

Planar Chromatography

1. REVIEWS AND BOOKS

- 655 Berrueta, L.A., Gallo, B. and Vicente, F.: A review of solid phase extraction: basic principles and new developments. *Chromatographia*, 40 (1995) 474-483 - a review with 178 refs.
- 656 Herold, A.: A review of the uses of planar chromatography in the coal and oil industries. [Erratum to document cited in CA 121:182947]. *J. Planar Chromatogr.*, 7 (1994) 328; C.A., 122 (1995) 294784h - a review without refs.
- 657 Jahn, K., Richter, R. and Schulze, W.: (*Cassia fikifiki*. An African medicinal plant against onchocerciasis). *Dtsch. Apoth. Ztg.*, 135, No. 4 (1995) 17-42; C.A., 123 (1995) 40782w - a review with 40 refs.
- 658 Kunugi, A. and Tabei, K.: (Basic exercises on TLC. 2. Experimental conditions affecting resolution of R_f value). *Kagaku to Kyoiku*, 43 (1995) 178-181; C.A., 122 (1995) 305517b.
- 659 Lippmann, T. and Mann, G.: Chromatography of diastereomeric calix[4]arenes. *GIT Fachz. Lab.*, 39 (1995) 203-204; C.A., 123 (1995) 24925q - a review with 6 refs.
- 660 Poole, C.F. and Poole, S.K.: Multidimensionality in planar chromatography. *J. Chromatogr. A*, 703 (1995) 573-612 - a review with 194 refs.
- 661 Potuzak, M., Turan, J. and Matejek, S.: (Use of thin-layer chromatography for pharmaceutical control IV. Chromatographic behavior of drugs). *Ceska Slov. Farm.*, 44 (1995) 37-46; C.A., 122 (1995) 274189q.
- 662 Potuzak, M., Turan, J. and Matejek, S.: (Use of thin-layer chromatography for pharmaceutical control V. Confirmation of identity, determination of the content of drugs). *Ceska Slov. Farm.*, 44 (1995) 99-107; C.A., 122 (1995) 299175v - a review with 118 refs.
- 663 Somsen, G.W., Morden, W. and Wilson, I.D.: Planar chromatography coupled with spectroscopic techniques. *J. Chromatogr. A*, 703 (1995) 613-665 - a review with 192 refs.
- 664 Wang, D. and Jin, H.: (Mechanism of development of thin-layer chromatography). *Sepu*, 13 (1995) 74; C.A., 122 (1995) 322986w - a review with 2 refs.
- 665 Zhao, B., Wei, T. and Feng, G.: (Latest developments in optimizing the solvent system in thin-layer chromatography). *Sepu*, 13 (1995) 99-103; C.A., 123 (1995) 24926r - a review with 61 refs.

See also 723.

2. FUNDAMENTALS, THEORY AND GENERAL

2a. General

- 666 Petrovic, M. and Kastelan-Macan, M.: Validation of quantitative chromatographic analysis on laboratory-prepared thin layers. *J. Chromatogr. A*, 704 (1995) 173-178.

2b. Thermodynamics and theoretical relationships

See 671.

2c. Relationship between structure and chromatographic behaviour

- 667 Chmil, V.D., Novitskaya, L.P. and Gertsyuk, M.N.: (Use of correlations between retention parameters in thin-layer and high-performance liquid chromatography for the identification of analyte compounds). *Zh. Fiz. Khim.*, 68 (1994) 1763-1769; C.A., 122 (1995) 281039u.

See also 681, 735, 744.

3. GENERAL TECHNIQUES

3a. Apparatus and accessories

- 668 Freeman, M.J.: Apparatus for depositing fluids on a chromatography plate. U.S. US 5,403,554 (Cl. 422-100; B01L3/02), 04 Apr. 1995, US Appl. 51,751, 22 Apr. 1993; 9 pp.; C.A., 123 (1995) 24988n.

See also 658, 660, 672.

3b. Detectors and detection reagents

See 666, 753.

