (including functional group analysis)

G: 847, 1194, 1509, 1539, 1558, 1593, 1623, 1625, 1714, 2184, 2185, 2290, 2374, 2487, 2547, 2659, 2705

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C: 419, 2006, 2009, 2013, 2016, 2815, 3743, 4693
 P: 1220

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C: 199, 4401, 5147
 G: 54, 126, 267, 282, 441, 503, 595, 599, 608, 611, 679, 690, 696, 700, 702, 708, 713, 744, 745, 747, 777, 840, 841, 849, 856, 918, 1004, 1020-1023, 1026, 1027, 1041, 1106, 1164, 1259, 1378, 1385, 1387, 1395, 1457, 1471, 1484, 1488, 1524, 1580, 1613, 1648, 1715, 1785, 1949, 1951, 1983, 1984, 1989, 1990, 1991, 1994, 1998-2000, 2128, 2131, 2180, 2206, 2207, 2221, 2228, 2229, 2237, 2238, 2243, 2245, 2258, 2326, 2387, 2390, 2430, 2573, 2680, 2684, 2710
 P: 8

—, reviews and books

G: 678, 746, 2729

Enzymes

C: 576-668, 1366-1424, 2115-2182, 2921-2974, 3923-4023, 4813-4886
 G: 999, 1935
 P: 339, 1231
 E: 281-369, 626-692, 921-966, 1187-1240, 1630-1716, 1999-2070

—, general techniques

C: 468, 1366, 2039, 2921, 2922, 4813
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—, activity measurement

C: 4840
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- , complex mixtures and uncompletely defined enzymes
C: 665-668, 2182, 2971, 4022, 4023, 4886
E: 368, 369, 691, 692, 966, 1101, 1197, 1236, 1239, 1240, 1715, 1716, 2069, 2070
- , —, structural studies
C: 4708
- Ephedra alkaloids
C: 824, 1815
G: 2055
P: 208, 613, 970
E: 1277
- Epoxides
C: 1109, 1111, 1485, 3035, 3411
G: 1828, 2146, 2550, 2687
P: 621, 661, 937, 1186, 1187, 1254
- Epoxy resins
C: 133
G: 2008, 2294, 2589
- Ergot alkaloids
C: 698, 4061, 4071
P: 419, 452, 764
- Essential oils
C: 978, 2772, 4644
G: 80, 176-178, 389, 426, 542-548, 982-986, 1026, 1128, 1242, 1244, 1347, 1348, 1437, 1732, 1880, 1884-1888, 1890-1893, 1895, 1898, 1900, 1901, 1903-1908, 2224, 2545-2551
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- Ethers
—, aliphatic ethers
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- Flavonoids and other γ -pyrone derivatives
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C: 3237, 4171, 4987
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G: 2157

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—, —, non-biological

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—, —, microorganisms

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P: 633, 1050

Nitrogen oxides

G: 257, 452, 685, 687, 753, 1097, 1143,
1217, 1627, 2192, 2193, 2197, 2718

Nitrosamines

C: 387, 2774

G: 265, 552, 556, 807, 860, 987, 1176,
1351-1353, 1472, 1494, 1507, 1910,
2002, 2226, 2555

P: 1207

Nitroso compounds

C: 367, 1211, 1238

G: 255, 441, 676, 807, 1123, 1140, 1485,
2125, 2316, 2430

P: 1207

Noble gases

G: 256, 257, 318, 328, 366, 369, 683,
1143, 1233, 2186, 2189, 2190, 2305,
2445, 2451, 2661

Noble metals, *see* Platinum metals and gold

Nucleic acids, *see* DNA; RNA

Nucleosides, *see* Purines, pyrimidines, nucleosides, nucleotides

Nucleotides, *see* Purines, pyrimidines, nucleosides, nucleotides

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Oestrogens, techniques and theory

C: 337, 338, 3631, 3633, 3635, 3636

G: 1417, 1656, 1867

P: 88, 515, 1069

—, applications, non-biological

C: 336, 1933, 2762, 4632

G: 1864

P: 516, 924, 925, 1064

—, —, biological

C: 326, 339, 584, 1201, 1934, 2761

3634, 3637, 3638, 4631

G: 971, 1417, 1872, 1874, 2175, 2538-2540

P: 85, 90-93, 728, 729, 923

—, non-steroidal

C: 4218, 4242

G: 222

P: 222, 1181

Oil additives

C: 2468, 2570, 2679, 3086, 3087, 3215, 3239

G: 1128, 2285, 2286

P: 195, 196, 214, 386, 394, 486, 583, 639, 640, 651, 659, 730, 783, 810, 825, 939, 1003, 1059, 1077, 1082, 1084, 1269, 1342, 1343

Oligonucleotides and polynucleotides

C: 691, 1425, 1433, 1435, 2030, 2187, 2189(review), 2994, 2996, 3001, 4029, 4034, 4849, 4909

P: 133, 533, 535

E: 373, 386, 989, 1242, 1243, 1248

Oligosaccharides

C: 232-234, 236-236, 247, 248, 315, 1115, 1120, 1121, 1123, 1136, 1141, 1866, 1869, 1870, 1877, 1884, 2043, 2050, 2682, 2684, 2685, 2692, 2954, 3513-2515, 3518, 3521, 3526, 3527, 3529, 3532-3534, 3542, 4540, 4542, 4544, 4547, 4552, 4555, 4556, 4561

G: 147, 148, 541, 992, 1109, 1270, 1536, 1794, 1799, 1805, 2259, 2526, 2527

P: 23, 24, 26-29, 33, 34-37, 228, 232-234, 236-238, 468, 470, 472, 474, 662, 663, 665, 669, 838, 855, 857, 861, 862, 1093, 1095-1097, 1100, 1101

