

Electrophoresis

1. REVIEWS AND BOOKS

- 1815 Byers, C.H. and Amarnath, A.: Understand the potential of electro-separations. *Chem. Eng. Prog.*, 91 (1995) 63-69; C.A., 122 (1995) 191266m - a review with 25 refs.
- 1816 Chrambach, A., Dunn, M.J. and Radola, B.J. (Editors): *Advances in Electrophoresis*, Vol. 7, VCH, Weinheim, 1994, 487 pp.; C.A., 122 (1995) 128041u.
- 1817 Hayashi, Y. and Matsuda, R.: Uncertainty structure information theory, and optimization of quantitative analysis in separation science. *Adv. Chromatogr. (N.Y.)*, 34 (1994) 347-427; C.A., 122 (1995) 150209b - a review with 198 refs.
- 1818 Hilsner, V.J. and Freire, E.: Quantitative analysis of conformational equilibrium using capillary electrophoresis: applications to protein folding. *Anal. Biochem.*, 224 (1995) 465-485 - a review with 50 refs.
- 1819 Jones, W.R.: Electrophoretic capillary ion analysis. In: Landers, J.P. (Editor), *Handb. Capillary Electrophor.*, CRC, Boca Raton, 1994, pp. 209-232; C.A., 122 (1995) 150208a - a review with 55 refs.
- 1820 Khaledi, M.G.: Micellar electrokinetic capillary chromatography. In: Landers, J.P. (Editor), *Handb. Capillary Electrophor.*, CRC, Boca Raton, 1994, pp. 43-93; C.A., 122 (1995) 150506w - a review with 108 refs.
- 1821 Pentoney, S.L., Jr. and Sweedler, J.V.: Optical detection techniques for capillary electrophoresis. In: Landers, J.P. (Editor), *Handb. Capillary Electrophor.*, CRC, Boca Raton, 1994, pp. 147-183; C.A., 122 (1995) 150507x - a review with 159 refs.
- 1822 Yonemoto, T.: (Separation-purification of biochemical substances by electrophoretic method). *Petrotech (Tokyo)*, 17 (1994) 846-851; C.A., 122 (1995) 75642g - a review with 21 refs.
- 1823 Zhu, T., Fang, X. and Sun, Y.: (High performance capillary electrophoresis. Part I. Frontier in analytical chemistry). *Huaxue Jinzhan*, 6 (1994) 229-243; C.A., 122 (1995) 121922y - a review with 108 refs.

See also 1841, 1843, 1864, 1868, 1869, 1872, 1876, 1879, 1886, 1894, 1895, 1896, 1898, 1901, 1903, 1905, 1909, 1911, 1917, 1921, 1922, 1925, 1928, 1934, 1935, 1940, 1953, 1956, 1969, 1982, 1999, 2034, 2042, 2043, 2049, 2065, 2114, 2128, 2151, 2157, 2212, 2352, 2367, 2390, 2435, 2449, 2452, 2501, 2519, 2540, 2597, 2600, 2617, 2618, 2620, 2621, 2634, 2647, 2652.

2. FUNDAMENTALS, THEORY AND GENERAL

2a. General

- 1824 Blasband, A.J.: Notched spacer for slab-gel electrophoresis. U.S. US 5,384,025 (Cl. 204-299R; C2589/00), 24 Jan. 1995, Appl. 206,995, 07 Mar. 1994; 8 pp.; C.A., 122 (1995) 155707x.
- 1825 Brooks, H.B. and Brooks, D.W.: Small scale electrophoresis. *J. Chem. Educ.*, 72 (1995) A28-A29; C.A., 122 (1995) 159748j.
- 1826 Cooke, M. and Wilson, I.D.: Separation science in the 21st Century. *LC-GC Int.*, 8, No. 3 (1995) 158-162.
- 1827 Kohn, A.: Automating method validation and system suitability testing in HPLC and CE. *Am. Biotechnol. Lab.*, 12 (1994) 44-47; C.A., 122 (1995) 26972f.
- 1828 Razilov, I.A. and Dukhin, S.S.: (Nonlinearity of electrophoresis determined by the mobility of adsorbed ions. Strong external field). *Kolloidn. Zh.*, 56 (1994) 697-702; C.A., 122 (1995) 90371m.
- 1829 Saul, A.J. and Stowers, A.: Electrophoretic resolution of charged molecules. *PCT Int. Appl. WO 94 25,144* (Cl. B01D57/02), 10 Nov. 1994, AU Appl. 93/8,659, 05 May 1993; 69 pp.; C.A., 122 (1995) 209207e.
- 1830 Sharina, I.G., Cherkasov, A.V. and Nedospasov, A.A.: (Quantitative evaluations of the degree of similarity of chromatograms and electrophoretograms). *Zh. Fiz. Khim.*, 68 (1994) 1752-1757; C.A., 122 (1995) 25434v.
- 1831 Terabe, S., Ozaki, H., Tanaka, Y. and Okada, Y.: (Pseudo-stationary phases for electrokinetic chromatography). *Kuromatogurafi*, 15 (1994) 114-115; C.A., 122 (1995) 155375n.

See also 1892, 1893.

2b. Thermodynamics and theoretical relationships

- 1832 Allison, S.A. and Nambi, P.: Electrophoresis of spheres by a discretized integral equation/finite difference approach. *Macromolecules*, 27 (1994) 1413-1422; C.A., 120 (1994) 165497b.
- 1833 Boese, F.G.: Contributions to a mathematical theory of free flow electrophoresis. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 3-32; C.A., 122 (1995) 50313n.
- 1834 Grateful, T.M., Athalye, A.M. and Lightfoot, E.N.: Numerical description of zone electrophoresis in the continuous flow electrophoresis device. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 33-53; C.A., 122 (1995) 50314p.
- 1835 Ishihama, Y., Oda, Y., Uchikawa, K. and Asakawa, N.: Evaluation of solute hydrophobicity by microemulsion electrokinetic chromatography. *Anal. Chem.*, 67 (1995) 1588-1595.
- 1836 Jumppanen, J.H. and Riekkola, M.-L.: Marker techniques for high-accuracy identification in CZE. *Anal. Chem.*, 67 (1995) 1060-1066.
- 1837 Kozulic, B.: A model of gel electrophoresis. *Appl. Theor. Electrophor.*, 4 (1994) 117-123; C.A., 122 (1995) 234662g.

- 1838 Kozulic, B.: On the "donor-corridor" model of gel electrophoresis. I. Equations describing the relationship between mobility and size of DNA fragments and protein-SDS complexes. *Appl. Theor. Electrophor.*, 4 (1994) 125-136; C.A., 122 (1995) 234663h.
- 1839 Kozulic, B.: On the "donor-corridor" model of gel electrophoresis. III. The gel constant and resistance, and the net charge, friction, diffusion and electrokinetic force of the migrating molecules. *Appl. Theor. Electrophor.*, 4 (1994) 149-159; C.A., 122 (1995) 234665k.
- 1840 Kozulic, B.: On the "door-corridor" model of gel electrophoresis. II. Developments related to new gels, capillary gel electrophoresis and gel chromatography. *Appl. Theor. Electrophor.*, 4 (1994) 137-148; C.A., 122 (1995) 234664j.
- 1841 Rhodes, P.H. and Snyder, R.S.: Theoretical and experimental studies on the stabilization of hydrodynamic flow in free fluid electrophoresis. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 57-74; C.A., 122 (1995) 50315q - a review with 14 refs.
- 1842 Zydney, A.L.: Boundary effects on the electrophoretic motion of a charged particle in a spherical cavity. *J. Colloid Interface Sci.*, 169 (1995) 476-485; C.A., 122 (1995) 197899s.

See also 1818, 1930, 1944, 1994, 2035, 2645.

2c. Relationship between structure and electrophoretic behaviour

See 1835, 2408.

2d. Measurement of physico-chemical and related values

- 1843 Kirkland, J.J.: New separation method for characterizing the size of silica sols. *Adv. Chem. Ser.*, 234 (1994) 287-308; C.A., 122 (1995) 197691t - a review with 36 refs.
- 1844 Yarmola, E. and Chrambach, A.: Nonlinear "Ferguson curves" by two runs of the commercial automated HPGE-1000 gel electrophoresis apparatus with intermittent scanning of fluorescence. *Electrophoresis (Weinheim)*, 16 (1995) 350-353.

See also 1902, 1919, 2592, 2619.

3. GENERAL TECHNIQUES

3a. Apparatus and accessories

- 1845 Alam, A.: Electroelution apparatus and method for isolation and recovery of biomolecules. *PCT Int. Appl. WO 94 28,406* (Cl. G01N27/447), 08 Dec. 1994, US Appl. 63,731, 20 May 1993; 30 pp.; C.A., 122 (1995) 101110d.
- 1846 Arai, A.: Device for capillary electrophoresis chiral separation. *Jpn. Kokai Tokyo Koho JP 06,288,983 [94,288,983]* (Cl. G01N27/447), 18 Oct. 1994, Appl. 93/98,664, 31 Mar. 1993; 5 pp.; C.A., 122 (1995) 204271m.
- 1847 Bevan, C.D. and Mutton, I.M.: Use of freeze-thaw flow management for controlling and switching fluid flow in capillary tubes. *Anal. Chem.*, 67 (1995) 1470-1473.

- 1848 Cognard, D. and Hache, J.: Method and apparatus for multiple electrophoresis for the migration and transfer of macromolecules. *Eur. Pat. Appl. EP 605,269* (Cl. B01D57/02), 06 Jul. 1994, FR Appl. 92/15,451, 22 Dec. 1992; 9 pp.; C.A., 122 (1995) 76001j.
- 1849 Hagiwara, H., Irisawa, K., Myazaki, J. and Ozaki, T.: Gel electrophoresis device. *Jpn. Kokai Tokkyo Koho JP 06,288,982 [94,288,982]* (Cl. G01N27/447), 18 Oct. 1994, Appl. 93/889, 30 Mar. 1993; 4 p.; C.A., 122 (1995) 122255v.
- 1850 Inomata, T. and Takahashi, Y.: Capillary electrophoresis apparatus. *Jpn. Kokai Tokkyo Koho JP 06,324,019 [94,324,019]* (Cl. G01N27/447), 25 Nov. 1994, Appl. 93/111,399, 13 May 1993; 7 p.; C.A., 122 (1995) 177429k.
- 1851 Kambara, H., Anazawa, T., Takahashi, S. and Murakami, K.: Electrophoresis analyzer with wavelength-selective detection. *Eur. Pat. Appl. EP 619,483* (Cl. G01N21/64), 12 Oct. 1994, JP Appl. 93/80,927, 07 Apr. 1993; 14 pp.; C.A., 122 (1995) 50717x.
- 1852 Kontush, S.M., Dukhin, S.S. and Vidov, O.I.: (Aperiodic electrophoresis). *Kolloidn. Zh.*, 56 (1994) 654-660; C.A., 122 (1995) 90369s.
- 1853 Liu, D.: (A new apparatus for electrophoresis). *Daxue Huaxue*, 9 (1994) 46; C.A., 122 (1995) 238781t.
- 1854 Moring, S.E., Albin, M.S., Kowallis, R.B., Lee, T.E., Mead, D.E., Nickel, J.H., Oldham, M.F., Reel, R.T., Orpin, T.S. and Woods, J.C.: Capillary electrophoresis instrument. *U.S. US 5,384,024* (Cl. 204-299R; B01D61/46), 24 Jan. 1995, Appl. 850,764, 13 Mar. 1992; 25 pp.; C.A., 122 (1995) 155706w.
- 1855 Nakazato, T. and Shinozaki, T.: Multiple sample-applicator for gel electrophoresis. *Jpn. Kokai Tokkyo Koho JP 06,281,621 [94,281,621]* (Cl. G01N27/447), 07 Oct. 1994, Appl. 92/232,206, 31 Aug. 1992; 11 pp.; C.A., 122 (1995) 128048b.
- 1856 Sabanayagam, C.R., Holzwarth, G.M. and Lai, E.H.: Method and apparatus for gel electrophoresis. *Eur. Pat. Appl. EP 644,420* (Cl. G01N27/447), 22 Mar. 1995, US Appl. 119,033, 09 Sep. 1993; 22 pp.; C.A., 122 (1995) 234831m.
- 1857 Sarrine, R.J.: Platform for conducting electrophoresis, and an electrophoresis plate for use with the platform. *Eur. Pat. Appl. EP 631,134* (Cl. G01N27/447), 28 Dec. 1994, US Appl. 79,229, 21 Jun. 1993; 10 pp.; C.A., 122 (1995) 101114h.
- 1858 Sarrine, R.J., Garsee, H.A., Kelley, C.D., Everitt, M.T., Golias, T.L., Boone, E.W., Guadagno, P.A. and Petersen, E.H.: Automatic electrophoresis method and apparatus. *Eur. Pat. Appl. EP 631,132* (Cl. G01N27/447), 28 Dec. 1994, US Appl. 79,378, 21 Jun. 1993; 56 pp.; C.A., 122 (1995) 101115j.

See also 1824, 1907, 1912, 1925, 2000, 2060.

3b. Detectors and detection procedures

- 1859 Andersson, P.E., Pfeffer, W.D. and Blomberg, L.G.: Indirect detection in capillary electrophoresis. Comparison between indirect UV and indirect laser-induced fluorescence detection for the determination of isoprenyl pyrophosphates. *J. Chromatogr. A*, 699 (1995) 323-330.
- 1860 Gunshelski, M.A.: Indirect fluorometric detection of arsenic and selenium oxyanions separated by capillary zone electrophoresis and ion chromatography. Avail. *Univ. Microfilms Int.*, Order No. DA 9431955, 1993, 157 p.; C.A., 122 (1995) 203978k.

- 1861 Lim, H.B., Lee, J.J. and Lee, K.-J.: Simple and sensitive laser-induced fluorescence detection for capillary electrophoresis and its application to protein separation. *Electrophoresis (Weinheim)*, 16 (1995) 674-678.
- 1862 Lohmann, J., Schickle, H. and Bosch, T.C.G.: REN display, a rapid and efficient method for nonradioactive differential display and mRNA isolation. *BioTechniques*, 18 (1995) 200-202; C.A., 122 (1995) 127919z.
- 1863 Park, S., Lunte, S.M. and Lunte, C.E.: A perfluorosulfonated ionomer joint for capillary electrophoresis with on-column electrochemical detection. *Anal. Chem.*, 67 (1995) 911-918.
- 1864 Patton, W.F.: Biologist's perspective on analytical imaging systems as applied to protein gel electrophoresis. *J. Chromatogr. A*, 698 (1995) 55-87 - a review with 98 refs.
- 1865 Potter, C.G. and Anderson, L.J.: Method of measuring chemiluminescence of multiple samples on a continuous matrix. *PCT Int. Appl. WO 94 25,855* (Cl. G01N21/76), 10 Nov. 1994, FI Appl. 93/1,858, 23 Apr. 1993; 37 pp.; C.A., 122 (1995) 76013q.
- 1866 Saz, J.M., Krattiger, B., Bruno, A.E., Diez-Masa, J.C. and Widmer, H.M.: Thermo-optical absorbance detection of native proteins separated by capillary electrophoresis in 10 µm I.D. tubes. *J. Chromatogr. A*, 699 (1995) 315-322.
- 1867 Shear, J.B., Fishman, H.A., Allbritton, N.L., Garigan, D., Zare, R.N. and Scheller, R.H.: Single cells as biosensors for chemical separations. *Science (Washington)*, 267 (1995) 74-77; C.A., 122 (1995) 75657r.
- 1868 Takagi, T.: (New aspects of electrophoresis and concern about manufacturing). *Tanpakushitsu Kakusan Koso*, 40 (1995) 350-357; C.A., 122 (1995) 127722e - a review with 25 refs.
- 1869 Toda, T. and Ohashi, M.: Current status and perspectives of computer-aided two-dimensional densitometry. *J. Chromatogr. A*, 698 (1995) 41-54 - a review with 35 refs.
- See also 1821, 1849, 1943, 2018, 2066, 2084, 2352, 2581, 2667.
- 3c. *Stabilization media for electrophoresis*
- 1870 Akashi, M., Inami, Y., Kishida, A. and Baba, Y.: (Novel hydrogels for electrophoresis). *Kuromatogurafi*, 15 (1994) 108-109; C.A., 122 (1995) 182485e.
- 1871 Buettner, C. and Beck, W.: A method of producing a capillary for an electrophoresis device. *Eur. Pat. Appl. EP 634,651* (Cl. G01N27/447), 18 Jan. 1995, Appl. 93/111,150, 12 Jul. 1993; 13 pp.; C.A., 122 (1995) 101113g.
- 1872 Destro-Bisol, G. and Santini, S.A.: Electrophoresis on cellulose acetate and Cellogel: current status and perspectives. *J. Chromatogr. A*, 698 (1995) 33-40 - a review with 43 refs.
- 1873 Guadagno, P.A., Rayachoti, R. and Petersen, E.H.: An electrophoresis plate and a method of making an electrophoresis plate package. *Eur. Pat. Appl. EP 631,133* (Cl. G01N27/447), 28 Dec. 1994, US Appl. 79,228, 21 Jun. 1993; 8 pp.; C.A., 122 (1995) 128056c.
- 1874 Lin, B., Chu, X. and Yang, Y.: Sym-triazines dye affinity capillary electrophoresis column and its preparation. *Faming Zhuanli Shenqing Gongkai Shuomingshu CN 1,085,318* (Cl. G01N30/02), 13 Apr. 1994, Appl. 92,109,938, 29 Sep. 1992; 12 pp.; C.A., 122 (1995) 50708v.
- 1875 Mechref, Y. and El Rassi, Z.: Fused-silica capillaries with surface-bound dextran layer crosslinked with diepoxypolyethylene glycol for capillary electrophoresis of biological substances at reduced electroosmotic flow. *Electrophoresis (Weinheim)*, 16 (1995) 617-624.
- 1876 Righetti, P.G.: Macroporous gels: facts and misfacts. *J. Chromatogr. A*, 698 (1995) 3-17 - a review with 53 refs.
- 1877 Shimizu, M.: Electrophoresis gel for separation and recovery of DNA and proteins. *Jpn. Kokai Tokkyo Koho JP 06,273,382* [94,273,382] (Cl. G01N27/447), 30 Sep. 1994, Appl. 93/57,235, 17 Mar. 1993; 6 p.; C.A., 122 (1995) 177433g.
- 1878 Wheeler, T.T., Ford, H.C. and Wilkins, R.J.: Rehydration of dried polyacrylamide gels. *BioTechniques*, 18 (1995) 233-234; C.A., 122 (1995) 128033t.
- 1879 Wirth, P.J. and Romano, A.: Staining methods in gel electrophoresis, including the use of multiple detection methods. *J. Chromatogr. A*, 698 (1995) 123-143 - a review with 166 refs.
- See also 1897, 1913, 1918, 1923, 1931, 2024, 2065.
- 3d. *Quantitative analysis*
- See 1817.
- 3e. *Preparative scale electrophoresis*
- See 2153, 2557.
- 3f. *Programmed voltage and buffer gradients*
- See 1901, 1934.
4. SPECIAL TECHNIQUES
- 4a. *Automation*
- See 1858, 1882.
- 4b. *Computerization and modelling*
- 1880 Barkema, G.T., Marko, J.F. and Widom, B.: Electrophoresis of charged polymers: simulation and scaling in a lattice model of reptation. *Phys. Rev. E: Stat. Phys., Plasmas, Fluids, Relat. Interdiscip. Top.*, 49 (1994) 5303-5309; C.A., 121 (1994) 58450e.
- 1881 Horgan, G.W. and Glasbey, C.A.: Uses of digital image analysis in electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 298-305.
- 1882 Riveron, A.M., Herrera, J.A., Ruiz-Esquivel, L., Baez-Camargo, M., Lopez-Canovas, L., Noa, M.D. and Orozco, E.: Hardware and a memory resident program for simultaneous control and switching of pulsed field gel electrophoresis. *Anal. Lett.*, 28 (1995) 945-860.
- 1883 Schubert, F.E.: Suspension for use electrophoretic image display systems. *U.S. US 5,380,362* (Cl. 106-493; C08K13/06), 10 Jan. 1995, Appl. 92,749, 16 Jul. 1993; 8 p.; C.A., 122 (1995) 147657r.