3c. Sorbents and columns, packing procedures

- 669 Huang, M., Li, G., Wang, X., Lin, H. and Yu, D.: (Preparation and study of properties of β -cyclodextrin (β -CD) bonded TLC plates). *Shandong Daxue Xuebao, Ziran Kexueban*, 29 (1994) 427-430; C.A., 123 (1995) 47034n.
- 670 Nakamura, H.: (Separation of structural isomers on titania microparticulates). *Kuromatogurafi*, 15 (1994) 60-61; C.A., 122 (1995) 305514y.
- 671 Reschiglian, P. and Torsi, G.: Determination of particle size distribution by gravitational field-flow fractionation: dimensional characterization of silica particles. *Chromatographia*, 40 (1995) 467-473.
- 672 Shkinev, V.M., Dubrova, T.V. and Molochnikova, N.P.: (Chromatographic plate). *Russ. RU 2,002,260* (Cl. G01N30/90), 30 Oct. 1993, SU Appl. 4,890,804, 31 Oct. 1990; C.A., 123 (1995) 47061u.

See also 666, 764.

3d. Quantitative analysis

- 673 Nagy-Turák, A., Végh, Z. and Ferenczi-Fodor, K.: Validation of the quantitative planar chromatographic analysis of drug substances. III. Robustness testing in OPLC. *J. Planar Chromatogr.*, 8 (1995) 188-193.

3e. Preparative scale chromatography

See 698.

3g. High performance procedures

- 674 Tyihak, E. and Mincsovcics, E.: (Development of layer-system liquid chromatography: identities and differences between overpressured layer chromatography (OPLC) and HPLC). *Kem. Kozl.*, 77 (1993) 79-99; *C.A.*, 122 (1995) 329471h.

4. SPECIAL TECHNIQUES

4b. Computerization and modelling

- 675 Markowski, W. and Czapinska, K.L.: Computer simulation of the separation in one- and two-dimensional thin-layer chromatography by isocratic and stepwise gradient development. *J. Liq. Chromatogr.*, 18 (1995) 1405-1427.
- 676 Prus, W. and Kowalska, T.: A novel approach to the optimization of separation quality in adsorption TLC. *J. Planar Chromatogr.*, 8 (1995) 205-215.

See also 665, 735.

4c. Combination with other physico-chemical techniques (MS, IR etc.)

- 677 Collins, M.W. and Busch, K.L.: Electrospray for surface derivatization in chromatography/SIMS. *Proc. Indiana Acad. Sci.*, 98 (1988, Publ. 1994) 145-150; *C.A.*, 122 (1995) 255057d.
- 678 Gusev, A.I., Procter, A., Rabinovich, Y.I. and Hercules, D.M.: Thin-layer chromatography combined with matrix-assisted laser desorption/ionization mass spectrometry. *Anal. Chem.*, 67 (1995) 1805-1814.

See also 660, 663, 738, 740.

4g. Enantiomers, separation

See 711.

4h. Other special techniques

See 674, 754.

5. HYDROCARBONS AND HALOGEN DERIVATIVES

5b. Cyclic hydrocarbons, fullerenes

See 659, 759.

6. ALCOHOLS

- 679 Triska, J. and Butkus, E.P.: Characterization of oxygen-containing adamantane derivatives by thin layer chromatography. *J. Planar Chromatogr.*, 8 (1995) 243-244.

7. PHENOLS

- 680 Buergi, C. and Otz, T.: Determination of alkylphenoethoxylates. Quantitative determination of alkylphenoethoxylates in detergents and cleaning agents using thin layer chromatography (RP-HPTLC). *Tenside, Surfactants, Deterg.*, 32 (1995) 22-24; *C.A.*, 122 (1995) 242783n.
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See also 729.

9. OXO COMPOUNDS, ETHERS, EPOXIDES AND QUINONES

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See also 679, 680, 748, 758.