E: 50, 186, 458, 1043

Opium alkaloids

C: 30, 699, 703, 2216, 2218, 3017, 4062, 4065, 4919, 4921

G: 241, 1002, 1197, 1429, 1936, 1938, 2052, 2330

P: 211, 346, 419, 543, 549, 613, 761, 1033, 1069, 1248

Organoleptics

G: 103, 104, 108, 187, 246, 262, 265, 274, 286, 295, 304, 311, 314, 316, 353, 357, 376, 453, 542, 549-551, 667, 673, 688, 697, 704, 723, 727, 731, 733, 750, 857, 858, 861, 899, 985, 986, 1041, 1078, 1099, 1105, 1130, 1131, 1158, 1170, 1264, 1281, 1286, 1373, 1441, 1462, 1463, 1468, 1469, 1474, 1486, 1490, 1491, 1494, 1690, 1720, 1721, 1732-1734, 1797, 1889, 1900, 1906, 1910, 1942, 2048, 2127, 2163, 2217, 2224, 2225, 2230, 2232, 2233, 2236, 2239, 2249-2251, 2253, 2255, 2261, 2269, 2296, 2328, 2353, 2365, 2366, 2376, 2380, 2391, 2394, 2493, 2495, 2555, 2463, 2667, 2676, 2689, 2694, 2708, 2726

Organometallic compounds

G: 248, 268, 315, 371, 593-595, 1010, 1011, 1015, 1025, 1196, 1376-1378, 1727, 1947, 1949, 1950, 2194, 2381, 2393, 2566, 2567, 2701, 2717, 2736

P: 828

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—, —, reviews and books

G: 10, 1194, 1537

P: 362

Oxazines

G: 2679

Oxazoles and isoxazoles

G: 1105, 2249, 2262

P: 1203

Oxazolines

G: 653, 2241

P: 1254

Oxidoreductases, acting on the C-OH group of donors (E.C. 1.1.-.-)

C: 327, 576, 579-582, 1424, 2115, 2119, 2122, 2126, 2925, 2926, 2928, 2930, 2932, 2934, 3926, 3932, 3933, 3935, 3944, 3965, 4817, 4819, 4825, 4831

E: 281, 286, 287, 294, 631, 634-637, 923, 926, 927, 1187, 1188, 1239, 1630, 1632, 1637-1639, 1642, 1653, 1673, 1866, 1916, 2001-2004, 2008, 2123

—, —, structural studies

C: 587, 590

E: 291

—, acting on aldehyde or keto group of donors (E.C. 1.2.-.-)

C: 577, 585, 2120, 2924, 3931, 3957, 3965, 4023, 4823

E: 282, 290, 925, 1039, 1636, 1640, 1673

- , —, structural studies
 - C: 1370, 1372, 1372, 2029
 - E: 638
- , acting on CH-CH group of donors (E.C. 1.3.-.-)
 - C: 593, 3928, 4826
 - E: 284
- , acting on the CH-NH₂ group of donors (E.C. 1.4.-.-)
 - C: 588, 1367, 1369, 2124, 2125, 2931, 3397, 4814
 - E: 296, 928, 1641
- , —, structural studies
 - C: 586
- , acting on CH-NH group of donors (E.C. 1.5.-.-)
 - C: 2933
- , acting on reduced NAD or NADP as donor (E.C. 1.6.-.-)
 - C: 584, 591, 594, 1373, 1375, 2116, 3397, 3925, 3934, 3939, 3942, 3944, 4820, 4830
 - E: 292, 627, 639, 922, 929, 1091, 1634, 1643, 2006, 2011
- , —, structural studies
 - C: 3770, 4829
 - E: 283
- , acting on other nitrogenous compounds as donor (E.C. 1.7.-.-)
 - C: 2121, 3930
- , acting on the sulphur group of donors (E.C. 1.8.-.-)
 - C: 3923
 - E: 930, 1635
- , acting on a haem group of donors (E.C. 1.9.-.-)
 - C: 2117, 2118, 2928, 2929, 3397, 3938, 4816
 - E: 293, 629, 641, 931, 1189, 1633, 1652, 1654, 2000
- , acting on H₂O₂ as acceptors (E.C. 1.11.-.-)
 - C: 583, 584, 1368, 2856, 3787, 3936, 3940, 3942, 4818, 4822
 - E: 628, 633, 924, 1190, 1644, 1645, 1647, 1651, 1999, 2005, 2007, 2009
- , acting on single donors with incorporation of oxygen (oxygenases) (E.C. 1.13.-.-)
 - C: 595, 2927, 3929
 - E: 630, 1648
- , acting on paired donors with incorporation of oxygen into one donor (hydroxylases) (E.C. 1.14.-.-)
 - C: 578, 592, 2123, 3927, 3944, 4827
 - E: 285, 288, 289, 295, 642, 1646
- , —, structural studies
 - C: 4821
- , acting on superoxide radicals as acceptor (E.C. 1.15.-.-)
 - C: 589, 3945
 - E: 632
- , —, structural studies
 - C: 460, 4714
- , activity measurements
 - C: 3592
 - G: 1820, 2181
- , other and uncompletely identified oxidoreductases (E.C. 1.99.-.-)
 - C: 1371, 3924, 3941, 3943, 4815, 4824
 - E: 622, 640, 1631, 1650
- , —, structural studies
 - E: 2010
- Oxo compounds, reviews
 - G: 2162, 2403
 - P: 828, 1091
 - E: 554 - 558
- , general techniques
 - C: 96, 1112, 1860, 1861
 - G: 29, 65, 99, 103, 114, 132, 385, 388, 398, 400, 404, 412, 427, 442, 457, 465, 1197, 1219, 1225, 1232, 1239, 1383, 1626, 1639, 1640, 1650, 1668, 1675, 1682, 1686, 1688, 1718, 1727, 2403, 2415, 2416, 2444, 2448, 2463, 2491
 - P: 910
- , aliphatic aldehydes and ketones
 - C: 30, 224, 225, 227, 228, 1110, 1857, 1862, 1863, 2513, 2680, 3509, 4536, 4539
 - G: 29, 87, 114, 132, 134, 143, 288, 289, 295, 296, 301, 331, 346, 353, 382, 385, 388, 400, 404, 412, 442, 468, 506, 509, 510, 626, 665, 667, 697, 717, 726, 727, 739, 749, 758, 759, 767, 771, 787, 788, 800, 814, 815, 818, 821, 823, 827, 858, 862, 863, 932, 1089, 1105, 1115, 1141, 1148, 1149, 1158, 1186, 1196, 1218, 1219, 1232, 1235, 1239, 1282, 1315, 1320, 1383, 1407, 1430, 1431, 1439, 1441, 1445, 1464, 1466, 1468, 1469, 1476, 1486, 1490, 1492, 1500, 1526, 1551, 1593, 1626, 1639, 1640, 1650, 1658, 1668, 1682, 1686, 1688, 1702, 1705, 1716, 1718, 1733, 1735, 1792, 1890, 1893, 1909, 1974, 1975, 2005, 2007, 2024, 2031, 2141, 2148, 2153, 2154, 2162, 2170, 2195, 2201, 2223, 2248, 2249, 2253, 2255, 2262, 2273, 2284, 2288, 2296, 2318, 2341, 2347, 2355, 2391, 2416, 2444, 2463, 2482, 2491, 2495, 2633, 2670, 2677, 2687, 2696, 2708
 - P: 115, 281, 317, 851, 1002, 1060, 1141
- , cyclic aldehydes and ketones
 - C: 96, 99, 230, 992, 1369, 1859, 2679, 3280, 3422, 3482, 3505 - 3507, 3510, 4538
 - G: 141, 261, 299, 310, 346, 347, 385, 389, 441, 442, 457, 465, 734, 759, 853, 877, 1049, 1150, 1225, 1718, 1776, 1778, 1888, 1890, 2024, 2053, 2124, 2176, 2212, 2249, 2258, 2277, 2388, 2430, 2482, 2550, 2563, 2670
 - P: 20, 21, 218, 428, 430, 445, 642, 1090

