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### Liquid Column Chromatography

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## 3f. Programmed temperature, pressure, vapors, gradients

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## 4. SPECIAL TECHNIQUES

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- 5. HYDROCARBONS AND HALOGEN DERIVATIVES**
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## 8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

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- ## 20. ENZYMES AND ENZYME ACTIVITY ESTIMATION
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- 33. CLINICO-CHEMICAL APPLICATIONS**
- 33b. *Complex mixtures and profiling (single compounds by cross-reference only)*
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- 34. FOOD ANALYSIS**
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## 34b. Complex mixtures (single compounds by cross-reference only)

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## Gas Chromatography

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

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### 34. FOOD ANALYSIS

- 34a. *General papers and reviews*

See 1351.

## 34b. Complex mixtures (single compounds by cross-reference only)

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- 34b. Complex mixtures (single compounds by cross-reference only)
- 636 Wang, K. and Zhu, X.: (Determination of compositions of cooking-oil smoke). *Shanghai Huaining Kexue*, 18 (1999) 526-528; C.A., 132 (2000) 68195s.
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- 637 Nam, S.-I., Leggett, D.C., Jenkins, T.F. and Stutz, M.H.: On-site analysis of explosives in soil: evaluation of thin-layer chromatography for confirmation of analyte identity. *Am. Lab. (Shelton)*, 32, No. 5 (2000) 184928g; C.A., 132 (2000) 184928g.
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38. INORGANIC COMPOUNDS
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- 38a. Cations
- 647 Bao, A., Lu, L., Wang, X. and Qin, L.: (Research on labeling chemistry of o-phenanthroline with  $^{99m}\text{Tc}$ ,  $^{188}\text{Re}$  and stable Re). *Hejishu*, 22 (1999) 253-256; C.A., 132 (2000) 90131q.
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39. RADIOACTIVE AND OTHER ISOTOPE COMPOUNDS

See 396, 397, 504, 518, 526, 527, 528, 573, 647.

## Gel Electrophoresis

### 1. REVIEWS AND BOOKS

See 2001, 2007, 2008, 2010, 2011, 2012, 2013, 2017, 2054, 2056, 2061, 2063, 2066, 2083, 2102, 2108, 2109, 2113, 2117, 2129, 2152, 2161, 2177, 2198, 2213, 2241, 2249, 2262, 2390, 2475, 2548, 2583, 2589, 2610, 2612, 2627.

### 2. FUNDAMENTALS, THEORY AND GENERAL

#### 2a. General

1995 Bosse, M.A. and Arce, P.: Role of Joule heating in dispersive mixing effects in electrophoretic cells: Convective-diffusive transport aspects. *Electrophoresis (Weinheim)*, 21 (2000) 1026-1033.

1996 Bosse, M.A. and Arce, P.: The role of Joule heating in dispersive mixing effects in electrophoretic cells: Hydrodynamic considerations. *Electrophoresis (Weinheim)*, 21 (2000) 1018-1025.

See also 2006.

#### 2b. Thermodynamics and theoretical relationships

1997 Anselmi, C., Bocchinfuso, G., deSantis, P., Fua, M., Savino, M. and Scipioni, A.: First order elasticity in superstructural transformations of DNAs. *Acta Pharm. (Zagreb)*, 49, No. 4 (1999) 237-255; C.A., 132 (2000) 204438c.

#### 2d. Measurement of physico-chemical and related values

See 2214.

### 3. GENERAL TECHNIQUES

#### 3a. Apparatus and accessories

1998 Hietpas, P.B. and Ewing, A.G.: DNA separations from nanovials. *J. Liq. Chromatogr. Relat. Technol.*, 23 (2000) 15-24.

1999 Miyamoto, K. and Maruyama, M.: (Electrophoresis device). *Jpn. Kokai Tokkyo Koho* JP 11 352,103 [99 352,103] (Cl. G01N27/447), 24 Dec. 1999, Appl. 1998/158,990, 8 Jun. 1998; 3 pp.; C.A., 132 (2000) 47212e.

See also 2081, 2490.

#### 3b. Detectors and detection procedures

2000 Bricker, T.M., Green-Church, K.B., Limbaugh, P.A. and Frankel, L.K.: Documentation of negatively staining polyacrylamide gels. *Anal. Biochem.*, 278 (2000) 237-239.