10. CARBOHYDRATES

10a. Mono and oligosaccharides. Structural studies

- 684 Conaway, C.A., Fried, B. and Sherma, J.: High performance thin-layer chromatographic analysis of sugars in *Helisoma trivolvis* (Pennsylvania strain) infected with larval *Echinostoma trivolvis* and in uninfected *H. trivolvis* (Pennsylvania and Colorado strains). *J. Planar Chromatogr.*, 8 (1995) 184-187.
- 685 Kurosawa, N., Hamamoto, T., Inoue, M. and Tsuji, S.: Molecular cloning and expression of chick Gal β 1,3GalNAc α 2,3-sialyltransferase. *Biochim. Biophys. Acta*, 1244 (1995) 216-222.
- 686 Yu, S., Ahmad, T., Kenne, L. and Pedersen, M.: α -1,4-Glucan lyase, a new class of starch/glycogen degrading enzyme. III. Substrate specificity, mode of action, and cleavage mechanism. *Biochim. Biophys. Acta*, 1244 (1995) 1-9.
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11. ORGANIC ACIDS AND LIPIDS
- 11a. *Organic acids and simple esters*
- 688 Bieganowska, M.L. and Petruczynik, A.: Retention parameters of some isomeric 2-benzoylbenzoic acids in reversed-phase ion-pair high performance thin-layer and column chromatography. *Chromatographia*, 40 (1995) 453-457.
- 689 Jovicic, G., Nikolic, L., Rajic, K.K., Agbaba, D., Jovanovic, M. and Djuric, Z.: Third-order derivative UV spectrophotometry and densitometry for the simultaneous assay of acetylsalicylic acid and salicylic acid in tablet formulations. *Farmaco*, 50 (1995) 285-288; C.A., 123 (1995) 18085z.
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- See also 670.
- 11c. *Lipids and their constituents*
- 692 Bertello, L.E., Goncalvez, M.F., Colli, W. and de Lederkremer, R.M.: Structural analysis of inositol phospholipids from *Trypanosoma cruzi* epimastigote forms. *Biochem. J.*, 310 (1995) 255-261.
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13. STEROIDS
- 13b. *Pregnane and androstane derivatives*
- 704 Lee-Robichaud, P., Wright, J.N., Akhtar, M.E. and Akhtar, M.: Modulation of the activity of human 17 α -hydroxylase-17,20-lyase (CYP17) by cytochrome b₅: endocrinological and mechanistic implications. *Biochem. J.*, 308 (1995) 901-908.
- 13c. *Estrogens*
- 705 Petrovic, S.M., Acanski, M.M., Kolarov, L.A. and Loncar, E.S.: The effect of the diluent on the retention of steroidal compounds in liquid-solid chromatography. *J. Planar Chromatogr.*, 8 (1995) 200-204.
- 13d. *Sterols*
- See 693.
- 13e. *Bile acids and alcohols*
- 706 Zhang, Z., Liao, G., Song, Y. and Yin, H.: (Determination of ursodeoxycholic acid and chenodeoxycholic acid in Chinese medicinal compound preparations by TLC-densitometry). *Zhongguo Zhongyao Zazhi*, 20 (1995) 162-164; C.A., 122 (1995) 299194a.
14. STEROID GLYCOSIDES AND SAPONINS
- See 707.
15. TERPENES AND OTHER VOLATILE AROMATIC COMPOUNDS
- 15a. *Terpenes*
- 707 Chaboud, A., Rougny, A., Proliac, A., Raynaud, J. and Cabalion, P.: A new triterpenoid saponin from *Polyscias fruticosa*. *Pharmazie*, 50 (1995) 371.

See also 693.

17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. Amines and polyamines

- 708 Mohammad, A., Ajmal, M. and Anwar, S.: Selective separation of *p*-dimethylaminobenzaldehyde from some secondary and tertiary amines. *J. Planar Chromatogr.*, 8 (1995) 216-218.
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18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS

18a. Amino acids and their derivatives

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See also 666, 670.