- 1884 Sevick, E.M. and Williams, D.R.M.: Motion of a polyelectrolyte chain hooked around a post. *Phys. Rev. E: Stat. Phys., Plasmas, Fluids, Relat. Interdiscip. Top.*, 50 (1994) R3357-R3360; C.A., 122 (1995) 115933m.
- See also 1837, 1838, 1839, 1840, 1887, 1893, 2072, 2124, 2383, 2439, 2473, 2482, 2487.
- 4c. *Combination with other physicochemical techniques, (MS, IR etc.)*
- 1885 Takada, Y., Sakairi, M. and Koizumi, H.: Atmospheric pressure chemical ionization interface for capillary electrophoresis/mass spectrometry. *Anal. Chem.*, 67 (1995) 1474-1476.
- See also 1929, 1995, 2002, 2029, 2044, 2141, 2369, 2490, 2599, 2610, 2661.
- 4d. *Affinity electrophoresis*
- 1886 Takeo, K.: Advances in affinity electrophoresis. *J. Chromatogr. A*, 698 (1995) 89-105 - a review with 54 refs.
- 4e. *Capillary zone electrophoresis and electrokinetic chromatography*
- 1887 Beckers, J.L.: Calculation of the composition of sample zones in capillary zone electrophoresis. II. Simulated electropherograms. *J. Chromatogr. A*, 696 (1995) 285-294.
- 1888 Busch, M.H.A., Kraak, J.C. and Poppe, H.: Cellulose acetate-coated fused-silica capillaries for the separation of proteins by capillary zone electrophoresis. *J. Chromatogr. A*, 695 (1995) 287-296.
- 1889 Castagnola, M., Cassiano, L., Lupi, A., Messana, I., Patamia, M., Rabino, R., Rossetti, D.V. and Giardina, B.: Ion-exchange electrokinetic capillary chromatography with Starburst (pamam) dendrimers: a route towards high-performance electrokinetic capillary chromatography. *J. Chromatogr. A*, 694 (1995) 463-469.
- 1890 Cole, L.J. and Kennedy, R.T.: Selective preconcentration for capillary zone electrophoresis using protein G immunoaffinity capillary chromatography. *Electrophoresis (Weinheim)*, 16 (1995) 549-556.
- 1891 Demorest, D.: Application-specific capillary electrophoresis. *PCT Int. Appl. WO 94 26,396* (Cl. B01D57/02), 24 Nov. 1994, US Appl. 59,946, 07 May 1993; 39 pp.; C.A., 122 (1995) 155714x.
- 1892 Dunn, C.D., Hankins, M.G. and Ghowsi, K.: Reverse direction anion capillary electrophoresis: theory and application. *Sep. Sci. Technol.*, 29 (1994) 2419-2433; C.A., 122 (1995) 121989a.
- 1893 Ermakov, S.V., Zhukov, M.Yu., Capelli, L. and Righetti, P.G.: Wall adsorption in capillary electrophoresis. Experimental study and computer simulation. *J. Chromatogr. A*, 699 (1995) 297-313.
- 1894 Guan, F.: (Enantiomeric separation by high-performance capillary electrophoresis). *Fenxi Huaxue*, 22 (1994) 731-737; C.A., 122 (1995) 95559p - a review with 54 refs.
- 1895 Guan, F.: (Separation and determination of ions by high-performance capillary electrophoresis). *Fenxi Huaxue*, 23 (1995) 111-116; C.A., 122 (1995) 177067r - a review with 50 refs.
- 1896 Guan, F.: (The role of surfactants in high performance capillary electrophoresis). *Sepu*, 13 (1995) 30-32; C.A., 122 (1995) 204163c - a review with 38 refs.
- 1897 Guttman, A., Shieh, C.H., Karger, B.L., Pentoney, S.J., Jr., Konrad, K.D., Rampal, S. and Ganzler, K.: Capillary electrophoresis column containing removable separation gel composition, and method of use. U.S. US 5,370,777 (Cl. 204-182.8; GO1N27/26), 06 Dec. 1994, US Appl. 829,638, 31 Jan. 1992; 23 pp.; C.A., 122 (1995) 76042y.
- 1898 Heiger, D.N. and Majors, R.E.: Capillaries and chemistries for capillary electrophoresis. *LC-GC*, 13 (1995) 12-23; C.A., 122 (1995) 75645k - a review with 15 refs.
- 1899 Hjertén, S., Valtcheva, L., Elenbring, K. and Liao, J.-L.: Fast, high-resolution (capillary) electrophoresis in buffers designed for high field strengths. *Electrophoresis (Weinheim)*, 16 (1995) 584-594.
- 1900 Huang, M., Dubrovckova-Schneiderman, E., Novotny, M.V., Fatunmbi, H.O. and Wirth, M.J.: Self-assembled alkyl silane monolayers for the preparation of stable and efficient coatings in capillary electrophoresis. *J. Microcolumn Sep.*, 6 (1994) 571-576; C.A., 122 (1995) 100894a.
- 1901 Janini, G.M. and Issaq, H.J.: The buffer in capillary zone electrophoresis. *Chromatogr. Sci. Ser.*, 64 (1993) 119-160; C.A., 120 (1994) 201066x - a review with 91 refs.
- 1902 Janini, G.M., Muschik, G.M. and Issaq, H.J.: Micellar electrokinetic chromatography in coated capillaries: determination of micelle-aqueous partition coefficients. *J. High Resolut. Chromatogr.*, 18 (1995) 171-174.
- 1903 Jankowski, J.A., Tracht, S. and Sweedler, J.V.: Assaying single cells with capillary electrophoresis. *TrAC*, 14 (1995) 170-176 - a review with 39 refs.
- 1904 Kano, K., Minami, K., Horiguchi, K., Ishimura, T. and Kodera, M.: Ability of non-cyclic oligosaccharides to form molecular complexes and its use for chiral separation by capillary zone electrophoresis. *J. Chromatogr. A*, 694 (1995) 307-313.
- 1905 Kennedler, E.: Organic solvents in capillary electrophoresis. *Chromatogr. Sci. Ser.*, 64 (1993) 161-186; C.A., 120 (1994) 201067x - a review with 46 refs.
- 1906 Khaledi, M.G., Quang, C., Sahota, R.S., Strasters, J.K. and Smith, S.C.: Controlling migration behavior in capillary electrophoresis: optimization strategies for method development. *Chromatogr. Sci. Ser.*, 64 (1993) 187-260; C.A., 120 (1994) 205279r.
- 1907 Knoll, M. and Cammann, D.: Capillary electrophoretic separation method and apparatus for chemical and biochemical analysis. *Ger. Offen. DE 4,314,755* (Cl. GO1N27/447), 10 Nov. 1994, Appl. 05 May 1993; 15 pp.; C.A., 122 (1995) 27247k.
- 1908 Krstanovic, S.: Connectorized capillaries for use with separation instrumentation components. *Eur. Pat. Appl. EP 617,278* (Cl. GO1N27/447), 28 Sep. 1994, US Appl. 31,007, 12 Mar. 1993; 25 pp.; C.A., 122 (1995) 27245h.
- 1909 Lickl, E.: (Capillary electrophoresis in trace analysis). *Oester. Chem. Z.*, 95 (1994) 238-240; C.A., 122 (1995) 122194z - a review with 19 refs.
- 1910 Manz, A., Effenhauser, C.S., Burggraf, N., Verpoorte, E., Raymond, D.E. and Widmer, H.M.: Capillary electrophoresis integrated onto a planar microstructure. *Analisis*, 22 (1994) M25-M28; C.A., 122 (1995) 177104a.

- 1911 Manz, A., Effenhauser, C.S., Burggraf, N., Verpoorte, E., Raymond, D.E. and Widmer, H.M.: Capillary electrophoresis integrated onto a planar microstructure. A step towards miniaturized total analysis system (μ -TAS). *Kagaku to Kogyo (Tokyo)*, 47 (1994) 1536-1541; C.A., 122 (1995) 95307e - a review with 38 refs.
- 1912 Manz, A., Harrison, D.J. and Effenhauser, C.S.: Method and sample applicator for controlling sample introduction in micro-column separation techniques. *Eur. Pat. Appl. EP 620,432*, (Cl. GO1N27/447), 19 Oct. 1994, Appl. 93/810,272, 15 Apr. 1993; 11 pp.; C.A., 122 (1995) 50716w.
- 1913 Mayer, S., Schleimer, M. and Schurig, V.: Dual chiral recognition system involving cyclodextrin derivatives in capillary electrophoresis. *J. Microcolumn Sep.*, 6 (1994) 43-48; C.A., 122 (1995) 122210b.
- 1914 Muijselaar, P.G.H.M., Claessens, H.A. and Cramers, C.A.: Parameters controlling the elution window and retention factors in micellar electrokinetic capillary chromatography. *J. Chromatogr. A*, 696 (1995) 273-284.
- 1915 Muijselaar, P.G.H.M., Claessens, H.A., Cramers, C.A., Jansen, J.F.G.A., Meijer, E.W., de Brabander-van den Berg, E.M.M. and van der Wal, S.: Dendrimers as pseudo-stationary phases in electrokinetic chromatography. *J. High Resolut. Chromatogr.*, 18 (1995) 121-123.
- 1916 Navin, M.J. and Morris, M.D.: Capillary electrophoresis separation techniques and mechanisms in dilute polymer matrices. *J. Chin. Chem. Soc. (Taipei)*, 42 (1995) 5-9; C.A., 122 (1995) 234650b.
- 1917 Nishi, H. and Terabe, S.: Optical resolution of drugs by capillary electrophoretic techniques. *J. Chromatogr. A*, 694 (1995) 245-276 - a review with 146 refs.
- 1918 Okuyama, T., Izumi, T. and Yamaguchi, M.: Capillary column packed with glucomannan gel for capillary electrophoresis and methods for making and using same. *U.S. US 5,364,520* (Cl. 204-299R; C25B9/00), 15 Nov. 1994, JP Appl. 91/350,146, 10 Dec. 1991; 4 pp.; C.A., 122 (1995) 50745e.
- 1919 Penn, S.G., Bergstroem, E.T., Knights, I., Liu, G., Ruddick, A. and Goodall, D.M.: Capillary electrophoresis as a method for determining binding constants: application to the binding of cyclodextrins and nitrophenolates. *J. Phys. Chem.*, 99 (1995) 3875-3880; C.A., 122 (1995) 182502h.
- 1920 Quang, C.: Chemically selective interactions in capillary zone electrophoresis. Avail. *Univ. Microfilms Int.*, Order No. DA9431884, 1994, 129 p.; C.A., 122 (1995) 170311g.
- 1921 Regnier, F.E., Patterson, D.H. and Harmon, B.J.: Electrophoretically-mediated microanalysis (EMMA). *TrAC*, 14 (1995) 177-181 - a review with 21 refs.
- 1922 Semba, T.: (Present status of capillary electrophoresis (CE). A view of studies on proteins by CE). *Meiji Yakka Daigaku Kenkyu Kiyo*, 24 (1994) 59-61; C.A., 122 (1995) 234480w - a review with many refs.
- 1923 Shieh, C.H.: Concentration-variation methods for controlling electroosmotic flow in coated capillary electrophoresis columns. *U.S. US 5,391,274* (Cl. 204-180.1; B01D57/02), 21 Feb. 1995, Appl. 138,324, 18 Oct. 1993; 13 pp.; C.A., 122 (1995) 109226k.
- 1924 Stathakis, C. and Cassidy, R.M.: Ionic polymers for selectivity control in the capillary electrophoretic separations of small ions. *Am. Lab. (Shelton)*, 26 (1994) 28J-28M; C.A., 122 (1995) 100889c.
- 1925 Stevenson, R.: A critical review of the development of HPLC instrumentation. *Am. Lab. (Shelton)*, 26 (1994) 29-33; C.A., 122 (1995) 127717g - a review with 24 refs.
- 1926 Sun, P. and Hartwick, R.A.: On-line kinetic monitoring for biochemical reactions using multi-point detection in high-performance capillary electrophoresis. *J. Chromatogr. A*, 695 (1995) 279-285.
- 1927 Tanaka, N., Fukutome, T., Tanigawa, T., Hosoya, K., Kimata, K., Araki, T. and Unger, K.K.: Structural selectivity provided by starburst dendrimers as pseudostationary phase in electrokinetic chromatography. *J. Chromatogr. A*, 699 (1995) 331-341.
- 1928 Terabe, S.: Micellar electrokinetic chromatography. *Chromatogr. Sci. Ser.*, 64 (1993) 65-87; C.A., 120 (1994) 201064u - a review with 43 refs.
- 1929 Tomlinson, A.J., Benson, L.M. and Naylor, S.: Advantages of nonaqueous solvents in the analysis of drug metabolites using CE and on-line CE-MS. *LC-GC Int.*, 8, No. 4 (1995) 210-216.
- 1930 Winzor, D.J.: Measurement of binding constants by capillary electrophoresis. *J. Chromatogr. A*, 696 (1995) 160-163.
- 1931 Xu, H.: (Derivatized cyclodextrins for the separation of chiral drugs in capillary electrophoresis). *Yaowu Fenxi Zazhi*, 14 (1994) 48-50; C.A., 122 (1995) 115144e.
- 1932 Zheng, J., Hu, R., Lin, H. and Liu, W.: (Application of column-coupling in capillary electrophoresis). *Fenxi Huaxue*, 22 (1994) 855-858; C.A., 122 (1995) 121963n.
- See also 1817, 1818, 1819, 1820, 1821, 1823, 1831, 1835, 1836, 1840, 1843, 1846, 1847, 1850, 1854, 1859, 1860, 1861, 1863, 1866, 1871, 1874, 1875, 1876, 1885, 1886, 1933, 1935, 1939, 1940, 1943, 1946, 1947, 1948, 1950, 1954, 1955, 1956, 1957, 1961, 1962, 1976, 1977, 1978, 1990, 1991, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2005, 2008, 2009, 2012, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2032, 2037, 2038, 2039, 2041, 2043, 2047, 2048, 2053, 2056, 2057, 2063, 2068, 2069, 2074, 2106, 2109, 2110, 2126, 2134, 2141, 2143, 2145, 2162, 2167, 2178, 2181, 2187, 2190, 2194, 2195, 2196, 2201, 2258, 2285, 2297, 2307, 2309, 2313, 2335, 2348, 2363, 2364, 2369, 2407, 2429, 2430, 2453, 2454, 2459, 2460, 2483, 2490, 2506, 2507, 2511, 2515, 2530, 2552, 2564, 2569, 2571, 2572, 2574, 2577, 2578, 2579, 2581, 2582, 2583, 2585, 2587, 2588, 2590, 2591, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2617, 2620, 2621, 2624, 2625, 2626, 2629, 2631, 2632, 2653, 2654, 2655, 2657, 2658, 2659, 2660, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670.
- 4f. *Isotachophoresis*
- 1933 Altria, K.D. and Hadgett, T.A.: An evaluation of the use of capillary electrophoresis to monitor trace drug residues following the manufacture of pharmaceuticals. *Chromatographia*, 40 (1995) 23-27.

1934 Righetti, P.G. and Chiari, M.: Conventional isoelectric focusing and immobilized pH gradients: an overview. *Chromatogr. Sci. Ser.*, 64 (1993) 89-116; *C.A.*, 120 (1994) 201065v - a review with 57 refs.

See also 1890, 1992, 2628.