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- G: 37, 256, 257, 318, 328, 358, 366, 369, 683, 830, 1095, 1096, 1098, 1143, 1172, 1233, 1495, 1611, 1623, 1627, 1660, 1673, 1691, 2275, 2305, 2451, 2461, 2487, 2705

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Panthothenic acid and coenzyme A

- C: 2262, 3049, 3566, 4108
G: 2216, 2570
P: 982

Papaveraceae alkaloids (excluding opium alkaloids)

- C: 1442, 4917
P: 350, 1069
E: 719, 1784

Penicillins (incl. carbapenem antibiotics)

- C: 765, 767, 771, 772, 774, 780, 781, 1497, 1505, 1506(review), 1513, 2271, 2275, 2283, 2287, 3073, 3079, 3080, 4144, 4153, 4156, 4157, 4159, 4160, 4963, 4964, 4966, 4969, 4975
G: 270, 1193, 1980
P: 179, 321, 372, 772, 993, 1270, 1343

Peptide (and amino acid) antibiotics

- C: 763, 766, 779, 1495, 1508, 2272, 2277, 2285, 4137
P: 119, 373, 376

Peptides

- C: 414 - 454, 1265 - 1281, 2002 - 2024, 2799 - 2820, 3705 - 3747, 4682 - 4706
G: 1934
P: 123 - 128, 326 - 338, 530 - 534, 755, 952 - 955, 1220 - 1226
E: 79 - 88, 477 - 481, 788 - 792, 1064 - 1069, 1383 - 1391, 1868 - 1871

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- P: 828

—, techniques

- C: 432, 436, 454, 455, 1050, 1068, 1268, 1272, 1277, 1741, 1984, 1986, 1993, 2008, 2019, 2033, 2036, 2808, 3400, 3430, 3767, 3718 - 3720, 3767, 3777, 3780, 3785, 4692, 4696, 4704, 4706
G: 566, 1934, 1977
P: 331, 332, 532, 533, 1221, 1226
E: 79, 85, 789, 1298, 1871

—, —, DABTC-derivatives

- C: 2100

—, applications, non-biological

- C: 417, 420, 430, 451, 452, 543, 751, 1271, 1276, 2024, 2799, 2810, 2817, 2818, 3716, 3735, 3739, 3746, 4682, 4689, 4701, 4703
G: 2740
P: 123, 127, 144, 531, 954, 1221, 1223
E: 478, 790, 792, 1383, 1390

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- C: 580, 587, 751, 1419, 2022, 2030, 2100, 2202, 3705, 3730, 3753, 3993, 4697, 4700

G: 998

- P: 128, 144, 326, 334, 337, 376, 534, 753, 1002, 1219, 1227, 1228

- E: 86, 287, 791, 969, 980, 1108

—, —, plants

- C: 414, 428, 2812, 4768

- P: 336, 947, 1002, 1224

- E: 80, 81, 84, 88, 526, 630, 1066, 1116

—, —, animal material

- C: 415, 421 - 427, 429, 431, 433 - 435, 437 - 439, 441, 443, 446, 450, 503, 518, 543, 635, 731, 1117, 1133, 1134, 1136, 1270, 1273, 1278, 1281, 1310, 1321, 1324, 1370, 1386, 2003 - 2005, 2007, 2010 - 2012, 2014, 2020, 2023, 2024, 2094, 2137, 2605, 2800, 2802 - 2804, 2806, 2811, 2814, 2819, 3709 - 3711, 3714, 3715, 3723 - 3725, 3727, 3731 - 3733, 3736, 3738, 3741, 3743, 3744, 3859, 3899, 3946, 4014, 4323, 3683, 4686, 4687, 4691, 4695, 4702, 4756, 4759, 4821, 4859
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- E: 83, 87, 184, 206, 213, 248, 278, 345, 408, 456 - 458, 477, 481, 540, 546, 559, 592, 678, 932, 937, 1064, 1067 - 1069, 1160, 1214, 1262, 1384, 1387, 1388, 1391, 1869, 1871, 1969, 2042

