

Planar Chromatography

1. REVIEWS AND BOOKS

- 1034 Cheng, J. and Liu, J.: (Inorganic chromatographic analysis). *Fenxi Shiyanshi*, 8 (1989) 18-44; *C.A.*, 113 (1990) 16970d - a review with 444 refs.
- 1035 Devinsky, F.: Amine oxides. XVIII. Nonaromatic amine oxides; preparation and analytical determination. *Acta Fac. Pharm. Univ. Comenianae*, 42 (1988, Pub. 1989) 191-201; *C.A.*, 112 (1990) 245378p - a review with 92 refs.
- 1036 Jaenchen, D.E.: (Principle and potential of gradient elution in planar chromatography). *Fenxi Ceshi Tongbao*, 8, No. 3 (1989) 6-14; *C.A.*, 112 (1990) 245374j - a review with 15 refs.
- 1037 Lin, Y., Dong, P. and Wu, Q.: (TLC/FID method and its application in hydrocarbon-type analysis of heavy oil). *Fenxi Ceshi Tongbao*, 8 (1989) 68-73; *C.A.*, 113 (1990) 9076p - a review with 8 refs.
- 1038 Studer, A.: Instrumental TLC - planar chromatography. Part 2. *Schweiz. Lab.-Z.*, 47 (1990) 134-147; *C.A.*, 113 (1990) 51811b - a review with 13 refs.
- 1039 Veuthey, J.L., Caude, M. and Kosset, R.: On-line coupling of supercritical fluid extraction and chromatography with chromatographic analyses. *Analisis*, 16 (1990) 103-111; *C.A.*, 113 (1990) 34159a - a review with 21 refs.

See also 1042, 1058, 1060, 1179, 1195.

2. FUNDAMENTALS, THEORY AND GENERAL

2a. General

- 1040 Kalasz, H., Bathori, M. and Ettre, L.S.: Optimization of displacement development by planar chromatography. *J. Planar Chromatogr.*, 3 (1990) 210-215.
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See also 1056.

2b. Thermodynamics and theoretical relationships

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3. GENERAL TECHNIQUES

3a. Apparatus and accessories

- 1043 Ryder, D.J.: Optimization and calibration of radio thin layer chromatographic scanners (linear analyzers). *Synth. Appl. Isot. Labelled Cpd. 1988, Proc. Int. Symp.*, 188 (Publ. 1989) 227-236; *C.A.*, 112 (1990) 245411u.

- 1044 Varadi, M. and Harsanyi, G.: (Instrumentation for overpressure thin-layer chromatography and its application). *Nauch. Appar.*, 2 (1987) 69-85; *C.A.*, 112 (1990) 245064h.

3b. Detectors and detection reagents

- 1045 Bayerbach, S. and Gauglitz, G.: Linear photo diode arrays allow spectral detection in thin layer chromatography. *Git Fachz. Lab.*, 34 (1990) 232-234; *C.A.*, 113 (1990) 17233c.
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- 1047 Gonnord, M.-F. and Siouffi, A.-M.: Ultrafast UV detection for bidimensional chromatography. *J. Planar Chromatogr.*, 3 (1990) 206-209.
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See also 1037, 1082.

3c. Sorbents, carriers, column and layer performance, packing procedures

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- 1052 Ohnui, H.: (Development of silica gel thin-layer plate for the separation and analysis of optical antipodes). *Bunseki*, (1989) 470-471; *C.A.*, 112 (1990) 245361c.
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- 1054 Wolski, T., Szumilo, H. and Iwanowicz, H.: (Manufacture of polyamide sorbents). *Pol. PL* 136,476 (Cl. C08G69/48), 29 Aug. 1986, Appl. 242,177, 23 May 1983; 4 pp.; *C.A.*, 112 (1990) 236631p.

See also 1128, 1163, 1177, 1196, 1199.

3e. Preparative scale chromatography

- 1055 Smolkova-Keulemansova, E.: Cyclodextrins in chromatography and isotachopheresis. *Proc. Int. Symp. Cyclodextrins*, 4th, (1988) 451-463; *C.A.*, 112 (1990) 245535e.

See also 1040, 1064.

3f. Programmed temperature, pressure, vapors, gradients

See 1063.

4. SPECIAL TECHNIQUES

4a. Automation and computerization

- 1056 Matyska, M. and Soczewinski, E.: Computer-aided optimization of liquid-solid systems in TLC 2. Comparison of selectivity for various silica-diluent + modifier systems. *J. Planar Chromatogr.*, 3 (1990) 264-268.

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

- 1057 Brown, S.M., Schurz, H. and Busch, K.L.: Interface devices for the combination of planar chromatography with mass spectrometry. *J. Planar Chromatogr.*, 3 (1990) 222-227.
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See also 1039.

4g. Separation of enantiomers

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- 1060 Martens, J. and Bhushan, R.: Importance of enantiomeric purity and its control by thin-layer chromatography. *J. Pharm. Biomed. Anal.*, 8 (1990) 259-269 - a review with 91 refs.
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See also 1052, 1055, 1128.

4h. Other special techniques

See 1044.

5. HYDROCARBONS AND HALOGEN DERIVATIVES

5b. Cyclic hydrocarbons

- 1062 Levin, S.S., Touchstone, J.C. and Cooper, D.Y.: Assay of biphenyl metabolites by HPTLC-spectrodensitometry. *Chem. Anal. (N.Y.)*, 108 (1990) 101-110; *C.A.*, 113 (1990) 19014f.

6. ALCOHOLS

See 1059.

7. PHENOLS

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See also 1051, 1067.

8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

8a. Flavonoids

1065 Budzianowski, J., Skrzypaczak, L. and Wesolowska, M.: Flavonoids and leiocarpoxide in four *Solidago* species. *Sci. Pharm.*, 58 (1990) 15-25; *C.A.*, 113 (1990) 46159p.

