

Planar Chromatography

1. REVIEWS AND BOOKS

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- 2 Kowalczyk, J.S.: Electrochromatography. *Chem. Anal. (Warsaw)*, 41 (1996) 157-171; *C.A.*, 124 (1996) 331103z - a review with 29 refs.
- 3 Sherma, J.: Thin layer chromatography in food analysis. *Food Test. Anal.*, 2 (1996) 39-44; *C.A.*, 124 (1996) 341120s.
- 4 Weins, C. and Hauck, H.E.: Advances and developments in thin-layer chromatography. *LC-GC*, 14 (1996) 456-464; *C.A.*, 125 (1996) 47655q - a review with 142 refs.

See also 55, 152.

2. FUNDAMENTALS, THEORY AND GENERAL

2a. General

- 5 Abraham, M.H., Poole, C.F. and Poole, S.K.: Solute effects on reversed-phase thin-layer chromatography. A linear free energy relationship analysis. *J. Chromatogr. A*, 749 (1996) 201-209.
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2b. Thermodynamics and theoretical relationships

- 7 Kleyle, R.M., Nurok, D., Kossoy, A.D. and Burris, S.C.: Novel computational methods for the determination of partition coefficients by planar chromatography. *J. Chromatogr. A*, 749 (1996) 211-217.

See also 2, 14.

2c. Relationship between structure and chromatographic behaviour

- 8 Baranowska, I. and Swierczek, S.: Selectivity of adsorption in TLC dependent on the modifier of mobile phase and pK_a of investigated azines and diazines. *Pol. J. Appl. Chem.*, 39, No. 1 (1995) 131-135; *C.A.*, 125 (1996) 47926w.
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2d. Measurement of physico-chemical and related values

See 115, 143.

3. GENERAL TECHNIQUES

3b. Detectors and detection reagents

See 30, 44, 70, 155.

3c. Sorbents and columns, packing procedures

- 11 Cserhati, T., Fenyvesi, E., Szejtli, J. and Forgacs, E.: Water-insoluble beta-cyclodextrin polymer as thin-layer chromatographic sorbent. *Chim. Oggi*, 13, No. 7-8 (1995) 21-24; *C.A.*, 125 (1996) 131271m.
- 12 Hajouj, Z., Thomas, J. and Siouffi, A.M.: Mechanically blended silica-based bonded phases. Application of the simple modulation of the polarity of the stationary phase to TLC. *J. Liq. Chromatogr. Relat. Technol.*, 19 (1996) 2419-2422.
- 13 Liang, Y., Baker, M.E., Gilmore, D.A. and Denton, M.B.: Evaluation of commercial silica-gel HPTLC plates for quantitative fluorescence analysis. *J. Planar Chromatogr.*, 9 (1996) 247-253.
- 14 Waksmundzka-Hajnos, M. and Wronska, B.: Retention behaviour of model solutes on mixed silica-magnesia adsorbents by TLC. Comparison with the adsorption properties of florisil. *Chromatographia*, 43 (1996) 405-412.

3d. Quantitative analysis

See 13, 129.

3e. Preparative scale chromatography

See 114.

3f. Programmed temperature, pressure, vapors, gradients

See 83, 137.

4. SPECIAL TECHNIQUES

4b. Computerization and modelling

- 15 Medic-Saric, M., Brantner, A. and Males, Z.: Application of information theory and numerical taxonomy methods to thin-layer chromatographic investigations of *Hypericum perforatum* L. *Acta Pharm. (Zagreb)*, 46 (1996) 115-124; *C.A.*, 125 (1996) 123858t.

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

See 22, 41, 43, 56, 110, 151.

4g. *Enantiomers, separation*

See 16, 82, 114.

4h. *Other special techniques*

See 37, 104.

5. HYDROCARBONS AND HALOGEN DERIVATIVES

5b. *Cyclic hydrocarbons, fullerenes*

See 1, 12.

6. ALCOHOLS

- 16 Huynh, T.K.X. and Leipzig-Pagani, E.: Quantitative thin layer chromatography on cellulose. II. Selected applications: lower alcohols, tryptophan enantiomers, gold and platinum. *J. Chromatogr. A*, 746 (1996) 261-268.