4g. Enantiomers, separation

1935 Bereuter, R.L.: Enantioseparation by capillary electrophoresis. *LC-GC*, 12 (1994) 748-766; *C.A.*, 122 (1995) 100691g - a review with 119 refs.

See also 1846, 1894, 1904, 1913, 1917, 1997, 2578, 2585, 2598, 2602, 2603, 2605, 2611.

4h. Two dimensional electrophoresis

1936 Fritz, P., Mischlinski, A., Wicherek, C. and Saal, J.: Two-dimensional cryostat section electrophoresis: a novel method and its application to the diseased synovial membrane. *Histochem. J.*, 26 (1994) 804-816; *C.A.*, 122 (1995) 27068c.

1937 Poppe, H.: The role of miniaturization in the development of analytical fractionation methods. *Analysis*, 22 (1994) M22-M24; *C.A.*, 122 (1995) 177132h.

1938 Wang, T. and Tong, Z.: (The methods solving problems encountered in two-dimensional polyacrylamide gel electrophoresis). *Zhiwu Shenglixue Tongxun*, 30 (1994) 283-285; *C.A.*, 122 (1995) 50518h.

See also 1864, 1869, 1879, 1881, 1886, 1982, 2007, 2027, 2029, 2034, 2036, 2044, 2046, 2060, 2072, 2082, 2085, 2089, 2096, 2099, 2114, 2121, 2124, 2135, 2151, 2157, 2166, 2173, 2179, 2199, 2200, 2202, 2212, 2217, 2225, 2245, 2255, 2256, 2277, 2302, 2336, 2388, 2487, 2508, 2533, 2560, 2618, 2647.

4i. Other special techniques

1939 Duro, G., Barbieri, R., Ribaldo, M.R., Feo, S. and Izzo, V.: A downward capillary blotting procedure from hundred base pairs to hundred kilobases nucleic acids. *Anal. Biochem.*, 225 (1995) 360-362.

1940 Lunte, S.M., Malone, M.A. and Zuo, H.: Capillary electrophoresis/electrochemistry for the analysis of microdialysis samples. *Curr. Sep.*, 13 (1994) 75-79; *C.A.*, 122 (1995) 50304k - a review with 21 refs.

1941 Slais, K. and Friedl, Z.: Ampholytic dyes for spectroscopic determination of pH in electrofocusing. *J. Chromatogr. A*, 695 (1995) 113-122.

1942 Yuan, N., Liu, Z. and Zhu, D.: Chromatograph-type electrophoresis separation method. *Faming Zhuanli Shenqing Gongkai Shuomingshu* CN 1,083,072 (Cl. CO7K3/14), 02 Mar. 1994, Appl. 93,108,629, 16 Jul. 1993; 8 pp.; *C.A.*, 122 (1995) 50769r.

See also 1852, 1882, 1910, 2453.

5. HYDROCARBONS AND HALOGEN DERIVATIVES

5b. Cyclic hydrocarbons, fullerenes

1943 Kaneta, T. and Imasaka, T.: Indirect detection of aromatic hydrocarbons by semiconductor laser fluorometry in micellar electrokinetic chromatography. *Anal. Chem.*, 67 (1995) 829-834.

See also 1927.

5d. Complex hydrocarbon mixtures (incl. analysis of tars, bitumens and mineral oils)

1944 Kokal, S., Tang, T., Schramm, L. and Sayegh, S.: Electrokinetic and adsorption properties of asphaltenes. *Colloids Surf., A*, 94 (1995) 253-265; *C.A.*, 122 (1995) 137690g.

1945 Samadijavan, A. and Loidl, D.: (Electrophoretic study of the refractive behavior of bitumen emulsion). *Oester. Chem. Z.*, 95 (1994) 272-277; *C.A.*, 122 (1995) 165062x.

6. ALCOHOLS

1946 Altria, K.D. and Howells, J.S.: Quantitative determination of organic solvents by capillary electrophoresis using indirect UV detection. *J. Chromatogr. A*, 696 (1995) 341-348.

7. PHENOLS

1947 Benz, N.J. and Fritz, J.S.: Optimization of separations of alkyl-substituted phenolate anions by capillary zone electrophoresis. *J. High Resolut. Chromatogr.*, 18 (1995) 175-178.

1948 Masselter, S.M. and Zemmann, A.J.: Influence of organic solvents in coelectroosmotic capillary electrophoresis of phenols. *Anal. Chem.*, 67 (1995) 1047-1053.

See also 1915, 1950, 2628.

8. SUBSTANCES CONTAINING HETEROCYCLIC OXYGEN

8a. Flavonoids

See 2616.

9. OXO COMPOUNDS, ETHERS, EPOXIDES AND QUINONES

1949 Iwagami, S. and Sawabe, Y.: (Simultaneous determination of sennoside A and B in rhei rhizoma of sennae folium by micellar electrokinetic capillary chromatography). *Osaka-furitsu Koshu Eisei Kenkyusho Kenkyu Hokoku, Yakujii Shido-hen*, 28 (1994) 17-21; *C.A.*, 122 (1995) 197093z.

1950 Masselter, S., Zemmann, A. and Bobleter, O.: Analysis of lignin degradation products by capillary electrophoresis. *Chromatographia*, 40 (1995) 51-57.

See also 1946, 2616.

10. CARBOHYDRATES

10a. Mono and oligosaccharides. Structural studies

- 1951 Charkoudian, J., Pluskal, M. and Horton, R.: Membrane surface for carbohydrate analysis. *Anal. Lett.*, 28 (1995) 1055-1070.
- 1952 Edens, R.E., Fromm, J.R., Fromm, S.J., Lonhardt, R.J. and Weiler, J.M.: Two-dimensional affinity resolution electrophoresis demonstrates that three distinct heparin populations interact with antithrombin III. *Biochemistry*, 34 (1995) 2400-2407.
- 1953 Jackson, P.: The analysis of fluorophore-labeled saccharides by high-resolution polyacrylamide gel electrophoresis. *Adv. Electrophor.*, 7 (1994) 255-262; *C.A.*, 122 (1995) 182215s - a review with 163 refs.
- 1954 Kerns, R.J., Vlahov, I.R. and Linhardt, R.J.: Capillary electrophoresis for monitoring chemical reactions: sulfation and synthetic manipulation of sulfated carbohydrates. *Carbohydr. Res.*, 267 (1995) 143-152; *C.A.*, 122 (1995) 240283a.
- 1955 Mechref, Y., Ostrander, G.K. and El Rassi, Z.: Capillary electrophoresis of carboxylated carbohydrates. I. Selective precolumn derivatization of gangliosides with UV absorbing and fluorescent tags. *J. Chromatogr. A*, 695 (1995) 83-95.
- 1956 Oefner, P. and Scherz, H.: Capillary electrophoresis and thin-layer electrophoresis of carbohydrates. *Adv. Electrophor.*, 7 (1994) 155-224; *C.A.*, 122 (1995) 182214r - a review with 130 refs.
- 1957 Shimura, K. and Kassai, K.-i.: Determination of the affinity constants of concanavalin A for monosaccharides by fluorescence affinity probe capillary electrophoresis. *Anal. Biochem.*, 227 (1995) 186-194.
- 1958 Starr, C.M., Klock, J.C., Skop, E., Masada, I. and Giudici, T.: Fluorophore-assisted electrophoresis of urinary carbohydrates for the identification of patients with oligosaccharidosis- and mucopolysaccharidosis-type lysosomal storage diseases. *Glycosylation Dis.*, 1 (1994) 165-176; *C.A.*, 122 (1995) 27067b.
- 1959 Tsen, G., Halfter, W., Kröger, S. and Cole, G.J.: Agrin is a heparan sulfate proteoglycan. *J. Biol. Chem.*, 270 (1995) 3392-3399.
- 1960 Yutani, S., Toh, G. and Honda, S.: (Analysis of fructooligosaccharides by HPLC and HPCE). *Kuromatografii*, 15 (1994) 210-211; *C.A.*, 122 (1995) 127992t.

See also 2578.

10b. Polysaccharides, mucopolysaccharides, lipopolysaccharides

- 1961 Hayase, S., Tsukamoto, T. and Ushio, T.: (Direct analysis of glycosaminoglycans by high-performance capillary electrophoresis and separation in the presence of amphoteric additive). *Kuromatografii*, 15 (1994) 216-217; *C.A.*, 122 (1995) 155524k.
- 1962 Karamanos, N.K., Axelsson, S., Vanky, P., Tzanakakis, G.N. and Hjerpe, A.: Determination of hyaluronan and galactosaminoglycan disaccharides by high-performance capillary electrophoresis at the attomole level. Applications to analyses of tissue and cell culture proteoglycans. *J. Chromatogr. A*, 696 (1995) 295-305.

- 1963 Volpi, N., Cusmano, M. and Venturelli, T.: Qualitative and quantitative studies of heparin and chondroitin sulfates in normal human plasma. *Biochim. Biophys. Acta*, 1243 (1995) 49-58.

See also 2047.

10c. Glycoproteins and their constituents

- 1964 Choi-Miura, N.-H., Sano, Y., Oda, E., Nakano, Y., Tobe, T., Yanagishita, T., Taniyama, M., Katagiri, T. and Tomita, M.: Purification and characterization of a novel glycoprotein which has significant homology to heavy chains of inter- α -trypsin inhibitor family from human plasma. *J. Biochem. (Tokyo)*, 117 (1995) 400-407.
- 1965 Clark, M.A. and Weiss, A.S.: Hutchinson-Gilford progeria types defined by differential binding of lectin DSA. *Biochim. Biophys. Acta*, 1270 (1995) 142-148.
- 1966 Fassbender, K., Fassbender, M., Schaberg, T., Sobieska, M. and Müller, W.: Glycosylation of α_1 -acid glycoprotein in bacterial lung infections: distinct pattern in tuberculosis. *Clin. Chem. (Washington)*, 41 (1995) 472-473.
- 1967 Hanski, C., Hanski, M.-L., Zimmer, T., Ogorek, D., Devine, P. and Riecken, E.-O.: Characterization of the major sialyl-Le^x-positive mucins present in colon, colon carcinoma, and sera of patients with colorectal cancer. *Cancer Res.*, 55 (1995) 928-933.
- 1968 Irimura, T. and Kawashima, H.: Detection and characterization of glycoprotein carbohydrate chains after electrophoretic separation. In: Dunbar, B.S. (Editor), *Protein Blotting*, IRL, Oxford, 1994, pp. 155-161; *C.A.*, 122 (1995) 155523j.
- 1969 Lampreave, F., Alava, M.A. and Piñero, A.: Lectin affinity immunoelectrophoresis of serum glycoproteins. *J. Chromatogr. A*, 698 (1995) 107-122 - a review with 132 refs.
- 1970 Lenoir, D., Ruggiero-Lopez, D., Louisot, P. and Biol, M.-C.: Developmental changes in intestinal glycosylation: nutrition-dependent multi-factor regulation of the fucosylation pathway at weaning time. *Biochim. Biophys. Acta*, 1234 (1995) 29-36.
- 1971 Madsen, P., Rasmussen, H.H., Flint, T., Gromov, P., Kruse, T.A., Honoré, B., Vorum, H. and Celis, J.E.: Cloning, Expression, and chromosome mapping of human galectin-7. *J. Biol. Chem.*, 270 (1995) 5823-5829.
- 1972 Mohanraj, D. and Ramakrishnan, S.: Cytotoxic effects of ricin without an interchain disulfide bond: genetic modification and chemical crosslinking studies. *Biochim. Biophys. Acta*, 1243 (1995) 399-406.
- 1973 Sato, T., Takio, K., Kobata, A., Greenwalt, D.E. and Furukawa, K.: Site-specific glycosylation of bovine butyrophilin. *J. Biochem. (Tokyo)*, 117 (1995) 147-157.
- 1974 Satoh, T., Abe, H., Sendai, Y., Iwata, H. and Hoshi, H.: Biochemical characterization of a bovine oviduct-specific sialo-glycoprotein that sustains sperm viability *in vitro*. *Biochim. Biophys. Acta*, 1266 (1995) 117-123.
- 1975 Sudou, A., Ozawa, M. and Muramatsu, T.: Lewis X structure increases cell substratum adhesion in L cells. *J. Biochem. (Tokyo)*, 117 (1995) 271-275.
- 1976 Weber, P.L., Kornfelt, T., Klausen, N.K. and Lunte, S.M.: Characterization of glycopeptides from recombinant coagulation factor VIIIa by high-performance liquid chromatography and capillary zone electrophoresis using ultraviolet and pulsed electrochemical detection. *Anal. Biochem.*, 225 (1995) 135-142.

11. ORGANIC ACIDS AND LIPIDS

11a. Organic acids and simple esters

1977 Erim, F.B., Xu, X. and Kraak, J.C.: Application of micellar electrokinetic chromatography and indirect UV detection for the analysis of fatty acids. *J. Chromatogr. A*, 694 (1995) 471-479.

1978 Schneede, J. and Ueland, P.M.: Application of capillary electrophoresis with laser-induced fluorescence detection for routine determination of methylmalonic acid in human serum. *Anal. Chem.*, 67 (1995) 812-819.

See also 2593, 2626.

11d. Lipoproteins and their constituents

1979 Baadenhuijsen, H., Demacker, P.N.M., Hessels, M., Boerma, G.J.M., Penders, T.J., Weykamp, C. and Willems, H.L.: Testing the accuracy of total cholesterol assays in an external quality-control program. Effect of adding sucrose to lyophilized control sera compared with use of fresh or frozen sera. *Clin. Chem. (Washington)*, 41 (1995) 724-730.

1980 Decossin, C., Tailleux, A., Fruchart, J.-C. and Fiévet, C.: Prevention of *in vitro* low-density lipoprotein oxidation by an albumin-containing Lp A-I subfraction. *Biochim. Biophys. Acta*, 1255 (1995) 31-38.

1981 Dobrian, A. and Simionescu, M.: Irreversibly glycosylated albumin alters the physico-chemical characteristics of low density lipoproteins of normal and diabetic subjects. *Biochim. Biophys. Acta*, 1270 (1995) 26-35.

1982 Greenspan, P., Mao, F.-w., Ryu, B.-H. and Gutman, R.L.: Advances in agarose gel electrophoresis of serum lipoproteins. *J. Chromatogr. A*, 698 (1995) 333-339 - a review with 56 refs.

1983 Marcovina, S.M., Albers, J.J., Gabel, B., Koschinsky, M.L. and Gaur, V.P.: Effect of the number of apolipoprotein(a) kringle 4 domains on immunochemical measurements of lipoprotein(a). *Clin. Chem. (Washington)*, 41 (1995) 246-255.

1984 Nagayoshi, A., Matsuki, N., Saito, H., Tsukamoto, K., Kaneko, K., Wakashima, M., Kinoshita, M., Yamanaka, M. and Teramoto, T.: Defect in assembly process of very-low-density lipoprotein in suncus liver: an animal model of fatty liver. *J. Biochem. (Tokyo)*, 117 (1995) 787-793.

1985 Nauck, M., Winkler, K., Wittman, C., Mayer, H., Luley, C., März, W. and Wieland, H.: Direct determination of lipoprotein(a) cholesterol by ultracentrifugation and agarose gel electrophoresis with enzymatic staining for cholesterol. *Clin. Chem. (Washington)*, 41 (1995) 731-738.

1986 Patel, D.D., Soutar, A.K. and Knight, B.L.: Abnormal structure and co-operative binding of low-density lipoprotein receptors containing the Glu-80 → Lys mutation. *Biochim. Biophys. Acta*, 1255 (1995) 285-292.

1987 Plonné, D., Heller, H., Kahlert, U. and Dargel, R.: Quantitative and qualitative characterization of apolipoprotein B containing lipoproteins produced by the visceral rat yolk sac in two different *in vitro* systems: organ culture and isolated epithelial cells in suspension culture. *Biochim. Biophys. Acta*, 1256 (1995) 71-80.

1988 Sigalov, A.B.: Cryopreservation and long-term storage of human low density lipoproteins. *Eur. J. Clin. Chem. Clin. Biochem.*, 33 (1995) 73-81.

1989 Skarlatos, S.I., Diverger, N., Rader, D. and Kruth, H.S.: Cholesterol efflux from human monocyte-derived macrophages in the presence of LpA-I:A-II. *Biochim. Biophys. Acta*, 1270 (1995) 19-25.

See also 2260, 2374.

13. STEROIDS

13d. Sterols

See 1985.

16. NITRO AND NITROSO COMPOUNDS

1990 Cao, J.: (Separation of complex nitrophenol sodium salts by micellar electrokinetic capillary chromatography). *Fenxi Huaxue*, 22 (1994) 1009-1011; *C.A.*, 122 (1995) 154012e.

1991 Oehrle, S.A.: Analysis of cationic ingredients and degradation products in liquid propellants by capillary ion electrophoresis (CIE). *J. Energ. Mater.*, 12 (1994) 197-209; *C.A.*, 122 (1995) 137592b.

1992 Tsikas, D., Böger, R.H., Bode-Böger, S.M., Brunner, G. and Frölich, J.C.: Formation of S-nitroso compounds from sodium nitroprusside, nitric oxide or nitrite and reduced thiols: analysis by capillary isotachopheresis. *J. Chromatogr. A*, 699 (1995) 363-369.

See also 1994.

17. AMINES, AMIDES AND RELATED NITROGEN COMPOUNDS

17a. Amines and polyamines

See 2593.

17b. Catecholamines and their metabolites

1993 Chang, H.-T. and Yeung, E.S.: Determination of catecholamines in single adrenal medullary cells by capillary electrophoresis and laser-induced native fluorescence. *Anal. Chem.*, 67 (1995) 1079-1083.

1994 Pyell, V. and Bütehorn, U.: Optimization strategies in micellar electrokinetic capillary chromatography. Optimization of the temperature of the separation capillary. *Chromatographia*, 40 (1995) 69-77.