—, —, food products

- C: 2801

- G: 1737

- E: 480

Peroxides

- C: 1864, 2677

- G: 768, 1187, 1857, 2195

- P: 517, 1108

Pesticides

- C: 782 - 789, 1515 - 1521, 2301 - 2317, 3086 - 3094, 4162 - 4168, 4976 - 4984

- G: 199 - 204, 599 - 613, 1020 - 1027, 1385 - 1392, 1982 - 2002, 2572 - 2586

- P: 148 - 153, 378 - 381, 568 - 578, 773 - 776, 995 - 1001, 1272 - 1281

- E: 997

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- C: 782

- G: 1457, 1712, 1990, 2406, 2574

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- C: 2301, 5153

- G: 434, 438, 449, 601, 610, 709, 710, 841, 856, 1471, 1987, 2224, 2634, 2724, 2733, 2734

- P: 148, 773, 938

- E: 997

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 - C: 784, 1515, 1516, 2307-2310, 3087, 3088
 - G: 199, 905, 906, 1277, 1285, 1992, 2000, 2244, 2733
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 - C: 1811, 2303, 2307, 4162, 4163, 4976, 4977
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 - C: 783, 2304-2306, 3086, 4164
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 - C: 804, 1541, 3105, 3115, 3266, 3268, 3269, 3274
 - G: 779, 780, 1193, 1227, 2045, 2606
 - P: 420, 443, 785, 828, 1290
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 - C: 1031, 1035, 1567, 1784, 1809, 2341, 2350, 4186, 4189, 4191, 4213, 4292, 4508, 5004, 5010, 5014, 5054
 - G: 225, 356, 653, 872, 1070, 1072, 1251, 1401, 1405, 1407, 1408, 2044, 2507, 2605, 2607, 2611
 - P: 8, 587, 804, 1006
 - E: 2120, 2121
- , systematic analysis and screening programs
 - C: 5013
 - G: 660, 1071, 1432
 - P: 419, 587
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 - C: 1118, 2351, 2643, 3108
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- , auxiliary compounds (excipients)
 - C: 1555, 2439
 - G: 205, 620, 1049, 1394, 1505, 2064, 2202, 2296, 2522
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 - C: 2318, 4170, 4173, 4987
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 - G: 214, 215, 261, 286, 314, 494-496, 704, 731, 765, 771, 851, 902, 917-920, 929, 931, 1107, 1127, 1131, 1183, 1188, 1347, 1408, 1468, 1493, 1522, 1525, 1702, 1703, 1709, 1726, 1777-1779, 1790, 1890, 2031, 2124, 2135, 2163, 2170, 2242, 2249, 2256, 2257, 2270, 2286, 2292, 2348, 2358, 2366, 2369, 2375, 2376, 2378, 2386, 2388, 2399, 2509, 2664, 2667, 2673, 2715, 2728, 2735, 2738, 2740
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1907, 1936, 1937, 1971, 1991, 1991,
1998-2001, 2144-2147, 2164, 2207,
2212, 2227, 2240, 2244, 2398, 2535,
2548, 2561, 2563, 2569, 2584, 2585,
2618, 2640, 2641, 2679, 2704, 2707
- P: 14, 15, 107, 181, 182, 184, 314,
424-430, 615-622, 809, 811-817,
1037, 1038, 1081, 1087, 1091, 1163,
1198, 1315-1322
- E: 1049
- Plasticizers, stabilizers (including
other additives)
- C: 2332, 3361, 4176, 4183
- G: 214, 512, 623, 695, 745, 1030,
1042, 1352, 1393, 1397, 1495, 1711,
1713, 2224, 2245, 2298, 2304, 2338,
2587, 2593, 2603, 2665, 2685
- P: 207, 211, 388, 783, 1287, 1289
- Plastics and other synthetic polymers
(including intermediates)
- C: 796-803, 1529-1540, 2323-2332,
3101-3104, 4174-4184, 4991-4998
- G: 205-218, 614-629, 1028-1045,
1393-1400, 2003-2040, 2587-2604
- P: 157, 387-389, 783, 784, 1004, 1005,
1287-1289
- E: 724, 1282, 1283, 1791, 1792, 2118,
2119
- , reviews and books
- C: 799, 2593, 3276, 4415
- G: 622, 1397, 1541, 2016, 2023
- P: 828, 1288
- , techniques and theory
- C: 146, 174, 798, 802, 803, 1013, 1529,
1530, 1536-1538, 1739, 2323-2325,
2328, 2548, 2551, 2651, 3101, 3103,
3104, 4177, 4178, 4182, 4992, 4997,
4998
- G: 207, 211-213, 886, 1030, 1038, 1044,
1208, 1253, 1596, 2021, 2029, 2229,
2511, 2592, 2595

Platinum metals and gold

C: 930, 1636, 1648, 2457, 3198, 4357
 G: 1954, 1964, 1965, 2480
 P: 187, 188, 434, 435, 626, 627, 629,
 820, 1041, 1048, 1327, 1329
 E: 1286

Polyamides, polyimides and their intermediates

C: 2326, 4179
 G: 623, 626, 629, 1033, 1044, 1396,
 1541, 2013, 2026

Polyamines, *see* Amines, polyamines and their derivatives

Polycarbonates

C: 2330
 G: 1034, 1393, 2031

Polyene antibiotics

C: 2295, 4154

Polyether antibiotics

C: 1496, 2298, 3078, 4971, 4974
 G: 1400
 P: 566, 1264-1267, 1343

Polyethers

G: 2028, 2304

Polynucleotides, *see* Oligo- and polynucleotides

Polyolefins

C: 1719, 1818, 4995
 G: 210, 214, 577, 614, 615, 624, 626,
 914, 1035, 1038, 1041, 1043, 1393,
 1541, 1713, 2006, 2024, 2026, 2037,
 2040, 2515, 2593, 2594, 2597, 2600,
 2604, 2664, 2701

Polyoxyethylene and related polymers

C: 1818
 G: 1029, 1520, 1560, 2032

Polysaccharides

C: 246, 250, 1140, 1818, 1879, 1883,
 1891, 2697, 2699, 2702, 2705, 2706,
 2740, 3538, 3540, 3547, 3553, 3558,
 4568
 G: 463, 705, 933, 1118, 1124, 1270,
 1800, 2018, 2740
 P: 240, 1104
 E: 52, 1051