1066 Diaz Lanza, A.M., Elias, R., Maillard, C., Faure, R., de Sotto, M. and Balansard, G.: Study of flavonoids from three cultivars of vine leaves, *Vitis vinifera* L. var. *tinctoria* (Alicante, Carignan, Grand noir). Significance for chemical analysis. *Ann. Pharm. Fr.*, 47 (1989, Publ. 1990) 229-234; *C.A.*, 113 (1990) 29366m.

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8b. Aflatoxins and other mycotoxins

1068 Carjaval, M., Mulholland, F. and Carner, R.C.: Comparison of the EASI-EXTRACT immunoaffinity concentration procedure with the AOAC CB method for the extraction and quantitation of Aflatoxin B₁ in raw ground unskinned peanuts. *J. Chromatogr.*, 511 (1990) 379-383.

8c. Other compounds with heterocyclic oxygen (including tannins)

1069 Khabarov, A.A., Grigor'ev, O.A., Georgievskii, V.P., Drozd, G.A. and Khabarova, L.P.: (Method for determination of psoralen by thin-layer chromatography). *U.S.S.R. SU 1,450,596* (Cl. G01N30/90), 23 Mar. 1990, Appl. 4,029,224, 20 Feb. 1986; *C.A.*, 113 (1990) 17306d.

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See also 1164.

9. OXO COMPOUNDS, ETHERS, EPOXIDES AND QUINONES

1071 Akhtar, M.H.: Fate of 3-phenoxybenzaldehyde: diphenyl ether cleavage, a major metabolic route in chicken. *J. Agric. Food Chem.*, 38 (1990) 1417-1422.

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See also 1079.

10. CARBOHYDRATES

10a. Mono and oligosaccharides. Structural studies

- 1073 Fell, R.D.: The qualitative and quantitative analysis of insect hemolymph sugars by high performance thin-layer chromatography. *Comp. Biochem. Physiol., A: Comp. Physiol.*, 95A (1990) 539-544; *C.A.*, 113 (1990) 20298h.
- 1074 Goso, Y. and Hotta, K.: Analysis of mucin-derived oligosaccharides by medium-pressure gel-permeation and amino-plate thin-layer chromatography conducted in conjunction. *Anal. Biochem.*, 188 (1990) 181-186.
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See also 1089, 1104.

10b. Polysaccharides, mucopolysaccharides, lipopolysaccharides

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See also 1061.

11. ORGANIC ACIDS AND LIPIDS

11a. Organic acids and simple esters

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- 1079 Schick, P.K. and Levey, C.: Reversed phase and argentation HPTLC for the separation of fatty acids and fatty aldehydes. *J. Planar Chromatogr.*, 3 (1990) 269-271.
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See also 1067, 1071, 1084, 1103, 1191.

11c. Lipids and their constituents

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12. ORGANIC PEROXIDES

See 1072.

13. STEROIDS

See 1041.

13a. Pregnane and androstane derivatives

See 1190.

13b. Estrogens

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See also 1190.

13c. Sterols

1114 Kovacheva, E., Ganchev, G., Neicheva, A., Ivanova, I., Konoushlieva, M. and Andreev, V.: Gas chromatographic determination of sterols in fat-soluble concentrates obtained from plant materials. *J. Chromatogr.*, 509 (1990) 79-84.

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See also 1117.

13d. Bile acids and alcohols

1117 Boberg, K.M., Einarsson, K. and Bjorkhem, I.: Apparent lack of conversion of sitosterol into C₂₄-bile acids in humans. *J. Lipid Res.*, 31 (1990) 1083-1088.

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13f. Other steroids

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15. TERPENES AND OTHER VOLATILE AROMATIC COMPOUNDS

15a. Terpenes

- 1121 Wheeler, C.J., Mihaliak, C.A. and Croteau, R.: Uncompetitive inhibitor of monoterpene cyclases by an analog of the substrate geranyl pyrophosphate and inhibition of monoterpene biosynthesis *in vivo* by an analog of geraniol. *Arch. Biochem. Biophys.*, 279 (1990) 203-210.

See also 1116.

15b. Essential oils

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16. NITRO AND NITROSO COMPOUNDS

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17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. Amines and polyamines

- 1124 Bieniek, G.: (Separation conditions and development of some amines by TLC). *Chem. Anal. (Warsaw)*, 33 (1988) 807-810; *C.A.*, 112 (1990) 245432b.

See also 1035, 1194.

17d. Other amine derivatives and amides (excluding peptides)

- 1125 Konetschny-Rapp, S., Jung, G., Meiwes, J. and Zähler, H.: Staphyloferrin A: a structurally new siderophore from staphylococci. *Eur. J. Biochem.*, 191 (1990) 65-74.

18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS

18a. Amino acids and their derivatives

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See also 1041, 1135.

18b. Peptides and peptidic and proteinous hormones

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See also 1131.

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23. OTHER SUBSTANCES CONTAINING HETEROCYCLIC NITROGEN

23d. Pyridine derivatives

See 1143.

24. ORGANIC SULPHUR COMPOUNDS

See 1049, 1050.

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See also 1093, 1111, 1126.

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See also 1048.

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See also 1160.

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See 1160.

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See 1160.

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See also 1187.

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See also 1136.

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See 1178.

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See also 1064, 1070, 1144.

33. CLINICO-CHEMICAL APPLICATIONS

33b. Complex mixtures and profiling (single compounds by cross-reference only)

See 1077, 1100, 1103, 1126, 1140.

34. FOOD ANALYSIS

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See also 1161, 1191.

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See also 1034.

38b. Anions

See 1034.

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