1995 Takada, Y., Yoshida, M., Sakairi, M. and Koizumi, H.: (Analysis of substances related to brain function using capillary electrophoresis/MS). *Bunseki Kagaku*, 44 (1995) 241-246; *C.A.*, 122 (1995) 234745m.

- 1996 Yu, X., Luo, Z., Song, C. and Lodder, R.A.: (Determination of norepinephrine and epinephrine by high performance capillary electrophoresis). *Shandong Yike Daxue Xuebao*, 32 (1994) 347-349; C.A., 122 (1995) 205369m.
18. AMINO ACIDS AND PEPTIDES; CHEMICAL STRUCTURE OF PROTEINS
- 18a. *Amino acids and their derivatives*
- 1997 Chan, K.C., Muschik, G.M. and Issaq, H.J.: Enantiomeric separation of amino acids using micellar electrokinetic chromatography after pre-column derivatization with the chiral reagent 1-(9-fluorenyl)-ethyl chloroformate. *Electrophoresis (Weinheim)*, 16 (1995) 504-509.
- 1998 Guo, Y., Colón, L.A., Dadoo, R. and Zare, R.N.: Analysis of underivatized amino acids by capillary electrophoresis using constant potential amperometric detection. *Electrophoresis (Weinheim)*, 16 (1995) 493-497.
- 1999 Issaq, H.J. and Chan, K.C.: Separation and detection of amino acids and their enantiomers by capillary electrophoresis: a review. *Electrophoresis (Weinheim)*, 16 (1995) 467-480 - a review with 81 refs.
- 2000 Jacobson, S.C. and Ramsey, J.M.: Microchip electrophoresis with sample stacking. *Electrophoresis (Weinheim)*, 16 (1995) 481-486.
- 2001 Kawamata, M. and Ohba, M.: (Study on analysis of D- and L-amino acids by capillary electrophoresis a preliminary examination on composition of carrier buffer solution). *Taisei Kensetsu Gijutsu Kenkyushoho*, 27 (1994) 315-318; C.A., 122 (1995) 182487g.
- 2002 Lu, W., Yang, G. and Cole, R.B.: Determination of amino acids by on-line capillary electrophoresis-electrospray ionization mass spectrometry. *Electrophoresis (Weinheim)*, 16 (1995) 487-492.
- 2003 Michalke, B.: Capillary electrophoresis methods for clear identification of seleno amino acids in complex matrices like human milk. *Fresenius J. Anal. Chem.*, 351 (1995) 670-677.
- 2004 Minamoto, S. and Kanazawa, K.: Electrochemical determination of enzymic production of ultimate carcinogen from tryptophan pyrolysate by rat hepatic microsomes. *Anal. Biochem.*, 225 (1995) 143-148.
- 2005 Molle, D., Leonil, J. and Bouhallab, S.: Separation of two-proline-containing peptides by capillary electrophoresis. *Anal. Biochem.*, 225 (1995) 161-162.
- 2006 Zhou, J. and Lunte, S.M.: Direct determination of amino acids by capillary electrophoresis/electrochemistry using a copper microelectrode and zwitterionic buffers. *Electrophoresis (Weinheim)*, 16 (1995) 498-503.
- See also 2026, 2625, 2627.
- 18b. *Peptides, peptidic and proteinous hormones, growth factors*
- 2007 Cazorla, P., Aldudo, J., Haas, C., Vázquez, J., Valdivieso, F. and Bullido, M.J.: Location of an epitope shared by Alzheimer's amyloid peptide and brain creatine kinase using a newly developed monoclonal antibody. *Biochim. Biophys. Acta*, 1270 (1995) 149-156.
- 2008 Chen, F.-T.A.: Characterization of protease-catalyzed hydrolysis of cyanine-labeled angiotensin using capillary electrophoresis with laser-induced fluorescence detection. *Anal. Biochem.*, 225 (1995) 341-345.
- 2009 Cifuentes, A. and Poppe, H.: Effect of pH and ionic strength of running buffer on peptide behavior in capillary electrophoresis: theoretical calculation and experimental evaluation. *Electrophoresis (Weinheim)*, 16 (1995) 516-524.
- 2010 De Ceuninck, F., Willeput, J. and Corvol, M.: Purification and characterization of insulin-like growth factor II (IGFII) and an IGF II variant from human placenta. *J. Chromatogr. B*, 666 (1995) 203-214.
- 2011 Fuchs, B., Hecker, D. and Scheidtmann, K.H.: Phosphorylation studies on rat p53 using the baculovirus expression system. Manipulation of the phosphorylation state with okadaic acid and influence on DNA binding. *Eur. J. Biochem.*, 228 (1995) 625-639.
- 2012 Fukuoka, E.: (Bradykinin metabolism in plasma and species differences determined by capillary electrophoresis). *Osaka Ika Daigaku Zasshi*, 53 (1994) 46-54; C.A., 122 (1995) 75816s.
- 2013 Hegedus, Z., Ando, I., Toth, G.K., Varadi, G. and Monostori, E.: Application of polyacrylamide gel electrophoresis for analysis of oligopeptide phosphorylation *in vitro*. *BioTechniques*, 18 (1995) 631-636; C.A., 122 (1995) 234657j.
- 2014 Karaplis, A.C., Lim, S., Baba, H., Arnold, A. and Kronenberg, H.M.: Inefficient membrane targeting, translocation, and proteolytic processing by signal peptidase of a mutant preproparathyroid hormone protein. *J. Biol. Chem.*, 270 (1995) 1629-1635.
- 2015 Lin, B.-C., Xu, X. and Luo, G.-A.: Zone broadening and simulation of migration process of peptides in capillary zone electrophoresis. *Sci. China, Ser. B*, 37 (1994) 807-819; C.A., 122 (1995) 204202q.
- 2016 Matsubara, N., Koezuka, K. and Terabe, S.: Separation of eleven angiotensin II analogs by capillary electrophoresis with a nonionic surfactant in acidic media. *Electrophoresis (Weinheim)*, 16 (1995) 580-583.
- 2017 Orwar, O., Weber, S.G., Sandberg, M., Folestad, S., Tivesten, A. and Sundahl, M.: Fluorescence, photodestruction, photoionization and thermal degradation of α -phthalaldehyde/ β -mercaptoethanol-labelled aliphatic α -oligopeptides. *J. Chromatogr. A*, 696 (1995) 139-148.
- 2018 Pinto, D.M., Arriaga, E.A., Sia, S., Li, Z. and Dovichi, N.J.: Solid-phase fluorescent labeling reaction of picomole amounts of insulin in very dilute solutions and their analysis by capillary electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 534-540.
- 2019 Ruberto, M.A. and Grayeski, M.L.: Investigation of acridinium labeling for chemiluminescence detection of peptides separated by capillary electrophoresis. *J. Microcolumn Sep.*, 6 (1994) 545-550; C.A., 122 (1995) 75776d.
- 2020 Schultz, N.M., Huang, L. and Kennedy, R.T.: Capillary electrophoresis-based immunoassay to determine insulin content and insulin secretion from single islets of Langerhans. *Anal. Chem.*, 67 (1995) 924-929.
- 2021 Strausbauch, M.A., Madden, B.J., Wettstein, P.J. and Landers, J.P.: Sensitivity enhancement and second-dimensional information from solid phase extraction-capillary electrophoresis of entire high-performance liquid chromatography fractions. *Electrophoresis (Weinheim)*, 16 (1995) 541-548.

- 2022 Tadey, T. and Purdy, W.C.: Capillary electrophoretic resolution of phosphorylated peptide isomers using micellar solutions and coated capillaries. *Electrophoresis (Weinheim)*, 16 (1995) 574-579.
- 2023 Thorsteinsdóttir, M., Beijersten, I. and Westerlund, D.: Capillary electroseparations of enkephalin-related peptides and protein kinase A peptide substrates. *Electrophoresis (Weinheim)*, 16 (1995) 564-573.
- 2024 Thorsteinsdóttir, M., Isaksson, R. and Westerlund, D.: Performance of amino-silylated fused-silica capillaries for the separation of enkephalin-related peptides by capillary zone electrophoresis and micellar electrokinetic chromatography. *Electrophoresis (Weinheim)*, 16 (1995) 557-563.
- See also 1879, 1995, 2038, 2047, 2057, 2168, 2240, 2469.
- 18c. *Elucidation of structure of proteins and enzymes*
- 2025 Adamson, N.J. and Reynolds, E.C.: High performance capillary electrophoresis of casein phosphopeptides containing 2-5 phosphoserine residues: relationship between absolute electrophoretic mobility and peptide charge and size. *Electrophoresis (Weinheim)*, 16 (1995) 525-528.
- 2026 Kim, N.J., Kim, J.H. and Lee, K.-J.: Application of capillary electrophoresis to amino acid sequencing of peptide. *Electrophoresis (Weinheim)*, 16 (1995) 510-515.
- 2027 Lopez, M.F., Barry, P., Sawlivič, W.B., Hines, T. and Skea, W.M.: High resolution 2-D peptide mapping with subsequent analysis of peptides by microsequencing or lectin binding directly from PVDF membrane blots. *Appl. Theor. Electrophor.*, 4 (1994) 95-102; C.A., 122 (1995) 50535m.
- 2028 Miyauchi, M., Tozawa, K. and Yoshida, M.: F₁-ATPase α -subunit made up from two fragments (1-395, 396-503) is stabilized by ATP and complexes containing it obey altered kinetics. *Biochim. Biophys. Acta*, 1229 (1995) 225-232.
- 2029 Nakayama, H., Kanai, M., Seta, K., Isobe, T. and Okuyama, T.: (Primary structure analysis of proteins by combined two-dimensional electrophoresis-capillary column HPLC-ESI/TSQMS). *Kuro-matogurafi*, 15 (1994) 264-265; C.A., 122 (1995) 127993u.
- 2030 Pedersen, J., Filimonova, M., Roepstorff, P. and Biedermann, K.: (Isoforms of *Serratia marcescens* nuclease produced by natural and recombinant strains. Comparative characterization by plasma desorption mass spectrometry). *Biokhimiya (Moscow)*, 60 (1995) 450-461.
- 2031 Rawal, N., Rajpurohit, R., Lischwe, M.A., Williams, K.R., Paik, W.K. and Kim, S.: Structural specificity of substrate for S-adenosylmethionine:protein arginine N-methyltransferases. *Biochim. Biophys. Acta*, 1248 (1995) 11-18.
- 2032 Van Riel, J. and Olieman, C.: Determination of caseinomacropeptide with capillary zone electrophoresis and its application to the detection and estimation of rennet whey solids in milk and buttermilk powder. *Electrophoresis (Weinheim)*, 16 (1995) 529-533.
- See also 2047, 2057, 2169, 2186, 2190, 2213, 2306, 2351.
19. PROTEINS
- 19a. *General techniques*
- 2033 Ali, R., Sayeed, S.A. and Khan, A.A.: A sensitive novel staining agent for the resolved proteins on PAGE. *Int. J. Pept. Protein Res.*, 45 (1995) 97-99; C.A., 122 (1995) 182371q.
- 2034 Cash, P.: Protein mutations revealed by two-dimensional electrophoresis. *J. Chromatogr. A*, 698 (1995) 203-224 - a review with 149 refs.
- 2035 Chae, K.S. and Lenhoff, A.M.: Computation of the electrophoretic mobility of proteins. *Biophys. J.*, 68 (1995) 1120-1127; C.A., 122 (1995) 155538t.
- 2036 Cordwell, S.J., Wilkins, M.R., Cerpa-Poljak, A., Gooley, A.A., Duncan, M., Williams, K.L. and Humphrey-Smith, I.: Cross-species identification of proteins separated by two-dimensional gel electrophoresis using matrix-assisted laser desorption ionisation/time-of-flight mass spectrometry and amino acid composition. *Electrophoresis (Weinheim)*, 16 (1995) 438-443.
- 2037 Corradini, D. and Cannarsa, G.: N,N,N',N'-Tetramethyl-1,3-butanediamine as effective running electrolyte additive for efficient electrophoretic separation of basic proteins in bare fused-silica capillaries. *Electrophoresis (Weinheim)*, 16 (1995) 630-635.
- 2038 Fadden, P. and Haystead, T.A.J.: Quantitative and selective fluorophore labeling of phosphoserine on peptides and proteins: characterization at the attomole level by capillary electrophoresis and laser-induced fluorescence. *Anal. Biochem.*, 225 (1995) 81-88.
- 2039 Gao, J., Gomez, F.A., Haerter, R. and Whitesides, G.M.: Determination of the effective charge of a protein in solution by capillary electrophoresis. *Proc. Natl. Acad. Sci. U.S.A.*, 91 (1994) 12027-12030; C.A., 122 (1995) 27085f.
- 2040 Glatz, Z., Janiczek, O., Wimmerova, M. and Novotny, M.V.: Detection of quinoproteins after electrophoresis in the presence of urea or SDS. *Biochem. Mol. Biol. Int.*, 35 (1995) 1-10; C.A., 122 (1995) 127923w.
- 2041 Guttman, A.: On the separation mechanism of capillary sodium dodecyl sulfate-gel electrophoresis of proteins. *Electrophoresis (Weinheim)*, 16 (1995) 611-616.
- 2042 Heegaard, N.H.H.: Characterization of biomolecules by electrophoretic analysis of reversible interactions. *Appl. Theor. Electrophor.*, 4 (1994) 43-63; C.A., 122 (1995) 50346a - a review with many refs.
- 2043 Heller, C.: Capillary electrophoresis of proteins and nucleic acids in gels and entangled polymer solutions. *J. Chromatogr. A*, 698 (1995) 19-31 - a review with 105 refs.
- 2044 Henzel, W.J., Grimley, C., Bourell, J.H., Billeci, T.M., Wong, S.C. and Stults, J.T.: Analysis of two-dimensional gel proteins by mass spectrometry and microsequencing. *Methods (San Diego)*, 6 (1994) 239-247; C.A., 122 (1995) 27209z.
- 2045 Hess, D. and Aebersold, R.: Internal sequence analysis of proteins separated by polyacrylamide gel electrophoresis. *Methods (San Diego)*, 6 (1994) 227-238; C.A., 122 (1995) 272087.
- 2046 Hillebrandt, S. Streffer, C.: Quantitative computerized analysis of silver-stained and Coomassie Blue-stained two-dimensional protein maps. *Z. Naturforsch. C: Biosci.*, 49 (1994) 849-855; C.A., 122 (1995) 74084q.