—, structure investigation

C: 501, 2710
 G: 1796, 1800, 1806, 1807, 2527
 P: 854
 E: 1051

Polyurethanes

C: 1531, 1539
 G: 620, 1917, 2036, 2245, 2338

Porphyrins and metalloporphyrins

C: 83, 706-708, 730, 1452-1454,
 2221-2223, 2928, 3025-3028, 4078-
 4081, 4504, 4922, 4923
 G: 575
 P: 551, 840, 922, 971-973

Potassium, *see* Alkali metals

Pregnane derivatives, techniques

C: 331, 333, 334, 1050, 1930, 1932,
 3622, 3628
 G: 828, 1656, 1865, 1867, 1868
 P: 511, 914, 1069

—, applications, non-biological

C: 320, 1928, 3629
 G: 1407
 P: 83, 86, 87, 512, 513, 717, 921,
 1015, 1174, 1176, 1177

—, —, biological

C: 318, 322-324, 326, 327, 332, 555,
 1931, 2752, 2755-2759, 2900, 2911,
 3625-3627, 3630
 G: 531, 971-974, 1080, 1090, 1341,
 1343, 1344, 1869, 1871, 2151, 2167,
 2175, 2507, 2619
 P: 79, 81, 82, 85, 89, 715, 716, 719,
 722-725, 731, 915, 919, 920
 E: 1731

Propellants

C: 1212, 2973, 4021

Prostaglandins and thromboxanes

C: 285-290, 1165-1171, 1910, 1911,
 2724-2726, 2728-2730, 3594, 3595,
 4598-4605

G: 156, 252, 523, 524, 940-944, 1809,
 1831, 2049, 2091, 2509, 2703
 P: 43, 257, 275, 291, 866, 1114-1116

Protamines, histones and other nuclear proteins (including chromatin proteins)

C: 514-519, 544, 1251, 1325, 1326,
 2080, 2081, 2880, 2881, 3855-3859,
 4053, 4761, 4762, 4915
 E: 17, 201-214, 565-579, 864-873,
 990, 991, 1145-1151, 1272, 1534-
 1547, 1564, 1764, 1765, 1884, 1941-
 1943, 1951

—, —, structural studies

C: 3857, 4707, 4715
 P: 124
 E: 311

Proteins

C: 465-575, 1289-1365, 2031-2114,
 2831-2920, 3771-3922, 4721-4812
 P: 129, 756, 757, 957, 958, 1230
 E: 92-280, 487-625, 796-920, 1073-
 1186, 1405-1629, 1873-1998

—, reviews and books

C: 987, 3773, 3892, 3796
 G: 2402
 E: 736

—, general techniques

C: 465-468, 1289-1294, 1724, 1791,
 1800, 1801, 1976, 2031-2041, 2595,
 2637, 2639, 2831-2845, 2921, 3385,
 3400, 3771, 3772, 3774-3791, 3793-
 3803, 4721-4724
 P: 1067, 1230

E: 17, 19, 20, 23, 29, 32, 34, 37, 92-
 106, 380, 393, 429, 440, 487, 488-
 495, 750, 762, 765, 768, 796-804,
 1013, 1020, 1038, 1074-1086, 1319,
 1328, 1405-1417, 1821, 1828-1831,
 1873-1882