8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

8a. *Flavonoids*

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8b. *Aflatoxins and other mycotoxins*

- 20 Biancardi, A. and Riberzani, A.: Determination of ochratoxin A in cereals and feed by SAX-SPE clean up and LC fluorimetric detection. *J. Liq. Chromatogr. Relat. Technol.*, 19 (1996) 2395-2407.
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8c. *Other compounds with heterocyclic oxygen (incl. tannins)*

- 23 Farina, A., Doldo, A., Cotichini, V., Rajevic, M., Quaglia, M.G., Mulinacci, N. and Vincieri, F.F.: HPTLC and reflectance mode densitometry of anthocyanins in *Malva silvestris* L.: a comparison with gradient-elution reversed-phase HPLC. *J. Pharm. Biomed. Anal.*, 14 (1995) 203-211.

See also 17, 18.

9. OXO COMPOUNDS, ETHERS, EPOXIDES AND QUINONES

- 24 Kus, P.: Characterization of some dibenzo crown ethers by RPTLC. *J. Planar Chromatogr.*, 9 (1996) 293-296.
- 25 Liang, D.: (Separation and purification of jasminal by column chromatography). *Huaxue Tongbao*, 12 (1995) 26-27; C.A., 125 (1996) 151325g.
- 26 Palamareva, M. and Chrobadijiev, S.: The Hammett equation and Snyder theory as a criterion for adsorption of a functional group under liquid-solid chromatography. *J. Chem. Soc. Perkin Trans. 2*, (1996) 961-964; C.A., 125 (1996) 33086k.
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- 28 Yin, Z. and Tan, H.: (The analysis of quality for the emodin in Baoshen tablet). *Zhongguo Yiyuan Yaoxue Zazhi*, 16, No. 2 (1996) 68-69; C.A., 125 (1996) 67970j.

See also 78.

10. CARBOHYDRATES

10a. *Mono and oligosaccharides. Structural studies*

- 29 Feng, J.: (Improvement on thin-layer chromatography for carbohydrate analysis). *Guangpu Shiyanshi*, 12, No. 3 (1995) 18-20; C.A., 125 (1996) 157337u.
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See also 53.

11. ORGANIC ACIDS AND LIPIDS

11a. Organic acids and simple esters

- 32 Asakura Ribeiro, Y., Caires, A.C.F., Boralle, N. and Ionashiro, M.: Thermal decomposition of acetylsalicylic acid (aspirin). *Thermochim. Acta*, 279 (1996) 177-181; *C.A.*, 125 (1996) 95794y.
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See also 43, 57, 59.

11b. Prostaglandins

See 33.

11c. Lipids and their constituents

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- 11d. *Lipoproteins and their constituents*
- 64 Bagdade, J.D., Ritter, M.C., Lithell, H., Basett, D., Maily, F., Talmud, P. and Hayden, M.R.: Reduced cholesteryl ester transfer in plasma of patients with lipoprotein lipase deficiency. *J. Lipid Res.*, 37 (1996) 1696-1703.
13. STEROIDS
- 13b. *Pregnane and androstane derivatives*
- 65 Shirke, P.P.Mrs., Tamhane, V.A., Patel, M.K., Tirodkar, V.B. and Sethi, P.D.: Simultaneous estimation of frusemide and spironolactone from their combined dosage form by HPTLC. *J. Indian Chem. Soc.*, 73 (1996) 445; *C.A.*, 125 (1996) 123924m.
- 13c. *Estrogens*
- 66 Nascimento, E.S., Salvadori, M.C. and Ribeiro-Neto, L.M.: Determination of synthetic estrogens in illegal veterinary formulations by HPTLC and HPLC. *J. Chromatogr. Sci.*, 34 (1996) 330-333.
- 13d. *Sterols*
- 67 Amin, D., Cornell, S.A., Perrone, M.H. and Bilder, G.E.: 1-Hydroxy-3-(methylpentylamino)-propylidene-1,1-biphosphonic acid as a potent inhibitor of squalene synthase. *Arzneim.-Forsch.*, 46 (1996) 759-762.
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- See also 40.
- 13e. *Bile acids and alcohols*
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- 13f. *Ecdysones and other insect steroid hormones*
- 74 Báthori, M., Máthé, I., Praszna, L., Rischák, K. and Kalász, H.: TLC analysis to determine the seasonal dependence of the level of 20-hydroxyecdysone in the leaves of *Serratula tinctoria* (L.). *J. Planar Chromatogr.*, 9 (1996) 264-268.
14. STEROID GLYCOSIDES AND SAPONINS
- 75 Chen, M., Wu, W.W. and Sticher, O.: Leonticins A-C, three octasaccharide saponins from *Leontice kiangnanensis*. *J. Natural Prod.*, 59 (1996) 722-728.
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- See also 18, 136.
15. TERPENES AND OTHER VOLATILE AROMATIC COMPOUNDS
- 15a. *Terpenes*
- 78 Okada, K., Suzuki, K., Kamiya, Y., Zhu, X.F., Fujisaki, S., Nishimura, Y., Nishino, T., Nakagawa, T., Kawamukai, M. and Matsuda, H.: Polyprenyl diphosphate synthase essentially defines the length of the side chain of ubiquinone. *Biochim. Biophys. Acta*, 1302 (1996) 217-223.
- See also 96, 106.