- 2047 Huang, M., Plocek, J. and Novotny, M.V.: Hydrolytically stable cellulose-derivative coatings for capillary electrophoresis of peptides, proteins and glycoconjugates. *Electrophoresis (Weinheim)*, 16 (1995) 396-401.
- 2048 Huang, T.-L., Shieh, P.C.H. and Cooke, N.: Isoelectric focusing of proteins in capillary electrophoresis with pressure-driven mobilization. *Chromatographia*, 39 (1994) 543-548.
- 2049 Jacobson, G.: Protein blotting using semi-dry electrophoretic transfer equipment. In: Dunbar, B.S. (Editor), *Protein Blotting*, IRL, Oxford, 1994, pp. 53-70; C.A., 122 (1995) 127725h - a review with 19 refs.
- 2050 Kasai, K.-i.: (Intelligent chromatography and electrophoresis as tools for understanding of biomolecules). *Kuromatogurafi*, 15 (1994) 206-209; C.A., 122 (1995) 127787e.
- 2051 Krueger, E., Radau, B. and Roenn, D.: (Investigation of beers and beer heads by methods employed in protein chemistry). *Monatsschr. Brauwiss.*, 46 (1993) 312-319; C.A., 122 (1995) 131260v.
- 2052 Kubo, K. and Takagi, T.: Modulation of the behavior of a protein in polyacrylamide gel electrophoresis in the presence of dodecyl sulfate by varying the cations. *Anal. Biochem.*, 224 (1995) 572-579.
- 2053 Kulish, D.M., Klyushnichenko, V.E. and Vul'fson, A.N.: (Separation of proteins by liquid chromatography and capillary electrophoresis). *Zh. Fiz. Khim.*, 68 (1994) 1841-1847; C.A., 122 (1995) 50407w.
- 2054 Kyd, J.M., Taylor, D. and Cripps, A.W.: Conservation of immune responses to proteins isolated by preparative polyacrylamide gel electrophoresis from the outer membrane of nontypeable *Haemophilus influenzae*. *Infect. Immun.*, 62 (1994) 5652-5658; C.A., 122 (1995) 27077e.
- 2055 Lee, V.H. and Dunbar, B.S.: Sample preparation for protein electrophoresis and transfer. In: Dunbar, B.S. (Editor), *Protein Blotting*, IRL, Oxford, 1994, pp. 87-103; C.A., 122 (1995) 127901n.
- 2056 Liu, Y., Fu, R. and Gu, J.: Capillary zone electrophoretic separation of proteins using a column coated with epoxy polymer. *J. Chromatogr. A*, 694 (1995) 498-506.
- 2057 Piccoli, G., Fiorani, M., Biagiarelli, B., Palma, F., Vallorani, L., de Bellis, R. and Stocchi, V.: High-performance capillary electrophoretic separation of proteins and peptides using a bonded hydrophilic phase capillary. *Electrophoresis (Weinheim)*, 16 (1995) 625-629.
- 2058 Rider, M.H., Puype, M., van Damme, J., Gevaert, K., de Boeck, S., D'Alayer, J., Rasmussen, H.H., Celis, J.E. and Vanderckhove, J.: An agarose-based gel-concentration system for microsequence and mass spectrometric characterization of proteins previously purified in polyacrylamide gels starting at low picomole levels. *Eur. J. Biochem.*, 230 (1995) 258-265.
- 2059 Salazar, R., Brandt, R. and Krantz, S.: Expression of fructosyllysine receptors on human monocytes and monocyte-like cell lines. *Biochim. Biophys. Acta*, 1266 (1995) 57-63.
- 2060 Sarmiento, M.: High resolution, standard format two-dimensional protein electrophoresis using disposable glass micropipettes and non-dedicated equipment. *Electrophoresis (Weinheim)*, 16 (1995) 431-437.
- 2061 Schaegger, H.: Denaturing electrophoretic techniques. In: Von Jagow, G. and Schaegger, H. (Editors), *Pract. Guide Membr. Protein Purif.*, Academic, San Diego, 1994, pp. 59-79; C.A., 122 (1995) 155328z.
- 2062 Schaegger, H.: Native gel electrophoresis. In: Von Jagow, G. (Editor), *Pract. Guide Membr. Protein Purif.*, Academic, San Diego, 1994, pp. 81-104; C.A., 122 (1995) 155527p.
- 2063 Senda, M., Sasaki, T. and Hiyama, T.: Capillary electrophoresis of redox proteins and adenine nucleotides. *Kuromatogurafi*, 15 (1994) 169-174; C.A., 122 (1995) 27071y.
- 2064 Shaw, S.M. and Crabbe, M.J.C.: Monitoring the progress of nonenzymic glycation *in vitro*. *Int. J. Pept. Protein Res.*, 44 (1994) 594-602; C.A., 122 (1995) 50702p.
- 2065 Shoji, M., Kato, M. and Hashizume, S.: Electrophoretic recovery of proteins from polyacrylamide gel. *J. Chromatogr. A*, 698 (1995) 145-162 - a review with 99 refs.
- 2066 Sreeramulu, G. and Singh, N.K.: Destaining of Coomassie Brilliant Blue R-250-stained polyacrylamide gels with sodium chloride solutions. *Electrophoresis (Weinheim)*, 16 (1995) 362-363.
- 2067 Szewczyk, B. and Summers, D.F.: Efficient elution of purified proteins from polyvinylidene difluoride membranes (immobilion) after transfer from SDS-PAGE and their use as immunogens. *Mol. Biotechnol.*, 2 (1994) 129-134; C.A., 122 (1995) 27069d.
- 2068 Szoko, E.: (Separation of proteins by capillary zone electrophoresis-the effect of dextran polymers on the selectivity). *Gyogyszereszet*, 38 (1994) 715-718; C.A., 122 (1995) 75821q.
- 2069 Tang, J. and Huang, J.: (Effect of sample overloading on the separation of proteins by high performance capillary gel electrophoresis). *Gaojishu Tongxun*, 4 (1994) 29-32; C.A., 122 (1995) 75842x.
- 2070 Theos, C.W.: Protein electrophoresis in aqueous two-phase systems. Avail. *Univ. Microfilms Int.*, Order No. DA9434086, 1994, 236 pp.; C.A., 122 (1995) 182496j.
- 2071 Thornton, J.R., Daum, H.A., III and Case S.T.: Agarose gel electrophoresis of high molecular mass protein complexes. *BioTechniques*, 18 (1995) 324-327; C.A., 122 (1995) 127922v.
- 2072 Tsonis, P.A. and del Rio-Tsonis, K.: Protein separation techniques in the study of tissue regeneration. *J. Chromatogr. A*, 698 (1995) 361-367.
- 2073 Vuillard, L., Marret, N. and Rabilloud, T.: Enhancing protein solubilization with nondetergent sulfobetaines. *Electrophoresis (Weinheim)*, 16 (1995) 295-297.
- 2074 Wheat, T.E.: Principles and practice of peptide analysis with capillary zone electrophoresis. *Methods Mol. Biol. (Totowa)*, 36(Peptide Analysis Protocols) (1994) 65-83; C.A., 122 (1995) 75703c.
- See also 1818, 1838, 1861, 1866, 1868, 1875, 1877, 1879, 1888, 1890, 1899, 1922, 2084, 2181, 2384, 2482, 2618, 2648, 2659.
- 19b. *Proteins of cells, viruses and subcellular particles*
- 2075 Azem, A., Shaked, I., Rosenbusch, J.P. and Daniel, E.: Cross-linking of porin with glutardialdehyde: a test for the adequacy of premises of cross-linking theory. *Biochim. Biophys. Acta*, 1243 (1995) 151-156.

- 2076 Bentlage, H.A.C.M., Janssen, A.J.M., Chomyn, A., Attardi, G., Walker, J.E., Schägger, H., Sengers, R.C.A. and Trijbels, F.J.M.: Multiple deficiencies of mitochondrial DNA- and nuclear-encoded subunits of respiratory NADH dehydrogenase detected with peptide- and subunit-specific antibodies in mitochondrial myopathies. *Biochim. Biophys. Acta*, 1234 (1995) 63-73.
- 2077 Boensch, C., Kuo, M., Connolly, D.T., Huang, S.S. and Huang, J.S.: Identification, purification, and characterization of cell-surface retention sequence-binding proteins from human SK-Hep cells and bovine liver plasma membranes. *J. Biol. Chem.*, 270 (1995) 1807-1816.
- 2078 Cai, S.-J., McAndrew, R.S., Leonard, B.P., Chapman, K.D. and Pidgeon, C.: Rapid purification of cotton seed membrane-bound N-acylphosphatidylethanolamine synthase by immobilized artificial membrane chromatography. *J. Chromatogr. A*, 696 (1995) 49-62.
- 2079 Duncan, R.F., Cavener, D.R. and Qu, S.: Heat shock effects on phosphorylation of protein synthesis initiation factor proteins eIF-4E and eIF-2 α in *Drosophila*. *Biochemistry*, 34 (1995) 2985-2997.
- 2080 Eriksson, H., Ridderstråle, M., Degerman, E., Ekholm, D., Smith, C.J., Manganiello, V.C., Belfrage, P. and Tornqvist, H.: Evidence for the key role of the adipocyte cGMP-inhibited cAMP phosphodiesterase in the antilipolytic action of insulin. *Biochim. Biophys. Acta*, 1266 (1995) 101-107.
- 2081 Fine, A., Panchenko, M.P., Smith, B.D., Yu, Q. and Goldstein, R.H.: Discordant regulation of transforming growth factor- β receptors by prostaglandin E₂. *Biochim. Biophys. Acta*, 1261 (1995) 19-24.
- 2082 Freiburghaus, A.U.: Two-dimensional polyacrylamide gel electrophoresis of membrane proteins. *Mol. Biotechnol.*, 2 (1994) 281-293; *C.A.*, 122 (1995) 127900m.
- 2083 Gaigg, B., Simbeni, R., Hrastrnik, C., Paltauf, F. and Daum, G.: Characterization of a microsomal subfraction associated with mitochondria of the yeast, *Saccharomyces cerevisiae*. Involvement in synthesis and import of phospholipids into mitochondria. *Biochim. Biophys. Acta*, 1234 (1995) 214-220.
- 2084 Gianazza, E., Coari, P., Lovati, M.R., Manzoni, C., Ghibaldi, E. and Salmona, M.: Basic proteins and basic membranes. Adjusting blotting and staining conditions to Immobilon CD. *J. Chromatogr. A*, 698 (1995) 351-359.
- 2085 Gimenez, B., Amarasekera, D., Argo, E. and Cash, P.: Analysis of protein synthesis by two-dimensional gel electrophoresis in T cells persistently infected with coxsackie B virus. *Electrophoresis (Weinheim)*, 16 (1995) 317-321.
- 2086 Hills, D. and Crane-Robinson, C.: Baculovirus expression of human basic fibroblast growth factor from a synthetic gene: role of the Kozak consensus and comparison with bacterial expression. *Biochim. Biophys. Acta*, 1260 (1995) 14-20.
- 2087 Kvannes, J., Eikhorn, T.S. and Flatmark, T.: On the mechanism of stimulation of peroxisomal β -oxidation in rat heart by partially hydrogenated fish oil. *Biochim. Biophys. Acta*, 1255 (1995) 39-49.
- 2088 Lopez-Moratalla, N., del Mar Calonge, M., López-Zabalza, M.J., Pérez-Mediavilla, L.A., Subirá, M.L. and Santiago, E.: Activation of human lymphomononuclear cells by peptides derived from extracellular matrix proteins. *Biochim. Biophys. Acta*, 1265 (1995) 181-188.
- 2089 Manabe, T., Yamamoto, H. and Kawai, M.: Studies on the procedure for the construction of cellular protein databases employing micro two-dimensional electrophoresis: an HL-60 protein database. *Electrophoresis (Weinheim)*, 16 (1995) 407-422.
- 2090 Matsumoto, K., Okazaki, H. and Nakamura, T.: Novel function of prostaglandins as inducers of gene expression of HGF and putative mediators of tissue regeneration. *J. Biochem. (Tokyo)*, 117 (1995) 458-464.
- 2091 Mithieux, G., Ajzannay, A. and Minassian, C.: Identification of membrane-bound phosphoglucosyltransferase and glucose-6-phosphatase by ³²P-labeling of rat liver microsomal membrane proteins with ³²P-glucose-6-phosphate. *J. Biochem. (Tokyo)*, 117 (1995) 908-914.
- 2092 Naylor, D.J., Ryan, M.T., Condon, R., Hoogenraad, N.J. and Høj, P.B.: Affinity-purification and identification of GrpE homologues from mammalian mitochondria. *Biochim. Biophys. Acta*, 1248 (1995) 75-79.
- 2093 Nonaka, T., Matsumoto, H., Shimada, W., Miyagi, I., Okada, K., Fukao, H., Ueshima, S., Kikuchi, H., Tanaka, S. and Matsuo, O.: Effect of cyclic AMP on urokinase-type plasminogen activator receptor and fibrinolytic factors in a human osteoblast-like cell line. *Biochim. Biophys. Acta*, 1266 (1995) 50-56.
- 2094 Ono, T.-a., Noguchi, T. and Nakajima, Y.: Characteristic changes of function and structure of Photosystem II during strong-light photoinhibition under aerobic conditions. *Biochim. Biophys. Acta*, 1229 (1995) 239-248.
- 2095 Palm, L., Andersen, J., Rahbek-Nielsen, H., Hansen, T.S., Kristiansen, K. and Hojrup, P.: The phosphorylated ribosomal protein S7 in *Tetrahymena* is homologous with mammalian S4 and the phosphorylated residues are located in the C-terminal region. Structural characterization of proteins separated by two-dimensional polyacrylamide gel electrophoresis. *J. Biol. Chem.*, 270 (1995) 6000-6005.
- 2096 Pemberton, P.W., Loble, R.W., Holms, R., Soerensen, S.H., Simpson, K.W. and Batt, R.M.: Characterization of microvillar membrane proteins of dog small intestine by two-dimensional electrophoresis. *Comp. Biochem. Physiol., B: Biochem. Mol. Biol.*, 110B (1995) 483-492; *C.A.*, 122 (1995) 209055d.
- 2097 Pestonjamas, K.N. and Mehta, N.G.: Neutral polymers elicit, and antibodies to spectrin, band 4.1 protein and cytoplasmic domain of band 3 protein inhibit the concanavalin A-mediated agglutination of human erythrocytes. *Biochim. Biophys. Acta*, 1235 (1995) 10-20.
- 2098 Puchkova, L.V., Aleinikova, T.D., Zakharova, E.T., Konopistseva, L.A., Tsymbalenko, N.V. and Gaitshokhi, V.S.: (Regulation of biosynthesis of molecular forms of ceruloplasmin in ontogenesis of the rats). *Biochimiyi (Moscow)*, 59 (1994) 1304-1311.
- 2099 Sato, E.F., Edashige, K., Inoue, M. and Utsumi, K.: Okadaic acid increased annexin I and induced differentiation of human promyelocytic leukemia cells. *Biochim. Biophys. Acta*, 1266 (1995) 23-30.
- 2100 Sugo, T., Nakamikawa, C., Tanabe, S. and Matsuda, M.: Activation of prothrombin by factor Xa bound to the membrane surface of human umbilical vein endothelial cells: its catalytic efficiency is similar to that of prothrombinase complex on platelets. *J. Biochem. (Tokyo)*, 117 (1995) 244-250.

- 2101 Takano, M., Yokoyama, K., Yayama, K. and Okamoto, H.: Murine fibroblasts synthesize and secrete kininogen in response to cyclic-AMP, prostaglandin E₂ and tumor necrosis factor. *Biochim. Biophys. Acta*, 1265 (1995) 189-195.
- 2102 Turner, G.P. and Kneale, G.G.: Site-directed mutagenesis of the M13 gene 5 protein: the role of Arg-21, Tyr-26 and Tyr-41. *Biochim. Biophys. Acta*, 1260 (1995) 79-84.
- 2103 Weil, R., Cloutier, J.-F., Fournel, M. and Veillette, A.: Regulation of Zap-70 by Src family tyrosine protein kinases in an antigen-specific T-cell line. *J. Biol. Chem.*, 270 (1995) 2791-2799.
- See also 1970, 2072, 2108, 2150, 2234, 2245, 2478.
- 19c. *Proteins synthesized by genetic manipulation, monoclonal antibodies*
- 2104 Bill, R.M., Winter, P.C., McHale, C.M., Hodges, V.M., Elder, G.E., Caley, J., Flitsch, S.L., Bicknell, R. and Lappin, T.R.J.: Expression and mutagenesis of recombinant human and murine erythropoietins in *Escherichia coli*. *Biochim. Biophys. Acta*, 1261 (1995) 35-43.
- 2105 Cvekl, A., McDermott, J.B. and Piatigorsky, J.: cDNA encoding a chicken protein (CRP1) with homology to hnRNP type A/B. *Biochim. Biophys. Acta*, 1261 (1995) 290-292.
- 2106 Kwon, K.-S., Lee, S. and Yu, M.-H.: Refolding of α_1 -antitrypsin expressed as inclusion bodies in *Escherichia coli*: characterization of aggregation. *Biochim. Biophys. Acta*, 1247 (1995) 179-184.
- 2107 Mukai, H., Mori, K., Takanaga, H., Kitagawa, M., Shibata, H., Shimakawa, M., Miyahara, M. and Ono, Y.: *Xenopus* PKN: cloning and sequencing of the cDNA and identification of conserved domains. *Biochim. Biophys. Acta*, 1261 (1995) 296-300.
- 2108 Samal, B.B., Arakawa, T., Boone, T.C., Jones, T., Prestrelski, S.J., Narhi, L.O., Wen, J., Stearns, G.W., Crandall, C.A., Pope, J. and Suggs, S.: High level expression of human leukemia inhibitory factor (LIF) from a synthetic gene in *Escherichia coli* and the physical and biological characterization of the protein. *Biochim. Biophys. Acta*, 1260 (1995) 27-34.
- 2109 Strega, M.A. and Lagu, A.L.: Capillary electrophoretic separations of biotechnology-derived proteins in *E. coli* fermentation broth. *Electrophoresis (Weinheim)*, 16 (1995) 642-646.
- 2110 Yao, Y.J., Loh, K.C., Chung, M.C.M. and Li, S.F.Y.: Analysis of recombinant human tumor necrosis factor beta by capillary electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 647-653.
- 2111 Zhu, A., Wang, Z.-K. and Goldstein, J.: Identification of tyrosine 108 in coffee bean α -galactosidase as an essential residue for the enzyme activity. *Biochim. Biophys. Acta*, 1247 (1995) 260-264.
- See also 2028, 2086, 2102, 2150, 2182, 2231, 2268, 2302, 2404, 2446.
- 19d. *Microbial and plant proteins*
- 2112 Black, J. and Durig, L.: Sequential method for the electrophoretic analysis of barley varieties, including computer storage and matching of banding patterns. *J. Am. Soc. Brew. Chem.*, 53 (1995) 19-23; C.A., 122 (1995) 158914y.
- 2113 Buchrieser, C., Gangar, V.V., Murphree, R.L., Tamplin, M.L. and Kaspar, C.W.: Multiple *Vibrio vulnificus* strains in oysters as demonstrated by clamped homogeneous electric field gel electrophoresis. *Appl. Environ. Microbiol.*, 61 (1995) 1163-1168; C.A., 122 (1995) 179593h.
- 2114 Cooke, R.J.: Gel electrophoresis for the identification of plant varieties. *J. Chromatogr. A*, 698 (1995) 281-299 - a review with 68 refs.
- 2115 Costas, M., Holmes, B., Ganner, M., On, S.L.W., Hoffman, P.N., Worsley, M.A. and Panigrahi, H.: Identification of outbreak-associated and other strains of *Clostridium difficile* by numerical analysis of SDS-PAGE protein patterns. *Epidemiol. Infect.*, 113 (1994) 1-12; C.A., 122 (1995) 27320d.
- 2116 Deb, A., Bhattacharyya, D. and Das, J.: A 25-kDa β -lactam-induced outer membrane protein of *Vibrio cholerae*. Purification and characterization. *J. Biol. Chem.*, 270 (1995) 2914-2920.
- 2117 Demirevska-Kepova, K., Metodiev, M. and Tsekov, T.: Comparison of gel electrophoretic and immunochemical measurements of Rubisco quantities in leaves. *Dokl. Bulg. Akad. Nauk.*, 46 (1993) 105-108; C.A., 122 (1995) 101720c.
- 2118 Descheemaeker, P., Pot, B., Ledebouer, A.M., Verrips, T. and Kersters, K.: Comparison of the *Lactococcus lactis* differential medium (DCL) and SDS-PAGE of whole-cell proteins for the identification of lactococci to subspecies level. *Syst. Appl. Microbiol.*, 17 (1994) 459-466; C.A., 122 (1995) 155621q.
- 2119 Durner, J. and Böger, P.: Ubiquitin in the prokaryote *Anabaena variabilis*. *J. Biol. Chem.*, 270 (1995) 3720-3725.
- 2120 Farber, S.P.: (Seed 12 S globulins in identification of cabbage cultivars). *Dokl. Ross. Akad. S-kh. Nauk.*, (1994) 8-10; C.A., 122 (1995) 235441w.
- 2121 Giometti, C.S., Tollaksen, S.L., Mukund, S., Zhou, Z.H., Ma, K., Mai, X. and Adams, M.W.W.: Two-dimensional gel electrophoresis mapping of proteins isolated from the hyperthermophile *Pyrococcus furiosus*. *J. Chromatogr. A*, 698 (1995) 341-349.
- 2122 Golitsyn, V.M., Teten'kin, V.L., Elanskaya, I.V. and Gulyaev, B.A.: (Spectral properties of the cyanobacterium *Cynechocystis* sp. PCC 6803 mutants devoid of the PhotoSystem 2 activity). *Bio-khimiya (Moscow)*, 60 (1995) 485-490.
- 2123 Jekow, P., Fromme, P., Witt, H.T. and Saenger, W.: Photosystem I from *Synechococcus elongatus*: preparation and crystallization of monomers with varying subunit compositions. *Biochim. Biophys. Acta*, 1229 (1995) 115-120.
- 2124 Kamo, M., Kawakami, T., Miyatake, N. and Tsugita, A.: Separation and characterization of *Arabidopsis thaliana* proteins by two-dimensional gel electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 423-430.
- 2125 Kondo, S., Matsumoto, T., Yokoyama, Y., Ohmori, I. and Suzuki, H.: The shortest isoform of human vascular endothelial growth factor/vascular permeability factor (VEGF/VPF₁₂₁) produced by *Saccharomyces cerevisiae* promotes both angiogenesis and vascular permeability. *Biochim. Biophys. Acta*, 1243 (1995) 195-202.
- 2126 Lookhart, G. and Bean, S.: A fast method for wheat cultivar differentiation using capillary zone electrophoresis. *Cereal Chem.*, 72 (1995) 42-47; C.A., 122 (1995) 155533n.
- 2127 Mendoza, J.A., Martinez, J.L. and Horowitz, P.M.: Tetradameric chaperonin 60 can be assembled *in vitro* from monomers in a process that is ATP independent. *Biochim. Biophys. Acta*, 1247 (1995) 209-214.