—, —, sequence and structure analysis

C: 456, 458, 463, 1287, 2027, 2028,
 3758, 3761, 3762, 4711, 4720
 G: 185
 P: 1227-1229
 E: 1404

- , subcellular particles and viruses
(including ribosomal proteins)
C: 469-471, 476, 488, 504, 514, 1295-1297, 2044-2047, 2049, 2050, 2087, 2846-2850, 2855, 3789, 3804-3810, 3812, 3813, 3831, 3922, 4725, 4973
G: 1935
E: 107-128, 134, 137, 151, 226, 235, 252, 438, 439, 496-506, 508-522, 542, 805-815, 886, 890, 898, 1087-1110, 1115, 1118, 1123, 1131, 1150, 1181, 1418-1447, 1454, 1582, 1589, 1627, 1629, 1876, 1883-1895
- , —, structural studies
C: 3752, 4718
E: 311, 1429
- , microbial and plant proteins
(including proteins of foods of plant origin)
C: 253, 470, 471, 472(review), 473, 474, 476-481, 519, 528, 556, 692, 1298, 1299, 1302, 1355, 1878, 2051-2060, 2081, 2121, 2851-2856, 3730, 3815-3818, 3820-3822, 3874, 3921, 4725-4729, 4731-4735
E: 51, 88, 126, 129-148, 214, 259, 260, 268, 294, 388, 411, 507, 514, 521-535, 577, 584, 599, 610, 625, 774, 808, 817-833, 869, 876, 989, 1049, 1108, 1112-1120, 1151, 1152, 1177, 1186, 1197, 1307, 1448, 1450-1455, 1457-1463, 1465, 1467-1472, 1508, 1818, 1895-1906
- , —, structural studies
C: 528, 1300, 1301, 1327, 2100, 2829, 4768
E: 203, 212, 273, 483, 1399
- , of blood serum and blood cells
C: 159, 315, 482-489, 491-497, 575, 1144, 1289, 1303-1312, 1343, 1351, 1818, 2061-2076, 2093, 2841, 2859-2877, 2889, 2898, 2911, 3808, 3823-3844, 3858, 3903, 3910, 3915, 3918, 3994, 4736-4739, 4740-4751, 4771, 4776
P: 129, 756
E: 82, 149-163, 165-169, 221, 241, 261, 447, 450, 465, 511, 536-548, 592, 596, 607, 834-851, 897, 1073, 1092, 1121-1134, 1136, 1172, 1473-1502, 1504-1506, 1554, 1555, 1575, 1593, 1821, 1823, 1855, 1907-1919, 1979
- , —, structural studies
C: 490, 1126, 1282, 2089, 2107, 2599, 2860, 3749, 3823, 3826, 3842
E: 446, 485, 540, 1374, 1394, 1397, 1432, 1479
- , structural proteins (except contractile elements)
C: 502-505, 507, 509, 510, 512, 567, 1127, 1135, 1313, 1315, 1316, 1321, 1322, 1818, 2077-2079, 2879, 3562, 3845, 3850-3852, 4566, 4752, 4754, 4755, 4757-4760
E: 117, 170, 171, 180, 182-184, 186, 188, 193-195, 198, 199, 449, 549-553, 559, 561, 563, 564, 854-858, 861, 1137, 1139, 1141, 1144, 1164, 1510, 1511, 1513, 1514, 1517, 1528, 1529, 1533, 1922, 1924, 1928, 1929, 1933, 1935, 1937, 1939, 1940, 1987
- , —, structural studies
C: 243, 501, 1317, 2826, 3765, 3766, 4756, 4757
E: 459, 482, 1398
- , of brain, nerves, cerebrospinal fluid and eye
C: 511, 562, 1295, 1348, 1349, 1351, 1361, 1362, 2108, 2111, 2113, 2918, 2920, 3793, 3886, 3914, 3919, 4753, 4806, 4807
E: 160, 190, 196, 265, 267, 270, 272, 279, 499, 605, 607, 616, 619-621, 623, 624, 852, 873, 896, 912, 914, 920, 1142, 1180, 1183, 1184, 1503, 1614, 1619, 1620, 1625, 1920, 1989, 1991, 1996, 1997
- , —, structural studies
C: 3754, 4709
E: 164, 181, 275, 276, 504, 764, 839, 1393
For eye pigments *see* Pigments, natural
- , of muscle and meat products including related contractile proteins
C: 498-500, 506, 508, 513, 1318-1320, 1323, 2878, 3846-3849, 3853, 3854, 4753
E: 172-179, 185, 187, 189, 191, 192, 194, 197, 200, 560, 562, 603, 852, 853, 859, 860, 862, 863, 1109, 1138, 1140, 1143, 1144, 1427, 1507-1509, 1512, 1515, 1516, 1518-1527, 1530-1532, 1872, 1889, 1920, 1921, 1923, 1925-1927, 1930-1932, 1934, 1936, 1938
- , —, structural studies
C: 1324, 2828, 3750
E: 90, 91, 200, 248, 1067, 1093, 1403
- , of glands and gland products (except mammary gland), various zymogens
C: 530-537, 559, 1337-1339, 1341, 2094, 2095, 2896, 2910, 3740, 3807, 3879-3882, 4774, 4792
P: 715
E: 119, 125, 225-227, 229, 230, 242, 252, 277, 448, 487, 505, 517, 585-587, 874, 881, 885, 886, 888, 898, 899, 1090, 1156-1160, 1162, 1163, 1226, 1431, 1564, 1568-1570, 1624, 1951, 1952, 1954, 1955, 1969, 1982
- , —, —, structural studies
C: 1364, 3759, 4812
E: 509
- , of milk
C: 529, 1336, 2892, 3883, 3913, 4772, 4773
E: 228, 882-884, 887, 1161, 1565-1567, 1571

- , —, structural studies
 - C: 3913
 - G: 2230
- , of eggs
 - C: 530, 2109, 2919
 - E: 269, 280, 916
- , —, structural studies
 - C: 462
- , urinary
 - C: 560, 561, 1358, 2915
 - E: 263, 264, 612-615, 908-911, 1073, 1179, 1284, 1328, 1615-1618, 1911, 1986
- , from neoplastic tissue
 - C: 538-540, 1342, 2099, 2106, 2894, 3551, 3807, 3884, 4812
 - E: 111, 115, 127, 128, 138, 199, 232-234, 237, 509, 517, 588-591, 900, 1150, 1164-1170, 1358, 1420, 1428, 1431, 1434, 1490, 1572-1578, 1893, 1938, 1956-1958
- , —, structural studies
 - C: 3884
 - E: 1576
- , complex mixtures and uncompletely specified proteins
 - C: 565, 567, 568, 574, 575, 960, 1341, 1359, 1360, 1363, 1365, 2108, 2110, 2112, 2114, 2893, 2914, 2916, 2917, 3909, 3917, 3918, 3921, 3922, 4804, 4808, 4809
 - E: 273, 274, 277, 617, 618, 622, 917-919, 1178, 1182, 1185, 1186, 1621-1624, 1627, 1629, 1990, 1993-1995
- , —, structural studies
 - C: 2076, 3755, 3760
 - E: 915, 1402
- Protoberberine alkaloids
 - C: 4073
 - P: 350, 428, 544, 766, 967, 968, 1249, 1250
- Purine alkaloids (xanthines)
 - C: 696, 701, 705, 1061, 1447, 2215, 2217, 2219, 3012, 3013, 3018, 3127, 4059, 4067-4069, 4076, 4244, 4916, 5059
 - G: 464, 470, 828, 894, 897, 908, 1276, 1281, 2051
 - P: 5, 7, 414, 416, 613, 763, 1013, 1069
- Purine antibiotics
 - C: 2281, 2289, 3085, 4137
 - E: 996
- Purines, pyrimidines, nucleotides, nucleosides
 - C: 669-687, 1425-1440, 2183-2201, 2975-2999, 4024-4042, 4887-4909
 - G: 569, 1365, 1366, 2559, 2660
 - P: 130-136, 340-342, 535-539, 758-760, 959-963, 1232-1242
 - E: 370-373, 693, 967, 1241-1243, 1717, 1718, 2071-2073
- , reviews
 - P: 133, 828
- , techniques
 - C: 674, 682, 686, 687, 1050, 1061, 1427, 1428, 1435, 1437, 2185, 2186, 2190, 2191, 2194-2197, 2200, 2201, 2451, 2595, 2978, 2979, 2986, 2987, 2990, 2992, 2999, 3426, 4024, 4028, 4032, 4033, 4041, 4042, 4045, 4887-4889, 4894, 4896, 4898-4900
 - G: 569, 570, 1000, 1365
 - P: 135, 342, 1067
 - E: 371, 967, 1241
- , analogues of purines, pyrimidines, nucleotides and nucleosides
 - C: 669, 671-673, 676, 680, 684, 685, 875, 1426, 1432, 1440, 2184, 2988, 4898
 - G: 1366
- , applications, non-biological
 - C: 670, 675, 678, 683, 1430, 1436, 2188, 2198, 2199, 2975-2977, 2982, 2998, 3085, 3468, 4032, 4037, 4895, 4899, 4902, 4903, 4907
 - G: 406, 995
 - P: 340, 341, 537, 590, 845, 1236, 1239, 1241
 - E: 372, 1717
- , —, enzymic
 - C: 2997, 4891
 - G: 1366
 - P: 1239
- , —, microorganisms
 - C: 677, 691, 1438, 4849, 4906
 - G: 279, 571, 742
 - P: 135, 535, 538, 1232
 - E: 2071
- , —, plants
 - C: 4901
 - P: 131, 539, 959, 960, 1238
- , —, animal material
 - C: 679, 681, 1429, 1431, 1434, 1439, 2127, 2171, 2192, 2193, 2980, 2981, 2983-2985, 2988, 2989, 2991, 2993, 2995, 4025-4027, 4030, 4032, 4035, 4038-4040, 4851, 4854, 4890, 4892, 4897, 4905, 4908
 - G: 1366, 2158
 - P: 130, 132, 134, 136, 195, 536, 758-760, 961-963, 1234, 1235, 1237, 1240, 1242, 1255
 - E: 370, 693, 1718, 2072, 2073
- , —, food products
 - G: 2560
- Pyrene derivatives
 - G: 347, 1485, 2249
- Pyrazines
 - C: 4092
 - G: 2058, 2249, 2676
- Pyrazoles
 - C: 3075
 - G: 2375
- Pyrazolones
 - P: 788