16. NITRO AND NITROSO COMPOUNDS

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See also 111, 150.

17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. Amines and polyamines

- 80 Gumieniczek, A., Przyborowski, L. and Plizga, J.: Chromatographic analysis (TLC and HPLC) of dilazep and prenylamine. *Acta Pol. Pharm.*, 52 (1995) 451-454; C.A., 124 (1996) 299069e.

17b. Catecholamines and their metabolites

- 81 Pisternick, W., Gündisch, D. and Kovar, K.-A.: HPTLC discrimination of 3,4-methylenedioxyamphetamines of the Ecstasy group using *o*-benzenesulfonamido-*p*-benzoquinone as detection reagent. *J. Planar Chromatogr.*, 9 (1996) 286-288.

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

See 79, 82, 111.

18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS

18a. Amino acids and their derivatives

- 82 Huang, M.-B., Li, H.-K., Li, G.-L., Yan, C.-T. and Wang, L.-P.: Planar chromatographic direct separation of some aromatic amino acids and aromatic amino alcohols into enantiomers using cyclodextrin mobile phase additives. *J. Chromatogr. A*, 742 (1996) 289-294.

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See also 16.

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

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See also 123.

19. PROTEINS

- 19n. Other proteins (incl. proteinous inhibitors of enzymic activity)

See 62.

21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS

21a. Purines, pyrimidines, nucleosides, nucleotides

- 86 Lu, W., Yan, H. and Long, X.: (Determination of adenosine in Jinshuibao capsule by TLC scanning). *Zhongcaoyao*, 27, No. 1 (1996) 14-15; C.A., 125 (1996) 67933z.

See also 97.

22. ALKALOIDS

- 87 Abou-Shoer, M.I.: A simple and sensitive method for qualitative and quantitative analysis of physostigmine. *Alexandria J. Pharm. Sci.*, 10, No. 1 (1996) 69-71; C.A., 124 (1996) 325496p.

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See also 122, 129.

23. OTHER SUBSTANCES CONTAINING HETEROCYCLIC NITROGEN

23e. Other N-heterocyclic compounds

- 94 Argekar, A.P., Kapadia, S.U. and Raj, S.V.: Determination of some fluoroquinolones in pharmaceutical preparations by HPTLC methods. *Indian Drugs*, 33 (1996) 107-111; *C.A.*, 124 (1996) 325489p.

See also 8, 12.

24. ORGANIC SULPHUR COMPOUNDS (INCL. GLUCOSINOLATES)

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25. ORGANIC PHOSPHORUS COMPOUNDS (INCL. SUGAR PHOSPHATES)

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See also 58.

26. ORGANOMETALLIC AND RELATED COMPOUNDS

26a. Organometallic compounds

See 152.

26c. Coordination compounds

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- 35c. *Water pollution (complex mixtures; single compounds by cross-reference only)*
- See 149.
- 35d. *Soil pollution (complex mixtures; single compounds by cross-reference only)*
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