- 2128 Michaud, D. and Assetin, A.: Application to plant proteins of gel electrophoretic methods. *J. Chromatogr. A*, 698 (1995) 263-279 - a review with 145 refs.
- 2129 Phan-Thanh, L. and Gormon, T.: Analysis of heat and cold shock proteins in *Listeria* by two-dimensional electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 444-450.
- 2130 Seki, K., Kobayashi, K. and Masuda, S.: A simple procedure for comparison of protein band patterns on SDS-PAGE between *Staphylococcus aureus* strains. *Zentralbl. Bakteriol., Suppl.*, 26 (1994) 61-63; *C.A.*, 122 (1995) 234647f.
- 2131 Takeda, T., Kurasawa, Y., Watanabe, Y. and Numata, O.: Polymerization of highly purified *Tetrahymena* 14-nm filament protein/citrate synthase into filaments and its possible role in regulation of enzymatic activity. *J. Biochem. (Tokyo)*, 117 (1995) 869-874.
- 2132 Tsiomenko, A.B., Tuymetova, G.P., Eldarov, M.A., Korolev, S.V., Skryabin, K.G. and Kulaev, I.S.: (The prosegment of yeast α -factor directs the human growth hormone to the culture medium of *Saccharomyces cerevisiae*). *Biokhimiya (Moscow)*, 59 (1994) 1675-1688.
- 2133 Wang, X., Yang, S., Xi, Y. and Cao, Y.: (Electrophoresis differentiation of oleosins between different family and genus of plants). *Xibei Shifan Daxue Xuebao, Ziran Kexueban*, 30 (1994) 53-56; *C.A.*, 122 (1995) 75841w.
- 2134 Werner, W.E., Wiktorowicz, J.E. and Kasarda, D.D.: Wheat varietal identification by capillary electrophoresis of gliadins and high molecular weight glutenin subunits. *Cereal Chem.*, 71 (1994) 397-402; *C.A.*, 122 (1995) 30176s.
- 2135 Yu, S.-G., Stefansson, H., Romanowska, E. and Albertsson, P.-A.: Two dimensional electrophoresis of thylakoid membrane proteins and its application to microsequencing. *Photosynth. Res.*, 41 (1994) 475-486; *C.A.*, 122 (1995) 50499c.
- 2136 Zimacheva, A.V. and Mosolov, V.V.: (Inhibitors of cysteine proteinases from soya seeds). *Biokhimiya (Moscow)*, 60 (1995) 118-123.
- See also 1957, 2066, 2104, 2109, 2395, 2623.
- 19e. *Proteins of blood, serum and blood cells*
- 2137 Brumeanu, T.-D., Zaghouni, H. and Bona, C.: Purification of antigenized immunoglobulins derivatized with monomethoxy-polyethylene glycol. *J. Chromatogr. A*, 696 (1995) 219-225.
- 2138 Cheema, A.A., Malik, M.A. and Javed, M.A.: Identification of plasma proteins of broiler chicks of *Gallus domesticus* by polyacrylamide gel electrophoresis using different dyes. *Pak. J. Zool.*, 26 (1994) 192-195; *C.A.*, 122 (1995) 127896q.
- 2139 Colls, J., Betterle, C., Volpato, M., Prentice, L., Smith, B.R. and Furmaniak, J.: Immunoprecipitation assay for autoantibodies to steroid 21-hydroxylase in autoimmune adrenal diseases. *Clin. Chem. (Washington)*, 41 (1995) 375-380.
- 2140 Fujimura, S., Rikimaru, T., Baba, S., Hori, J., Hao, X.-Q., Terada, S. and Kimoto, E.: Purification and characterization of a non-hemorrhagic metalloprotease from *Agkistrodon halys brevicaudus* venom. *Biochim. Biophys. Acta*, 1243 (1995) 94-100.
- 2141 Hofstadler, S.A., Swaneck, F.D., Gale, D.C., Ewing, A.G. and Smith, R.D.: Capillary electrophoresis - electrospray ionization Fourier transform ion cyclotron resonance mass spectrometry for direct analysis of cellular proteins. *Anal. Chem.*, 67 (1995) 1477-1480.
- 2142 Janiak, A., Villar, R., Cassoly, R. and Rendu, F.: Tubulin is not phosphorylated in resting and thrombin-activated platelets. *J. Biochem. (Tokyo)*, 117 (1995) 296-302.
- 2143 Lausch, R., Reif, O.-W., Riechel, P. and Scheper, T.: Analysis of immunoglobulin G using a capillary electrophoretic affinity assay with protein A and laser-induced fluorescence detection. *Electrophoresis (Weinheim)*, 16 (1995) 636-641.
- 2144 Marchi, G., Dorizzi, R.M., Ferrari, V.D. and Jirillo, A.: Appearance of heavy chains and unfavorable prognosis in Hodgkin disease. *Clin. Chem. (Washington)*, 41 (1995) 761-762.
- 2145 Miura, T., Yabuki, S., Funato, T., Kawamura, T., Sasaki, T., Tsubo, S. and Machida, S.: (Capillary electrophoretic separation of human serum proteins by the addition of trimethylammonium propanesulfonate (Z1-methyl) to the buffer). *Seibutsu Butsuri Kagaku*, 38 (1994) 425-431; *C.A.*, 122 (1995) 100891x.
- 2146 Miyata, T., Funatsu, A. and Kato, H.: Chemical cross-linking of activated coagulation factor VII with soluble tissue factor: calcium ions are not essential for full amidolytic activity of the factor VIIa-tissue factor complex after complex formation. *J. Biochem. (Tokyo)*, 117 (1995) 836-844.
- 2147 Ozaki, Y., Satoh, K., Yatomi, Y., Miura, S., Fujimura, Y. and Kume, S.: Protein tyrosine phosphorylation in human platelets induced by interaction between glycoprotein Ib and von Willebrand factor. *Biochim. Biophys. Acta*, 1243 (1995) 482-488.
- 2148 Prin, C., Bene, M.C., Gobert, B., Montagne, P. and Faure, G.C.: Isoelectric restriction of human immunoglobulin isotypes. *Biochim. Biophys. Acta*, 1243 (1995) 287-290.
- 2149 Stafeyeva, O.A., Khailova, L.S., Katrukha, A.G. and Bulargina, I.V.: (Preparation of anti-E1 monoclonal antibodies and their application in the study of the pyruvate dehydrogenase complex). *Biokhimiya (Moscow)*, 60 (1995) 124-130.
- 2150 Szamel, M., Leufgen, H., Kurrle, R. and Resch, K.: Differential signal transduction pathways regulating interleukin-2 synthesis and interleukin-2 receptor expression in stimulated human lymphocytes. *Biochim. Biophys. Acta*, 1235 (1995) 33-42.
- 2151 Tissot, J.-D. and Spertini, F.: Analysis of immunoglobulins by two-dimensional gel electrophoresis. *J. Chromatogr. A*, 698 (1995) 225-250 - a review with 237 refs.
- 2152 Ugarova, T.P., Zamarron, C., Veklich, Y., Bowditch, R.D., Ginsberg, M.H., Weisel, J.W. and Plow, E.F.: Conformational transitions in the cell binding domain of fibronectin. *Biochemistry*, 34 (1995) 4457-4466.
- 2153 Van den Berg, C.W., Harrison, R.A. and Morgan, B.P.: A rapid method for the isolation of analogs of human CD59 by preparative SDS-PAGE: application to pig CD59. *J. Immunol. Methods*, 179 (1995) 223-231; *C.A.*, 122 (1995) 184912r.
- 2154 Wang, X., DeVries, A. and Cheng, C.-H.: Antifreeze peptide heterogeneity in an antarctic eel pout includes an unusually large major variant comprised of two 7 kDa type III AFPs linked in tandem. *Biochim. Biophys. Acta*, 1247 (1995) 163-172.
- 2155 Yasuda, F., Hayashi, T., Tanitame, K., Nishioka, J. and Suzuki, K.: Molecular cloning and functional characterization of rat plasma protein S. *J. Biochem. (Tokyo)*, 117 (1995) 374-383.
- See also 1966, 2059, 2100, 2106, 2186, 2223, 2327.

19f. *Structural and muscle proteins*

- 2156 Asano, T., Shinohara, H., Morishita, R., Norota, I., Kato, K. and Endoh, M.: The G-protein G₀ in mammalian cardiac muscle: localization and coupling to A₁ adenosine receptors. *J. Biochem. (Tokyo)*, 117 (1995) 183-189.
- 2157 Bárány, K., Bárány, M. and Giometti, C.S.: Polyacrylamide gel electrophoretic methods in the separation of structural muscle proteins. *J. Chromatogr. A*, 698 (1995) 301-332 - a review with 179 refs.
- 2158 Belkin, A.M. and Burrige, K.: Association of aciculin with dystrophin and utrophin. *J. Biol. Chem.*, 270 (1995) 6328-6337.
- 2159 Chan, D., Cole, W.R., Chow, C.W., Mundlos, S. and Bateman, J.F.: A COL2A1 mutation in a chondrogenesis type II results in the replacement of type II collagen by type I and III collagens in cartilage. *J. Biol. Chem.*, 270 (1995) 1747-1753.
- 2160 Claeys, E., Uytterhaegen, L., Buts, B. and Demeyer, D.: Quantification of beef myofibrillar proteins by SDS-PAGE. *Meat Sci.*, 39 (1995) 177-193; *C.A.*, 122 (1995) 104167p.
- 2161 Demignot, S., Borge, L. and Adolphe, M.: Transglutaminase activity in rabbit articular chondrocytes in culture. *Biochim. Biophys. Acta*, 1266 (1995) 163-170.
- 2162 Deyl, Z. and Miksik, I.: Separation of collagen type I chain polymers by electrophoresis in non-cross-linked polyacrylamide-filled capillaries. *J. Chromatogr. A*, 698 (1995) 369-373.
- 2163 Hayashi, A., Suzuki, T. and Tajima, S.: Modulations of elastin expression and cell proliferation by retinoids in cultured vascular smooth muscle cells. *J. Biochem. (Tokyo)*, 117 (1995) 132-136.
- 2164 Inaba, K.: ATP-Dependent conformational changes of dynein: evidence for changes in the interaction of dynein heavy chain with the intermediate chain 1. *J. Biochem. (Tokyo)*, 117 (1995) 903-907.
- 2165 Kawamura, Y., Kume, H., Itoh, Y., Ohtsuka, S., Kimura, S. and Maruyama, K.: Localization of three fragments of connectin in chicken breast muscle sarcomeres. *J. Biochem. (Tokyo)*, 117 (1995) 201-207.
- 2166 Knecht, M., Regitz-Zagrosek, V., Pleissner, K.-P., Jungblut, P., Steffen, C., Hildebrandt, A. and Fleck, E.: Characterization of myocardial protein composition in dilated cardiomyopathy by two-dimensional gel electrophoresis. *Eur. Heart J.*, 15(Suppl. D) (1994) 37-44; *C.A.*, 122 (1995) 182490c.
- 2167 LeBlanc, E.L., Singh, S. and LeBlanc, R.J.: Capillary zone electrophoresis of fish muscle sarcoplasmic proteins. *J. Food Sci.*, 59 (1994) 1267-1270; *C.A.*, 122 (1995) 212342a.
- 2168 Moyers, J.S., Linder, M.E., Shannon, J.D. and Parsons, S.J.: Identification of the *in vitro* phosphorylation sites on G_{5a} mediated by pp60^{c-src}. *Biochem. J.*, 305 (1995) 411-417.
- 2169 Schug, B.S. and Kalbhen, D.A.: Influence of chloroquine and other substances on the collagenolytic activity in human osteoarthritic cartilage *in vitro*. *Arzneim.-Forsch.*, 45 (1995) 285-289.
- 2170 Schumacher-Perdreau, F., Stefanik, D., Peters, G. and Pulverer, G.: Extracellular protein analysis: a reliable epidemiological tool for tracing methicillin-resistant Staphylococci. *Zentralbl. Bakteriol., Suppl.*, 26 (1994) 53-50; *C.A.*, 122 (1995) 234646e.
- 2171 Sires, U.I., Dublet, B., Aubert-Foucher, E., van der Rest, M. and Welgus, H.G.: Degradation of the COL1 domain of type XIV collagen by 92-kDa gelatinase. *J. Biol. Chem.*, 270 (1995) 1062-1067.
- 2172 Skolyshva, L.K., Smirnova, E.A., Medvedeva, M.V. and Gusev, N.B.: (Isolation and some properties of bovine aorta caldesmon). *Biokhimiya (Moscow)*, 60 (1995) 339-348.
- 2173 Sutton, C.W., Pemberton, K.S., Cottrell, J.S., Corbett, J.M., Wheeler, C.H., Dunn, M.J. and Pappin, D.J.: Identification of myocardial proteins from two-dimensional gels by peptide mass fingerprinting. *Electrophoresis (Weinheim)*, 16 (1995) 308-316.
- 2174 Yang, B., Jung, D., Rafael, J.A., Chamberlain, J.S. and Campbell, K.P.: Identification of α -syntrophin binding to syntrophin triplet, dystrophin, and utrophin. *J. Biol. Chem.*, 270 (1995) 4975-4978.
- 2175 Yoshihara, Y. and Kuroda, M.: Use of an SDS-gel-separated protein band as a ligand for affinity chromatography: procedure and application to the purification of domain-specific antibodies against α -actinin. *J. Biochem. (Tokyo)*, 117 (1995) 443-446.

19g. *Protamines, histones and other nuclear proteins*

- 2176 Annunziato, A.T., Eason, M.B. and Perry, C.A.: Relationship between methylation and acetylation of arginine-rich histones in cycling and arrested HeLa cells. *Biochemistry*, 34 (1995) 2916-2924.
- 2177 Buhrmester, H., von Kries, J.P. and Strätling, W.H.: Nuclear matrix protein ARBP recognizes a novel DNA sequence motif with high affinity. *Biochemistry*, 34 (1995) 4108-4117.
- 2178 Lindner, H., Helliger, W., Sarg, B. and Meraner, C.: Effect of buffer composition on the migration order and separation of histone H1 subtypes. *Electrophoresis (Weinheim)*, 16 (1995) 604-610.
- 2179 Santoro, R., D'Erme, M., Matroantonio, S., Reale, A., Marenzi, S., Saluz, H.-P., Strom, R. and Caiafa, P.: Binding of histone H1 e-c variants to CpG-rich DNA correlates with the inhibitory effect on enzymic DNA methylation. *Biochem. J.*, 305 (1995) 739-744.
- 2180 Thiriet, C. and Albert, P.: Rapid and effective Western blotting of histones from acid-urea-Triton and sodium dodecyl sulfate polyacrylamide gels: two different approaches depending on the subsequent qualitative or quantitative analysis. *Electrophoresis (Weinheim)*, 16 (1995) 357-361.

See also 2554.

19h. *Chromoproteins and metalloproteins*

- 2181 Beattie, J.H., Self, R. and Richards, M.P.: The use of solid phase concentrators for on-line preconcentration of metallothionein prior to isoform separation by capillary zone electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 322-328.
- 2182 Hibino, T., Lee, B.H., Takabe, T. and Takabe, T.: Expression and characterization of Met92Gln mutant plastocyanin from *Silene pratensis*. *J. Biochem. (Tokyo)*, 117 (1995) 101-106.