Pyrethrins (and other natural insecticides)
 C: 1030, 1520, 1521, 2316, 2317, 2676, 3092, 2093
 G: 696, 1073, 1154, 1517, 1614, 1682
 P: 153, 571

Pyridine and piperidine derivatives
 C: 712, 1455, 2195, 2231, 2232, 3307, 4091
 G: 65, 274, 281, 371, 385, 389, 398, 412, 442, 576, 579, 581, 720, 825, 826, 851, 948, 1158, 1171, 1200, 1220, 1239, 1355, 1369, 1416, 1551, 1675, 1939, 1941, 2249, 2621

P: 203, 316, 352, 353

—, carboxylic acids
 C: 3032
 G: 776, 2041, 2611
 P: 141, 1298
see also Nicotinic acid and derivatives

Pyridones

C: 718

Pyridoxine, *see* Vitamins, B₆ group

Pyrimidines, *see* Purines, pyrimidines, nucleosides, nucleotides

α-Pyrone derivatives

P: 429

γ-Pyrone derivatives, *see* Flavonoids and other γ-pyrone derivatives

Pyrroles, pyrrolidines and pyrrolidones

C: 3024, 4077

G: 274, 281, 457, 581, 727, 851, 948, 990, 1137, 1138, 1158, 1183, 1355, 1368, 1460, 2170, 2249, 2592, 2696

P: 351, 804

see also Bile pigments, Porphyrins and metalloporphyrins

Pyrrolizidine alkaloids

G: 580

P: 545

Q

Quinoline and isoquinoline alkaloids

C: 4070, 4918

G: 1087

P: 184, 343, 347, 349, 350, 544, 547

E: 1278

Quinolines and isoquinolines

C: 202, 1456, 3307, 4935

G: 229, 230, 386, 651, 720, 747, 820, 851, 1274, 1370, 1391, 1498, 1559, 1675, 2300, 2719

P: 354, 590, 598, 1256

Quinolizidine alkaloids

P: 350, 428, 544

Quinones

C: 202, 226, 1114, 1933, 2054, 2678

G: 60, 378, 469, 682, 742, 848, 902, 1279, 1284, 1502, 1522, 2778

P: 384, 1015, 1285

see also Anthraquinones; Ubiquinones

R

Radiopharmaceuticals

P: 191, 192, 437, 438, 634, 636, 1051, 1053, 1054

Radioprotective agents

C: 2358

Rare earths

C: 1647, 1649, 1651, 2455, 2461, 2463, 2475, 3200, 3212, 4330-4332, 4335, 4345, 4355, 4358, 5130, 5132, 5137

G: 1013, 1093, 1452, 1954, 1959, 1964, 1967

P: 432-434, 625, 628-630, 818, 820, 1044, 1325, 1326, 1332

E: 728, 1803, 2125

Rauwolfia alkaloids

C: 3014

P: 966

E: 1799

Repellents, *see* Pesticides

Resins (including pyrolysis products),

see also Acrylic resins; Epoxy resins; Polyolefins; Rubber; Styrene polymers

—, alkyl

C: 4184

G: 2013, 2294

—, phenolic

G: 208, 215, 1398, 2007, 2008

P: 784

—, polyester

G: 463, 1040, 1253, 1430, 1541, 2013, 2033, 2036, 2597, 2598, 2602

—, polyethylene and polypropylene

glycols

C: 1721, 1818, 4991

G: 1520, 1773, 2022, 2484, 2591

—, poly(vinyl acetate)

C: 4190

G: 209, 213, 217, 618, 2005, 2034, 2035

—, poly(vinyl chloride)

C: 4181

G: 626, 628, 1253, 1395, 2003, 2009, 2019, 2495, 2587, 2590

—, poly(vinylidene fluoride)

G: 1031

—, poly(vinylpyrrolidone)