2001 Jankowiak, R., Robeerts, K.P. and Small, G.J.: Fluorescence line-narrowing detection in chromatography and electrophoresis. *Electrophoresis (Weinheim)*, 21 (2000) 1251-1266 - a review with 112 refs.

See also 2013, 2058, 2059, 2068, 2070, 2071, 2506.

#### 3c. Stabilization media for electrophoresis

2002 Chan, G.Y.N., Kambouris, P.A., Looney, M.G., Qiao, G.G. and Solomon, D.H.: Approaches to the controlled formation of network polymers: 2. Studies of hybrid crosslinking agents. *Polymer* 2000, 41 (1999) 27-34; C.A., 132 (2000) 50628a.

See also 2544.

#### 3e. Preparative scale electrophoresis

See 2067, 2072, 2179, 2218.

### 4. SPECIAL TECHNIQUES

#### 4a. Automation

2003 Mifflin, T.E., Estey, C.A. and Felder, R.A.: Robotic automation performs a nested RT-PCR analysis for HCV without introducing sample contamination. *Clin. Chim. Acta*, 290 (2000) 199-211.

#### 4b. Computerization and modelling

2004 Adelmann, H.G.: An interactive image processing tool for DNA comet assay analysis. *Am. Lab. (Shelton)*, 31, No. 19 (1999) 14-15; C.A., 132 (2000) 219070a.

2005 Labrie, J., Mercier, J.-F. and Slater, G.W.: An exactly solvable Ogston model of gel electrophoresis. V. Attractive gel-analyte interactions and their effects on the Ferguson plot. *Electrophoresis (Weinheim)*, 21 (2000) 823-833.

2006 Lee, E., Yen, F.-Y. and Hsu, J.-P.: Electrophoretic mobility of concentrated spheres with a charge-regulated surface. *Electrophoresis (Weinheim)*, 21 (2000) 475-480.

See also 2052, 2549.

#### 4c. Combination with other physicochemical techniques, (MS, IR etc.)

2007 Merchant, M. and Weinberger, S.R.: Recent advancements in surface-enhanced laser desorption/ionization-time of flight-mass spectrometry. *Electrophoresis (Weinheim)*, 21 (2000) 1164-1167 - a review with 52 refs.

See also 2056, 2057, 2060, 2066, 2071, 2074, 2117, 2120, 2206, 2226, 2229, 2251.

## 4d. Affinity electrophoresis

2008 Kuwabara, M. and Ariyoshi, Y.: (Molecular microdiversity of tumor markers). *Kensa to Gijutsu*, 27 (1999) 443-452; C.A., 132 (2000) 61089b.

## 4e. Two dimensional databases

2009 Henikoff, J.G., Pietrokowski, S., McCallum, C.M. and Henikoff, S.: Blocks-based methods for detecting protein homology. *Electrophoresis (Weinheim)*, 21 (2000) 1700-1706.

See also 2062, 2120, 2142, 2154, 2159, 2164, 2167, 2230, 2233, 2245, 2246, 2253, 2263, 2300.

## 4f. Isoelectric focusing

See 2074, 2171, 2180, 2181.

## 4h. Two dimensional electrophoresis

2010 Görg, A., Obermaier, C., Boguth, G., Harder, A., Scheibe, B., Wildgruber, R. and Weiss, W.: The current state of two-dimensional electrophoresis with immobilized pH gradients. *Electrophoresis (Weinheim)*, 21 (2000) 1037-1053 - a review with 72 refs.

2011 Hanash, S.M.: Biomedical applications of two-dimensional electrophoresis using immobilized pH gradients: Current status. *Electrophoresis (Weinheim)*, 21 (2000) 1202-1209 - a review with 33 refs.

2012 Harry, J.L., Wilkins, M.R., Herbert, B.R., Packer, N.H., Gooley, A.A. and Williams, K.L.: Proteomics: Capacity versus utility. *Electrophoresis (Weinheim)*, 21 (2000) 1071-1081 - a review with 79 refs.

2013 Patton, W.F.: A thousand points of light: The application of fluorescence detection technologies to two-dimensional gel electrophoresis and proteomics. *Electrophoresis (Weinheim)*, 21 (2000) 1123-1144 - a review with 181 refs.