- 2183 Jansen, E.H.J.M., Laan, C.A. and de Fluiter, P.: Determination of phthalate-induced rat liver cytochrome P-450 IVA1 by a fluorimetric enzymatic assay and by chemiluminescence detection on Western blots. *Anal. Chim. Acta*, 303 (1995) 99-102.
- 2184 Qian, Z.-Y., Jollès, P., Migliore-Samour, D. and Fiat, A.-M.: Isolation and characterization of sheep lactoferrin, an inhibitor of platelet aggregation and comparison with human lactoferrin. *Biochim. Biophys. Acta*, 1243 (1995) 25-32.
- 2185 Tashiro, H. and Sone, N.: Preparation and characterization of the hydrophilic Cu_A-cytochrome c domain of subunit II of cytochrome c oxidase from thermophilic *Bacillus* PS3. *J. Biochem. (Tokyo)*, 117 (1995) 521-526.
- 2186 Turpeinen, U., Sipilä, I., Anttila, P., Karjalainen, U., Kuronen, B., Kalkkinen, N., Ahola, T. and Stenman, U.-H.: Two α -chain hemoglobin variants, Hb Broussais and Hb Cemenelum, characterized by cation-exchange HPLC, isoelectric focusing, and peptide sequencing. *Clin. Chem. (Washington)*, 41 (1995) 532-536.
- 2187 Wu, J. and Pawliszyn, J.: Application of capillary isoelectric focusing with absorption imaging detection to the quantitative determination of human hemoglobin variants. *Electrophoresis (Weinheim)*, 16 (1995) 670-673.
- See also 1926.
- 19i. *Proteins of glands, gland products, various zymogens (incl. milk proteins)*
- 2188 Accatino, L., Pizarro, M., Solis, N. and Koenig, C.S.: Association of canalicular membrane enzymes with bile acid micelles and lipid aggregates in human and rat bile. *Biochim. Biophys. Acta*, 1243 (1995) 33-42.
- 2189 Chu, C.-C., Li, S.-H. and Chen, Y.-H.: Resolution of isotoxins in the β -bungarotoxin family. *J. Chromatogr. A*, 694 (1995) 492-497.
- 2190 Kristiansen, K.R., Otte, J., Zakora, M. and Qvist, K.B.: Capillary electrophoresis used to monitor the enzymic hydrolysis of caseins and the fractionation of hydrolysis products. *Milchwissenschaft*, 49 (1994) 683-688; *C.A.*, 122 (1995) 131350z.
- 2191 Leikin, A. and Shinitzky, M.: Characterization of the lipid surrounding the Δ^6 -desaturase of rat liver microsomes. *Biochim. Biophys. Acta*, 1256 (1995) 13-17.
- 2192 Marangoni, S., Toyama, M.H., Arantes, E.C., Giglio, J.R., da Silva, C.A., Carneiro, E.M., Goncalves, A.A. and Oliveira, B.: Amino acid sequence of TsTX-V, an α -toxin from *Tityus serrulatus* scorpion venom, and its effect on K⁺ permeability of β -cells from isolated rat islets of Langerhans. *Biochim. Biophys. Acta*, 1243 (1995) 309-314.
- 2193 Ota, Y., Ido, K., Kimura, K., Fukui, E. and Ikemoto, S.: Electrophoretic analysis of bile proteins from patients with and without gallstones. *Electrophoresis (Weinheim)*, 16 (1995) 402-406.
- 2194 Otte, J., Midtgaard, L. and Qvist, K.B.: Analysis of caseinomacropptide(s) by free solution capillary electrophoresis. *Milchwissenschaft*, 50 (1995) 75-79; *C.A.*, 122 (1995) 212373m.
- 2195 Otte, J.A.H.J., Kristiansen, K.R., Zakora, M. and Qvist, K.B.: Separation of individual whey proteins and measurement of α -lactalbumin and β -lactoglobulin by capillary zone electrophoresis. *Neth. Milk Dairy J.*, 48 (1994) 81-97; *C.A.*, 122 (1995) 29963q.
- 2196 Recio, I., Molina, E., Ramos, M. and de Frutos, M.: Quantitative analysis of major whey proteins by capillary electrophoresis using uncoated capillaries. *Electrophoresis (Weinheim)*, 16 (1995) 654-658.
- 2197 Saito, M., Kita, K., Sekiya, K., Omata, S. and Horigome, T.: Purification and molecular shape of a 144 kDa protein bearing N-acetylglucosamine residues from rat liver nuclear envelopes. *J. Biochem. (Tokyo)*, 117 (1995) 47-53.
- 2198 Sciacchitano, S., Danese, D., Andreoli, M., di Gregorio, A., Sacchi, A. and Pontecorvi, A.: Analysis of ras mutations in thyroid cytologic smears by denaturing gradient gel electrophoresis. *Front. Endocrinol.*, 9 (Highlights in Molecular and Clinical Endocrinology) (1994) 61-65; *C.A.*, 122 (1995) 234644c.
- 2199 Witzmann, F., Clack, J., Fultz, C. and Jarnot, B.: Two-dimensional electrophoretic mapping of hepatic and renal stress proteins. *Electrophoresis (Weinheim)*, 16 (1995) 451-559.
- 2200 Xu, C., Rigney, D.R. and Anderson, D.J.: Two-dimensional electrophoretic profile of human sperm membrane proteins. *J. Androl.*, 15 (1994) 595-602; *C.A.*, 122 (1995) 155525m.
- See also 2025, 2032, 2404.
- 19j. *Proteins of brain, cerebrospinal fluid and eye*
- 2201 Althaus, J.S., Fici, G.J. and VonVoigtlander, P.F.: Antibody transformation by peroxy nitrite as determined using capillary electrophoresis: a feasibility study. *Res. Commun. Mol. Pathol. Pharmacol.*, 87 (1995) 359-366; *C.A.*, 122 (1995) 237178q.
- 2202 Borghini, I., Barja, F., Pometta, D. and James, R.W.: Characterization of subpopulations of lipoprotein particles isolated from human cerebrospinal fluid. *Biochim. Biophys. Acta*, 1255 (1995) 192-200.
- 2203 Cameron, B.M., Sr., Merrill, C.R., Creed, G.J. and Vanderputten, D.: Methods for the diagnosis of peripheral nerve damage. *U.S. US 5,364,793* (Cl. 436-86; GO1N33/49), 15 Nov. 1994, US Appl. 620,104, 30 Nov. 1990; 46 pp.; *C.A.*, 122 (1995) 27283u.
- 2204 Chao, D., Severson, D.L., Zwiers, H. and Hollenberg, M.D.: Radiolabelling of bovine myristoylated alanine-rich protein kinase C substrate (MARCKS) in an ADP-ribosylation reaction. *Biochem. Cell Biol.*, 72 (1994) 391-396.
- 2205 Goedert, M.: Molecular dissection of the neurofibrillary lesions of Alzheimer's disease. *Arzneim.-Forsch.*, 45 (1995) 403-409.
- 2206 Hosoi, T., Uchiyama, M., Okumura, E., Saito, T., Ishiguro, K., Uchida, T., Okuyama, A., Kishimoto, T. and Hisanaga, S.-i.: Evidence for cdk5 as a major activity phosphorylating tau protein in porcine brain extract. *J. Biochem. (Tokyo)*, 117 (1995) 741-749.
- 2207 Johnson, G., Ghanbari, H.A., Wolozin, B. and Merrill, C.R.: Methods for the diagnosis of Alzheimer's disease. *PCT Int. Appl. WO 95 05,604* (Cl. GO1N33/68), 23 Feb. 1995, US Appl. 105,922, 13 Aug. 1993; 28 pp.; *C.A.*, 122 (1995) 234861w.

- 2208 Kordeli, E., Lambert, S. and Bennett, V.: Ankyrin. A new ankyrin gene with neural-specific isoforms localized at the axonal initial segment and node of Ranvier. *J. Biol. Chem.*, 270 (1995) 2352-2359.
- 2209 Pley, U.M., Hill, B.L., Alibert, C., Brodsky, F.M. and Parham, P.: The interaction of calmodulin with clathrin-coated vesicles, triskelions, and light chains. Localization of a binding site. *J. Biol. Chem.*, 270 (1995) 2395-2402.
- 2210 Rahmatullah, M., Ginnan, R. and Robishaw, J.D.: Specificity of G protein α - γ subunit interactions. N-terminal 15 amino acids of γ subunit specifies interaction with α subunit. *J. Biol. Chem.*, 270 (1995) 2946-2951.
- 2211 Riley, M.L. and Harding, J.J.: The reaction of methylglyoxal with human and bovine lens proteins. *Biochim. Biophys. Acta*, 1270 (1995) 36-43.
- 2212 Shirao, T.: The roles of microfilament-associated proteins, drebrins, in brain morphogenesis: a review. *J. Biochem. (Tokyo)*, 117 (1995) 231-236 - a review with 42 refs.
- 2213 Strub, J.-M., Garcia-Sablone, P., Lonning, K., Taupenot, L., Hubert, P., van Dorsselaar, A., Aunis, D. and Metz-Boutigue, M.-H.: Processing of chromogranin B in bovine adrenal medulla. Identification of secretolytin, the endogenous C-terminal fragment of residues 614-626 with antibacterial activity. *Eur. J. Biochem.*, 229 (1995) 356-368.
- 2214 Urayama, O., Murakoshi, T. and Ikawa, Y.: Krev-1 protein is abundantly expressed in the rat spinal cord. *Biochim. Biophys. Acta*, 1243 (1995) 446-452.
- 19k. *Proteins of neoplastic tissue and transformed cells*
- 2215 Almquist, K.C., Loe, D.W., Hipfner, D.R., Mackie, J.E., Cole, S.P.C. and Deeley, R.G.: Characterization of the M_r 190,000 multidrug resistance protein (MRP) in drug-selected and transfected human tumor cells. *Cancer Res.*, 55 (1995) 102-110.
- 2216 Gorbachev, A.V., Egorova, S.G. and Myagkov, A.V.: (A biochemical study of antigen A2F4 associated with human lung adenocarcinoma). *Biokhimiya (Moscow)*, 59 (1994) 1401-1405.
- 2217 Kovarova, H., Stulik, J., Hochstrasser, D.F., Bures, J., Melichar, B. and Jandik, P.: Two-dimensional electrophoretic study of normal colon mucosa and colorectal cancer. *Appl. Theor. Electrophor.*, 4 (1994) 103-106; C.A., 122 (1995) 234660e.
- 2218 Taylor, I.C.A., Roy, S., Yaswen, P., Stampfer, M.R. and Varmus, H.E.: Mouse mammary tumors express elevated levels of RNA encoding the murine homolog of SKY, a putative receptor tyrosine kinase. *J. Biol. Chem.*, 270 (1995) 6872-6880.
- 2219 Toyoshima, M., Nakajima, M., Yamori, T. and Tsuruo, T.: Purification and characterization of the platelet-aggregating sialoglycoprotein gp44 expressed by highly metastatic variant cells of mouse colon adenocarcinoma 26. *Cancer Res.*, 55 (1995) 767-773.
- See also 2110, 2198, 2229.
- 19l. *Specific binding and receptor proteins*
- 2220 Adam, R., Drummond, D.R., Solic, N., Holt, S.J., Sharma, R.P., Chamberlin, S.G. and Davies, D.E.: Modulation of the receptor binding affinity of amphiregulin by modification of its carboxyl terminal tail. *Biochim. Biophys. Acta*, 1266 (1995) 83-90.
- 2221 Akamura, F., Kato, M., Kameyama, K., Nukada, T., Haga, T., Kato, H., Takenawa, T. and Kikkawa, U.: Characterization of G α family G proteins G $\alpha_{L1\alpha}$ (G $\alpha_{14\alpha}$), G $\alpha_{L2\alpha}$ (G $\alpha_{11\alpha}$), and G $\alpha_{q\alpha}$ expressed in the baculovirus-insect cell system. *J. Biol. Chem.*, 270 (1995) 6246-6253.
- 2222 Brenner, C., Jan, G., Chevalier, Y. and Wroblewski, H.: Evaluation of the efficacy of zwitterionic dodecyl carboxybetaine surfactants for the extraction and the separation of mycoplasma membrane protein antigens. *Anal. Biochem.*, 224 (1995) 515-523.
- 2223 Cain, T.J., Liu, Y., Takizawa, T. and Robinson, J.M.: Solubilization of glycosyl-phosphatidylinositol-anchored proteins in quiescent and stimulated neutrophils. *Biochim. Biophys. Acta*, 1235 (1995) 69-78.
- 2224 Cardenas, A.M., Kuijpers, G.A.J. and Pollard, H.B.: Effect of protein synthesis inhibitors on synexin levels and secretory response in bovine adrenal medullary chromaffin cells. *Biochim. Biophys. Acta*, 1234 (1995) 255-260.
- 2225 Chan, K.C.: Characterization of rat serum insulin-like growth factor binding proteins by two-dimensional gel electrophoresis: identification of a potentially novel form. *Univ. Microfilm Int.*, Order No. DA9430421, 1993, 124 pp.; C.A., 122 (1995) 179200c.
- 2226 Chantry, A.: The kinase domain and membrane localization determine intracellular interactions between epidermal growth factor receptors. *J. Biol. Chem.*, 270 (1995) 3068-3073.
- 2227 Chen, P.C., DuBois, G.C. and Chen, M.: Mapping the domain(s) critical for the binding of human tumor necrosis factor- α to its two receptors. *J. Biol. Chem.*, 270 (1995) 2874-2878.
- 2228 Denker, B.M., Boutin, P.M. and Neer, E.J.: Interactions between the amino- and carboxyl-terminal regions of G α subunits: analysis of mutated G α_1 /G α_2 chimeras. *Biochemistry*, 34 (1995) 5544-5553.
- 2229 Di Renzo, M.F., Poulosom, R., Olivero, M., Comoglio, P.M. and Lemoine, N.R.: Expression of the Met/hepatocyte growth factor receptor in human pancreatic cancer. *Cancer Res.*, 55 (1995) 1129-1138.
- 2230 Jo, D.-W., Leren, T.-P., Yang, Z.-Y., Chung, Y.-H., Taylor, J.M. and Paik, Y.-K.: Characterization of an upstream regulatory element of the human apolipoprotein E gene, and purification of its binding protein from the human placenta. *J. Biochem. (Tokyo)*, 117 (1995) 915-922.
- 2231 Kishino, J., Kawamoto, K., Ishizaki, J., Verheij, H.M., Ohara, O. and Arita, H.: Pancreatic-type phospholipase A₂ activates prostaglandin E₂ production in rat mesangial cells by receptor binding reaction. *J. Biochem. (Tokyo)*, 117 (1995) 420-424.
- 2232 Kobayashi, A., Sogawa, K., Imataka, H. and Fujii-Kuriyama, Y.: Analysis of functional domains of a GC box-binding protein, BTEB. *J. Biochem. (Tokyo)*, 117 (1995) 91-95.
- 2233 Kovacina, K.S. and Roth, R.A.: Characterization of the endogenous insulin receptor-related receptor in neuroblastomas. *J. Biol. Chem.*, 270 (1995) 1881-1887.
- 2234 Krantz, S., Salazar, R., Brandt, R., Kellermann, J. and Lottspeich, F.: Purification and partial amino acid sequencing of a fructosyllysine-specific binding protein from cell membranes of the monocyte-like cell line U937. *Biochim. Biophys. Acta*, 1266 (1995) 109-112.

- 2235 Krupenko, S.A., Kolesnik, O.I., Krupenko, N.I. and Strel'chyonok, O.A.: Organization of the transcortin-binding domain on placental plasma membranes. *Biochim. Biophys. Acta*, 1235 (1995) 387-394.
- 2236 Lu, Z., Xia, L., Mesmer, O.T. and Lo, T.C.Y.: Use of hexose transport mutants to examine the expression and properties of the rat myoblast GLUT 1 transport process. *Biochim. Biophys. Acta*, 1234 (1995) 155-165.
- 2237 Moore, M.A. and McCarthy, M.P.: Snake venom toxins, unlike smaller antagonists, appear to stabilize a resting state conformation of the nicotinic acetylcholine receptor. *Biochim. Biophys. Acta*, 1235 (1995) 336-342.
- 2238 Ozcelebi, F. and Miller, L.J.: Phosphopeptide mapping of cholecystokinin receptors on agonist-stimulated native pancreatic acinar cells. *J. Biol. Chem.*, 270 (1995) 3435-3441.
- 2239 Pouliot, J.-F. and Béliveau, R.: Palmitoylation of the glucose transporter in blood-brain barrier capillaries. *Biochim. Biophys. Acta*, 1234 (1995) 191-196.
- 2240 Sakakibara, Y., Suiko, M., Nakajima, H. and Liu, M.-C.: Sulphation of L-tyrosine in mammalian cells: a comparative study. *Biochem. J.*, 305 (1995) 993-998.
- 2241 Shire, D., Carillon, C., Kaghad, M., Calandra, B., Rinaldi-Carmona, M., le Fur, G., Caput, D. and Ferrara, P.: An amino-terminal variant of the central cannabinoid receptor resulting from alternative splicing. *J. Biol. Chem.*, 270 (1995) 3726-37311.
- 2242 Stipani, I., Natuzzi, D., Daddabbo, L., Ritieni, A., Randazzo, G. and Palmieri, F.: Photoaffinity labeling of the mitochondrial oxoglutarate carrier by azido-phthalonate. *Biochim. Biophys. Acta*, 1234 (1995) 149-154.
- 2243 Szabo, T., Kadish, J.L. and Czop, J.K.: Biochemical properties of the ligand-binding 20-kDa subunit of the β -glucan receptors on human mononuclear phagocytes. *J. Biol. Chem.*, 270 (1995) 2145-2151.
- 2244 Tamei, H., Hoshino, T., Yoshida, S., Hayashi, T., Iwata, K. and Suzuki, K.: One-step sandwich enzyme immunoassays for human C4b-binding protein (C4BP) and protein S-C4BP complex using monoclonal antibodies. *Clin. Chim. Acta*, 234 (1995) 115-125.
- 2245 Thomson, M., Korn, M. and Hall, P.F.: GTP-binding proteins in adrenocortical mitochondria. *Biochim. Biophys. Acta*, 1248 (1995) 159-169.
- 2246 Wang, G.L. and Semenza, G.L.: Purification and characterization of hypoxia-inducible factor 1. *J. Biol. Chem.*, 270 (1995) 1230-1237.
- 2247 Waters, M.J., Daniel, N., Bignon, C. and Djiane, J.: The rabbit mammary gland prolactin receptor is tyrosine-phosphorylated in response to prolactin *in vivo* and *in vitro*. *J. Biol. Chem.*, 270 (1995) 5136-5143.
- 2248 Xu, J., McKeenan, K., Matsuzaki, K. and McKeenan, W.L.: Inhibin antagonizes inhibition of liver cell growth by activin by a dominant-negative mechanism. *J. Biol. Chem.*, 270 (1995) 6308-6313.
- 2249 Yamaguchi, T., Fermandez, R. and Roth, R.A.: Comparison of the signaling abilities of the *Drosophila* and human insulin receptors in mammalian cells. *Biochemistry*, 34 (1995) 4962-4968.
- 2250 Yokota, Y., Arai, T. and Kawasaki, T.: Oligomeric structures required for complement activation of serum mannan-binding proteins. *J. Biochem. (Tokyo)*, 117 (1995) 414-419.
- 2251 Yu, H. and Diamandis, E.P.: Prostate-specific antigen immunoreactivity in amniotic fluid. *Clin. Chem. (Washington)*, 41 (1995) 204-210.
- 2252 Zhang, Q.-X., Walker, F., Burgess, A.W. and Baldwin, G.S.: Reduction in platelet-derived growth factor receptor mRNA in v-src-transformed fibroblasts. *Biochim. Biophys. Acta*, 1266 (1995) 9-15.