18b. Peptides, peptidic and proteinous hormones, growth factors

- 712 Asamoah, K.A., Atkinson, P.G.P., Carter, W.G. and Sale, G.J.: Studies on an insulin-stimulated insulin receptor serine kinase activity: separation of the kinase activity from the insulin receptor and its reconstitution back to the insulin receptor. *Biochem. J.*, 308 (1995) 915-922.
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21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS

21a. Purines, pyrimidines, nucleosides, nucleotides

See 749.

22. ALKALOIDS

- 715 Klyushnichenko, V.E., Yakimov, S.A., Tuzova, T.P., Syagailo, Y.V., Kuzovkina, I.N., Wulfson, A.N. and Miroshnikov, A.I.: Determination of indole alkaloids from *R. serpentina* and *R. vomitoria* by high-performance liquid chromatography and high-performance thin-layer chromatography. *J. Chromatogr. A*, 704 (1995) 357-362.
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See also 673.

24. ORGANIC SULPHUR COMPOUNDS (INCL. GLUCOSINOLATES)

See 734.

25. ORGANIC PHOSPHORUS COMPOUNDS (INCL. SUGAR PHOSPHATES)

See 710, 712, 713

27. VITAMINS AND VARIOUS ANIMAL GROWTH FACTORS (NON-PEPTIDIC)

- 719 Bednichenko, Yu.I. and Kolomoets, I.I.: (Use of densitometry in analysis of certain medicinal preparations). *Farm. Zh. (Kiev)*, No. 5 (1993) 89-91; *C.A.*, 122 (1995) 299189c.

28. ANTIBIOTICS

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See also 663.

29. INSECTICIDES, PESTICIDES AND OTHER AGROCHEMICALS

29a. General techniques

- 723 Lucas, A.D., Gee, S.J., Hammock, B.D. and Seiber, J.N.: Integration of immunochemical methods for pesticide residue determination. *J. Assoc. Off. Anal. Chem.*, 78 (1995) 585-591 - a review in part on PC.
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29c. Phosphorus insecticides

- 726 Mali, B.D., Garad, M.V., Patil, V.B. and Padalikar, S.V.: Thin-layer chromatographic detection of dichlorvos and dimethoate using orcinol. *J. Chromatogr. A*, 704 (1995) 540-543.

29e. Herbicides

See 736.

29f. Fungicides

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30. SYNTHETIC AND NATURAL DYES

30a. Synthetic dyes

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32. DRUG ANALYSIS

32a. Drug analysis, general techniques

See 661, 662, 663, 673.

32b. Antirheumatics and antiinflammatory drugs

- 730 Correa, M.A. and Bueno, J.H.F.: (Thermal stability of paracetamol solution. Thin-layer chromatography (TLC)-ultraviolet spectrophotometry). *Rev. Cienc. Farm. (Sao Paulo)*, 15 (1993, Publ. 1994) 123-140; C.A., 122 (1995) 298867k.

See also 689.

32c. Autonomic and cardiovascular drugs

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32d. Central nervous system drugs

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See also 773.

32e. Chemotherapeutics (exc. cytostatics and antibiotics)

- 739 Bhushan, R. and Ali, I.: TLC separation of sulfonamides on impregnated silica gel layers, and their quantitative estimation by spectroscopy. *J. Planar Chromatogr.*, 8 (1995) 245-247.
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See also 689.

32f. Cytostatics

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See also 673.

32g. Other drug categories

- 747 Tuszyńska, E., Podolska, M., Kwiatkowska-Puchniarz, B. and Kaniewska, T.: New methods for determination of active compounds present in multicomponent antihistaminic pharmaceuticals. *Acta Pol. Pharm.*, 51 (1994) 317-323; *C.A.*, 122 (1995) 299214q.

32h. Toxicological and forensic applications

See 731

32i. Plant extracts

- 748 Cui, W. and Jin, M.: (Content determination of muscone in Liushenwan by thin-layer chromatographic colorimetry). *Yanbian Yixueyuan Xuebao*, 18, No. 1 (1995) 28-30; *C.A.*, 122 (1995) 299203c.
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