See also 2037, 2052, 2053, 2054, 2056, 2058, 2060, 2061, 2063, 2064, 2067, 2068, 2079, 2082, 2083, 2102, 2108, 2111, 2115, 2120, 2129, 2134, 2138, 2142, 2147, 2152, 2154, 2155, 2156, 2159, 2164, 2165, 2166, 2183, 2201, 2202, 2206, 2225, 2226, 2229, 2230, 2233, 2236, 2241, 2245, 2246, 2249, 2251, 2253, 2260, 2262, 2263, 2277, 2300, 2388, 2549.

## 4i. Other special techniques

2014 Müller, T., Schnelle, T., Gradi, G., Shirley, S.G. and Fuhr, G.: Microdevice for cell and particle separation using dielectrophoretic field-flow fractionation. *J. Liq. Chromatogr. Relat. Technol.*, 23 (2000) 47-59.

2015 Voropanov, A.M. and Day, I.N.M.: Elimination of dumbbell bands and enhancement of resolution in MADGE using delayed start electrophoresis. *BioTechniques*, 28 (2000) 32-34; C.A., 132 (2000) 217622b.

## 10. CARBOHYDRATES

## 10a. Mono and oligosaccharides. Structural studies

2016 Kubomi, T., Fujita, T. and Matuo, Y.: (Fluorophore-labeled saccharides analysis (FACE) by the method of polyacrylamide gel electrophoresis). *Seibutsu Butsuri Kagaku*, 43, No. 3 (1999) 129-138; C.A., 132 (2000) 148662g.

2017 Kumar, H.P.M., Denny, P.A. and Denny, P.C.: Use of fluorophore-assisted carbohydrate electrophoresis (FACE) in the elucidation of N-linked oligosaccharide structures. *Methods Biotechnol.*, 10(Carbohydrate Biotechnology Protocols) (1999) 221-234; C.A., 132 (2000) 119364f - a review with 11 refs.

2018 Noda, K., Kubota, K. and Yamasaki, R.: Separation of lipooligosaccharides by linear gradient gel electrophoresis. *Anal. Biochem.*, 279 (2000) 18-22.

2019 Yamamoto, H., Swoger, J., Greene, S., Saito, T., Hurh, J., Sweeley, Ch., Leestma, J., Mkrdichian, E., Cerullo, L., Nishikawa, A., Ihara, Y., Taniguchi, N. and Moscal, J.R.:  $\beta$ 1,6-N-Acetylglucosamine-bearing N-glycans in human gliomas: implications for a role in regulating invasivity. *Cancer Res.*, 60 (2000) 134-142.

## 10b. Polysaccharides, mucopolysaccharides, lipopolysaccharides

2020 Jegesothy, H., Wootton, M. and Fairclough, R.J.: Agarose gel electrophoresis of wheat starch. *J. Cereal Sci.*, 31 (2000) 75-78; C.A., 132 (2000) 207069u.

2021 Soriano, E.S., Campos, M.S.Q. and Michelacci, Y.M.: Effect of epithelial debridement on glycosaminoglycan synthesis by human corneal explants. *Clin. Chim. Acta*, 295 (2000) 41-62.

2022 Zimmermann, R., Sartipy, P., Winkler, R., Zechner, R., Hurt-Camejo, E. and Kostner, G.M.: Endogenously produced glycosaminoglycans affecting the release of lipoprotein lipase from macrophages and the interaction with lipoproteins. *Biochim. Biophys. Acta*, 1484 (2000) 316-324.

See also 2032.

## 10c. Glycoproteins and their constituents

2023 Cala, S.E.: GRP94 hyperglycosylation and phosphorylation in SF21 cells. *Biochim. Biophys. Acta*, 1496 (2000) 296-310.

2024 Chopard, A., Pons, F., Charpiot, P. and Marini, J.-F.: Quantitative analysis of relative protein contents by Western blotting: Comparison of three members of the dystrophin-glycoprotein complex in slow and fast rat skeletal muscle. *Electrophoresis (Weinheim)*, 21 (2000) 517-522.

2025 Epperson, T.K., Patel, K.D., McEver, R.P. and Cummings, R.D.: Noncovalent association of P-selectin glycoprotein ligand-1 and minimal determinants for binding to P-selectin. *J. Biol. Chem.*, 275 (2000) 7839-7853.

2026 Kearns, C.F., Lenhart, J.A. and McKeever, K.H.: Cross-reactivity between human erythropoietin antibody and horse erythropoietin. *Electrophoresis (Weinheim)*, 21 (2000) 1454-1457.