C: 1818, 4660

Respiratory stimulants

G: 659

RNA, reviews

C: 987

P: 133

—, techniques

C: 690, 2595, 3000, 3005-3007, 4044, 4045, 4050, 4911, 4912

E: 23, 379, 380, 390, 393, 970, 982, 1020, 1256, 1319, 1736, 2079, 2096

- , applications, non-biological
(in vitro reactions)
C: 4043, 4047
E: 375, 376, 387, 694, 971-974,
979, 1719, 1720, 1727, 1749, 2077,
2081
- , —, microorganisms
C: 691, 1818, 2202, 2203, 2595, 3005,
4049, 4910
G: 571, 1183
P: 964
E: 377, 381, 383, 385, 386, 390, 698,
940, 969, 973, 980, 1252, 1255,
1664, 1721, 1724, 1781, 1959, 2075,
2076, 2080
- , —, plants
C: 689, 692, 3001-3003, 4046, 4913
E: 384, 388, 524, 1248, 1249, 1725,
1733
- , —, animal material
C: 688, 2204, 2595, 4048, 4051, 4914
E: 374, 378, 382, 384, 389, 391, 696,
697, 699-701, 968, 976-978, 981,
1244-1247, 1250, 1251, 1253, 1254,
1257, 1630, 1721, 1723, 1726, 1728-
1732, 1734, 1735, 1743, 1994, 2074,
2078, 2082-2084
- , structural studies
C: 691, 2206, 4054, 4056, 4057
P: 964
E: 375, 383, 386, 387, 410, 695, 718,
975, 992, 993, 1251, 1273, 1276,
1722, 1730, 1766, 1767, 1769, 1773,
1774, 1779, 1780, 1782, 2107, 2108,
2111, 2112
- Rodenticides
C: 3091
- Rubber (natural and synthetic)
C: 1532, 1535, 1540, 2327, 2331, 4185
G: 180, 205, 216, 617, 1040, 1043,
1352, 1495, 1507, 1541, 2037, 2039,
2555, 2587, 2601, 2701
- Rubidium, *see* Alkali metals

S

- Saponins and sapogenins
C: 358, 360, 361, 3649, 3651, 3652,
4380, 4642
G: 980
P: 94, 108, 109, 311, 313, 520, 736,
1196, 1197
- Secretolytics
G: 1426
- Sedatives, hypnotics and narcotics
C: 848, 4285, 4292, 4298
G: 189, 223, 243, 631, 2042, 2085,
2113, 2608
P: 165, 175, 418, 419, 421, 598, 613,
799, 808, 1025, 1026, 1306
- Selenium compounds inorganic, *see*
Cations, inorganic, analytical group
IIb

- Selenium compounds, organic
G: 1011, 1607, 1930, 1953, 1954
- Senecio alkaloids
C: 2212
G: 572
- Sexual attractants, *see* Pheromones
- Sialic acids, *see* Glycosaminoglycans
- Silicium compounds, inorganic
C: 937
G: 1509
P: 625
E: 1802
- , organic
C: 729, 1462, 2327, 4102
G: 194, 423, 617, 862, 1011, 1012,
1253, 1279, 1379, 1405, 1502, 1558,
1727, 1774, 1952, 2012, 2020, 2470,
2513, 2603
- Silver, *see* Cations, inorganic, analytical
group I and IIa
- Snake venoms
C: 533, 1340, 1411, 2167
- Sodium, *see* Alkali metals
- Softeners
G: 415
P: 1005
- Soil pollution
C: 1524, 1683, 2302, 5140, 5163
G: 146, 201, 315, 606, 743, 770, 773-
776, 1026, 1181, 1285, 1387, 1954,
1964, 1997, 2001, 2392-2401, 2406,
2553, 2585, 2737, 2738, 2740
P: 121, 149, 440, 572, 630, 1000, 1076
- Spasmolytics, *see* Anticonvulsants
- Specific binding proteins (receptors)
C: 496, 522, 541-558, 562, 639, 1133,
1323, 1343-1357, 2068, 2071, 2081,
2086, 2096-2098, 2101-2106, 2710,
2849, 2858, 2860, 2895-2913, 3880,
3885-3908, 3949, 4775-4803, 4807
E: 217, 235-262, 456, 500, 502, 530,
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Types of Contributions. The following types of papers are published in the *Journal of Chromatography* and the section on *Biomedical Applications*: Regular research papers (Full-length papers), Short communications and Notes. Short communications are preliminary announcements of important new developments and will, whenever possible, be published with maximum speed. Notes are usually descriptions of short investigations and reflect the same quality of research as Full-length papers, but should preferably not exceed four printed pages. For review articles, see page 2 of cover under Submission of Papers.

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Optimization of Chromatographic Selectivity

A Guide to Method Development

by **P. Schoenmakers**, *Philips
Research Laboratories, Eindhoven,
The Netherlands*

(Journal of Chromatography
Library, 35)

This is the first detailed description of method development in chromatography – the overall process of which may be summarized as: method selection, phase selection, selectivity optimization, and system optimization. All four aspects receive attention in this book.

Chapter 1 gives a short introduction, describes chromatographic theory and nomenclature, and outlines the method development process. Chapter 2 describes guidelines for method selection, and quantitative concepts for characterizing and classifying chromatographic phases. Selective separation methods, from both gas and liquid chromatography are given in Chapter 3; the main parameters of each method are identified and simple, quantitative relations are sought to describe their effects. Criteria by which to judge the quality of separation are discussed in Chapter 4

with clear recommendations for different situations. The specific problems involved in the optimization of chromatographic selectivity are explained in Chapter 5. Optimization procedures, illustrated by example are extensively described and compared on the basis of a number of criteria. Suggestions are made both for the application of different procedures and for further research. The optimization of programmed analysis receives special attention in Chapter 6 and the last chapter summarizes the optimization of the chromatographic system, including the optimization of the efficiency, sensitivity and instrumentation.

Those involved in developing chromatographic methods or wishing to improve existing methods will value the detailed, structured way in which the subject is presented. Because optimization procedures and criteria are described as elements of a complete optimization package, the book will help the reader to understand, evaluate and select current and future commercial systems.

Contents: 1. Introduction, 2. Selection of Methods, 3. Parameters Affecting Selectivity, 4. Optimization Criteria, 5. Optimization Procedures, 6. Programmed Analysis, 7. System Optimization. Author Index. Subject Index.

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