2027 Kuroswawa, N., Takashima, S., Kono, M., Ikebara, Y., Inoue, M., Tachida, Y., Narimatsu, H. and Terui, S.: Molecular cloning and

See also 2066.

genomic analysis of mouse GalNAc  $\alpha$ 2,6-sialyltransferase (ST6GalNAc I). *J. Biochem. (Tokyo)*, 127 (2000) 845-854.

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- 2030 Marcus, N.Y. and Perlmutter, D.H.: Glucosidase andmannosidase inhibitors mediate increased secretion of mutant  $\alpha$ 1 antitrypsin Z. *J. Biol. Chem.*, 275 (2000) 1987-1992.
- 2031 Mo, H., Winter, H.C. and Goldstein, I.J.: Purification and characterization of a Neu5Ac $\alpha$ 2-6Gal $\beta$ 1-4Glc/GlcNAc-specific lectin from the fruiting body of the polypore mushroom *Polyporus squamosus*. *J. Biol. Chem.*, 275 (2000) 10623-10629.

See also 2017, 2184, 2398.

## 11. ORGANIC ACIDS AND LIPIDS

### 11c. Lipids and their constituents

- 2032 Pupo, E., López, C.M., Alonso, M. and Hardy, E.: High-efficiency passive elution of bacterial lipopolysaccharides from polyacrylamide gels. *Electrophoresis (Weinheim)*, 21 (2000) 526-530.

See also 2018.

### 11d. Lipoproteins and their constituents

- 2033 Claus, R., Kinscherf, R., Gehrke, C., Bonaterra, G., Basnet, P., Matz, J. and Deigner, H.-P.: Antia apoptotic effects of propolis extract and propol on human macrophages exposed to minimally modified low density lipoprotein. *Arzneim.-Forsch.*, 50 (2000) 373-379.
- 2034 Duan, H., Gu, D. and Mazzone, T.: Sterols and inhibitors of sterol transport modulate the degradation and secretion of macrophage ApoE: requirement for the C-terminal domain. *Biochim. Biophys. Acta*, 1484 (2000) 142-150.
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- 2042 Tsujita, M., Tomimoto, S., Okumura-Noji, K., Okazaki, M. and Yokoyama, S.: Apolipoprotein-mediated cellular cholesterol/phospholipid efflux and plasma high density lipoprotein level in mice. *Biochim. Biophys. Acta*, 1485 (2000) 199-213.

See also 2302.

## 13. STEROIDS

### 13d. Sterols

- 2043 Benlian, P., Cansier, C., Hennache, G., Khalouf, O., Bayer, P., Duron, F., Carrat, F., Couderc, R., Chazouilleres, O., Bardet, J., Bouchard, P., Poupon, R., Masliah, J. and Bereziat, G.: Comparison of a new method for the direct and simultaneous assessment of LDL- and HDL-cholesterol with ultracentrifugation and established methods. *Clin. Chem. (Washington)*, 46 (2000) 493-505.

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## 14. STEROID GLYCOSIDES AND SAPONINS

See 2624.

## 18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS

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

- 2045 Qi, M., Ikematsu, S., Ichihara-Tanaka, K., Sakuma, S., Maramatsu, T. and Kadomatsu, K.: Midkine rescues Wilms' tumor cells from cisplatin-induced apoptosis: regulation of Bcl-2 expression by midkine. *J. Biochem. (Tokyo)*, 127 (2000) 269-277.

- 2046 Vogt, A., Wang, A.S., Johnson, C.S., Fabisiak, J.P., Wipf, P. and Lazo, J.S.: *In vivo* antitumor activity and induction of insulin-like growth factor-1-resistant apoptosis by SC- $\alpha$ 89. *J. Pharmacol. Exp. Ther.*, 292 (2000) 530-537.

## 18c. Elucidation of structure of proteins and enzymes

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## 19. PROTEINS

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## 20. ENZYMES AND ENZYME ACTIVITY ESTIMATION

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## Capillary Electrophoresis and Electrokinetic Chromatography

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See 1021, 1022, 1121, 1196, 1199.

## 34. FOOD ANALYSIS

See 1177.

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See 1060, 1132.

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See 979, 1127, 1130, 1203.

35d. Soil pollution (complex mixtures; single compounds by cross-reference only)

See 969, 1008.

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