See also 2081, 2105, 2259, 2399, 2648.

19m. Urinary proteins

- 2253 Burlando, L.: Factitious additional band simulating Bence Jones protein caused by contamination from face plate for ureterostomy. *Clin. Chem. (Washington)*, 41 (1995) 477.
- 2254 Dussol, B., Daudon, M., Dupuy, P., Michel, R., Berland, Y., Dagon, J.C. and Verdier, J.M.: Analysis of the protein content of five different types of kidney stones. In: Ryall, R.L. (Editor), *Urolithiasis 2, [Proc. Int. Symp.], 7th 1994*, Plenum, New York, 1994, pp. 363-364; *C.A.*, 122 (1995) 234744k.
- 2255 Grover, P.K. and Resnick, M.I.: Two-dimensional analysis of proteins in the urine of male and female stone formers. In: Ryall, R.L. (Editor), *Urolithiasis 2, [Proc. Int. Symp.], 7th 1992*, Plenum, New York, 1994, pp. 287-288; *C.A.*, 122 (1995) 234645d.
- 2256 Grover, P.K. and Resnick, M.I.: Two-dimensional gel analysis of proteins in unprocessed human urine using double stain. In: Ryall, R.L. (Editor), *Urolithiasis 2, [Proc. Int. Symp.], 7th 1992*, Plenum, New York, 1994, pp. 285-286; *C.A.*, 122 (1995) 109048d.
- 2257 Hiratsuka, N., Shiba, K., Shinomura, K., Hosaki, S., Cho, H., Nagasaki, A. and Kobayashi, S.: Urinary protein fractions in healthy subjects using cellulose acetate membrane electrophoresis followed by staining with Acid Violet 17. *Biol. Pharm. Bull.*, 17 (1994) 1355-1357; *C.A.*, 122 (1995) 182524s.
- 2258 Liu, C.-M. and Wang, H.-P.: Method of sample preparation for urine protein analysis with capillary electrophoresis. *PCT Int. Appl. WO 95 02,182 (Cl. G01N33/483)*, 19 Jan. 1995, US Appl. 91,844, 09 Jul. 1993; 40 pp.; *C.A.*, 122 (1995) 155762m.
- 2259 Withold, W. and Reinauer, H.: An immunoblotting procedure following agarose gel electrophoresis for detection of Bence Jones proteinuria compared with immunofixation and quantitative light chain determination. *Eur. J. Clin. Chem. Clin. Biochem.*, 33 (1995) 135-138.

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

- 2260 Borisova, T.A., Los, G.V. and Lishko, V.K.: (Inclusion of secretory protein precursors into artificial phospholipid vesicles). *Biokhimiya (Moscow)*, 59 (1994) 1483-1489.
- 2261 Lomas, D.A., Elliott, P.R., Chang, W.W., Wardell, M.R. and Carrell, R.W.: Preparation and characterization of latent α_1 -antitrypsin. *J. Biol. Chem.*, 270 (1995) 5282-5288.
- 2262 Nadano, D., Yasuda, T., Takeshita, H. and Kishi, K.: Activity staining of mammalian ribonuclease inhibitors after electrophoresis in sealed vestrical slab polyacrylamide gels. *Anal. Biochem.*, 227 (1995) 210-215.

- 2263 Pinto, R.A., Hawgood, S., Clements, J.A., Benson, B.J., Naidu, A., Hamilton, R.L. and Wright, J.R.: Association of surfactant protein C with isolated alveolar type II cells. *Biochim. Biophys. Acta*, 1255 (1995) 16-22.

See also 2040, 2136, 2199, 2623, 2630.

20. ENZYMES AND ENZYME ACTIVITY ESTIMATION

- 2264 John, M.A. and Hussain, Z.: Multilocus enzyme electrophoresis using ultrathin polyacrylamide gels. *J. Microbiol. Methods*, 19 (1994) 307-313; C.A., 122 (1995) 49687f.

See also 2052.

20a. Oxidoreductases

- 2265 Agarwal, A.K., Mune, T., Monder, C. and White, P.C.: Mutations in putative glycosylation sites of rat 11 β -hydroxysteroid dehydrogenase affect enzymatic activity. *Biochim. Biophys. Acta*, 1248 (1995) 70-74.
- 2266 Braun, H.-P. and Schmitz, U.K.: Molecular structure of the 8.0 kDa subunit of cytochrome-c reductase from potato and its $\Delta\Psi$ -dependent import into isolated mitochondria. *Biochim. Biophys. Acta*, 1229 (1995) 181-186.
- 2267 Esworthy, R.S., Baker, M.A. and Chu, F.: Expression of selenium-dependent glutathione peroxidase in human breast tumor cell lines. *Cancer Res.*, 55 (1995) 957-962.
- 2268 Fujita, Y., Uruga, Y. and Ichisima, E.: Molecular cloning and nucleotide sequence of the protyrosinase gene, melO, from *Aspergillus oryzae* and expression of the gene in yeast cells. *Biochim. Biophys. Acta*, 1261 (1995) 151-154.
- 2269 Hicks, D.B.: Purification of three catalase isozymes from facultatively alkaliphilic *Bacillus firmus* OF4. *Biochim. Biophys. Acta*, 1229 (1995) 347-355.
- 2270 Jiménez-Cervantes, C., García-Borrón, J.C., Lozano, J.A. and Solano, F.: Effect of detergents and endogenous lipids on the activity and properties of tyrosinase and its related proteins. *Biochim. Biophys. Acta*, 1243 (1995) 421-430.
- 2271 Kobayashi, T., Ishida, T., Horiike, K., Takahara, Y., Numao, N., Nakazawa, A., Nakazawa, T. and Nozaki, M.: Overexpression of *Pseudomonas putida* catechol 2,3-dioxygenase with high specific activity by genetically engineered *Escherichia coli*. *J. Biochem. (Tokyo)*, 117 (1995) 614-622.
- 2272 Krungkrai, J.: Purification, characterization and localization of mitochondrial dihydroorotate dehydrogenase in *Plasmodium falciparum*, human malaria parasite. *Biochim. Biophys. Acta*, 1243 (1995) 351-360.
- 2273 Lomnitski, L., Sklan, D. and Grossman, S.: Lipoxygenase activity in rat dermis and epidermis: partial purification and characterization. *Biochim. Biophys. Acta*, 1255 (1995) 351-359.
- 2274 Marui, Y., Hayashi, C., Matsuda, Y., Matsuura, S., Eto, A., Ohba, Y. and Okuda, K.: Multi-enzyme reference material from established human cell lines and human sources. *Clin. Chim. Acta*, 233 (1995) 19-38.
- 2275 Mazhul', M.M. and Danilov, V.S.: (Study of properties of NAD(P)H:FMN oxidoreductase from the marine luminescent bacteria *Vibrio fischeri*). *Biokhimiya (Moscow)*, 59 (1994) 1608-1614.
- 2276 Narita, H. and Morishita, E.: Production and application of monoclonal antibodies specific to pyrroloquinoline quinone. *J. Biochem. (Tokyo)*, 117 (1995) 830-835.
- 2277 Nijtmans, L.G.J., Barth, P.G., Lincke, C.R., van Galen, M.J.M., Zwart, R., Klement, P., Bolhuis, P.A., Ruitenbeek, W., Wanders, R.J.A. and van den Bogert, C.: Altered kinetics of cytochrome c oxidase in a patient with severe mitochondrial encephalomyopathy. *Biochim. Biophys. Acta*, 1270 (1995) 193-201.
- 2278 Nijtmans, L.G.J., Spelbrink, J.N., van Galen, M.J.M., Zwaan, M., Klement, P. and van den Bogert, C.: Expression and fate of the nuclear encoded subunits of cytochrome-c oxidase in cultured human cells depleted of mitochondrial gene products. *Biochim. Biophys. Acta*, 1265 (1995) 117-126.
- 2279 Palumbo, A. and Jackson, I.J.: Peroxidase activity in the ink gland of *Sepia officinalis* and partial nucleotide sequence of a candidate cDNA encoding the enzyme. *Biochim. Biophys. Acta*, 1247 (1995) 173-178.
- 2280 Reddy, S.G., Sacchetti, J.C. and Blanchard, J.S.: Expression, purification, and characterization of *Escherichia coli* dihydrodipicolinate reductase. *Biochemistry*, 34 (1995) 3492-3501.
- 2281 Rubartelli, A., Bonifaci, N. and Sitia, R.: High rates of thioredoxin secretion correlate with growth arrest in hepatoma cells. *Cancer Res.*, 55 (1995) 675-680.
- 2282 Schilling, B. and Lerch, K.: Amine oxidases from *Aspergillus niger*: identification of a novel flavin-dependent enzyme. *Biochim. Biophys. Acta*, 1243 (1995) 529-537.
- 2283 Soukri, A., Valverde, F., Hafid, N., Elkebbaj, M.S. and Serrano, A.: Characterization of muscle glyceraldehyde-3-phosphate dehydrogenase isoforms from eutheric and induced hibernating *Jaculus orientalis*. *Biochim. Biophys. Acta*, 1243 (1995) 161-168.
- 2284 Suzuki, K., Mizuguchi, M., Gomi, T. and Itagaki, E.: Identification of a lysine residue in the NADH-binding site of salicylate hydroxylase from *Pseudomonas putida* S-1. *J. Biochem. (Tokyo)*, 117 (1995) 579-585.
- 2285 Tachibana, M., Onoe, H., Okubo, A. and Yamazaki, S.: Application of micellar electrokinetic chromatography as a novel assay method for dimethyl sulfoxide reductase. *Biosci., Biotechnol., Biochem.*, 59 (1995) 282-284; C.A., 122 (1995) 208205r.
- 2286 Terada, K., Kawarada, Y., Miura, N., Yasui, O., Koyama, K. and Sugiyama, T.: Copper incorporation into ceruloplasmin in rat livers. *Biochim. Biophys. Acta*, 1270 (1995) 58-62.
- 2287 Uchida, K. and Kawakishi, S.: Formation of 2-oxo-histidine at the active site of Cu,Zn-superoxide dismutase by reaction with H₂O₂. *Int. Congr. Ser.-Excerpta Med.*, 1058(Frontiers of Reactive Oxygen Species in Biology and Medicine) (1994) 175-176; C.A., 122 (1995) 127419m.
- 2288 Wang, H.-t., Liu, W.-y. and Ulbrich, N.: Isolation and characterization of a tyrosinase from the skin of the white silky fowl (*Gallina lanigera*) employing copper saturated diethylaminoethyl-cellulose. *Biochim. Biophys. Acta*, 1243 (1995) 251-255.

See also 2076.

20b. Transferases (excl. E.C. 2.7.-.-)

- 2289 Buki, K.G., Bauer, P.I., Hakam, A. and Kun, E.: Identification of domains of poly(ADP-ribose) polymerase for protein binding and self-association. *J. Biol. Chem.*, 270 (1995) 3370-3377.

- 2290 Egaas, E., Falls, J.G., Svendsen, N.O., Ramstad, H., Skaare, J.Y. and Dauterman, W.C.: Strain- and sex-specific differences in the glutathione S-transferase class pi in the mouse examined by gradient elution of the glutathione-affinity matrix and reverse-phase high performance liquid chromatography. *Biochim. Biophys. Acta*, 1243 (1995) 256-264.
- 2291 Hambartsumian, A.A. and Bezirjian, Kh.O.: (Valine-pyruvate transaminase of *Brevibacterium flavum*: isolation and primary characterization). *Biokhimiya (Moscow)*, 59 (1994) 1378-1384.
- 2292 Jeong, J., Murthy, S.N.P., Radek, J.T. and Lorand, L.: The fibronectin-binding domain of transglutaminase. *J. Biol. Chem.*, 270 (1995) 5654-5658.
- 2293 Saheki, T., Mori, K., Kobayashi, K., Horiuchi, M., Shige, T., Obara, T., Suzuki, S., Mori, M. and Yamamura, K.-i.: Importance of ornithine transcarbamylase (OTC) deficiency in small intestine for urinary orotic acid excretion: analysis of OTC-deficient spf-ash mice with OTC transgene. *Biochim. Biophys. Acta*, 1270 (1995) 87-93.
- 2294 Varone, C.L., Canépa, E.T., Llambias, E.B.C. and Grinstein, M.: cAMP Regulation of phenobarbital-mediated induction of δ -aminolevulinic synthase mRNA in hepatocytes from normal and experimental diabetic rats. *Biochem. Cell Biol.*, 72 (1994) 381-390.
- See also 2274, 2345, 2436, 2446.
- 20c. *Transferases transferring phosphorus containing groups (E.C. 2.7.-.-)*
- 2295 Ahmad, F. and Goldstein, B.J.: Purification, identification and subcellular distribution of three predominant protein-tyrosine phosphatase enzymes in skeletal muscle tissue. *Biochim. Biophys. Acta*, 1248 (1995) 57-69.
- 2296 Chernov, A.V., Matvienko, N.N., Zheleznyaya, L.A. and Matvienko, N.I.: (A new site-specific endonuclease-methylase from the thermophilic strain of *Bacillus* species LU11). *Biokhimiya (Moscow)*, 59 (1994) 1714-1729.
- 2297 Craig, A.G., Hoeger, C.A., Miller, C.L., Goedken, T., Rivier, J.E. and Fischer, W.H.: Monitoring protein kinase and phosphatase reactions with matrix-assisted laser desorption/ionization mass spectrometry and capillary zone electrophoresis: comparison of the detection efficiency of peptide-phosphopeptide mixtures. *Biol. Mass Spectrom.*, 23 (1994) 519-528; C.A., 122 (1995) 127051k.
- 2298 Heider, H. and Widmer, H.R.: Okadaic acid potentiates heat-induced activation of erk2. *Biochim. Biophys. Acta*, 1265 (1995) 196-200.
- 2299 Hsuan, J.J., Totty, N.F., Truong, O. and Waterfield, M.D.: Purification of phosphatidylinositol 3-kinase by SDA-agarose gel electrophoresis and HPEC. *Protein Pept. Lett.*, 1 (1994) 25-32; C.A., 122 (1995) 154733r.
- 2300 Kameshita, I. and Fujisawa, H.: Preparation and characterization of calmodulin-dependent protein kinase IV (CaM-kinase IV) free of CaM-kinase IV kinase from rat cerebral cortex. *J. Biochem. (Tokyo)*, 117 (1995) 85-90.
- 2301 Kuroda, K. and Ueda, R.: A 130 kDa polypeptide immunologically related to the 180 kDa catalytic subunit of DNA polymerase α -primase complex is detected in early embryos of *Drosophila*. *J. Biochem. (Tokyo)*, 117 (1995) 809-818.
- 2302 Matsumoto, N., Kojima, S., Osawa, T. and Toyoshima, S.: Protein kinase C phosphorylates p50 LSP1 and induces translocation of p50 LSP1 in T lymphocytes. *J. Biochem. (Tokyo)*, 117 (1995) 222-229.
- 2303 Murthy, V.V.: Adenylate kinase mimics creatine kinase-MM isoenzyme in a CK isoenzyme electrophoresis assay. *J. Clin. Lab. Anal.*, 8 (1994) 140-143; C.A., 122 (1995) 26347f.
- 2304 Ohgi, K., Iwama, M., Tada, K., Takizawa, R. and Irie, M.: Role of Lys108 in the enzymatic activity of RNase Rh from *Rhizopus niveus*. *J. Biochem. (Tokyo)*, 117 (1995) 27-33.
- 2305 Pertile, P. and Cantley, L.C.: Type 2 phosphatidylinositol 4-kinase is recruited to CD4 in response to CD4 cross-linking. *Biochim. Biophys. Acta*, 1248 (1995) 129-134.
- 2306 Price, D.J., Kawakami, Y., Kawakami, T. and Rivnay, B.: Purification of a major tyrosine kinase from RBL-2H3 cells phosphorylating Fc ϵ R1 γ -cytoplasmic domain and identification as the Btk tyrosine kinase. *Biochim. Biophys. Acta*, 1265 (1995) 133-142.
- 2307 Roberts, M.W., Preiss, J. and Okita, T.W.: A capillary zone electrophoresis assay for the nucleoside transfer enzyme adenosine diphosphate-glucose pyrophosphorylase. *Anal. Biochem.*, 225 (1995) 121-126.
- 2308 Shapovalova, N.I., Zheleznyaya, L.A. and Matvienko, N.I.: (A new site-specific endonuclease and methylase from the thermophilic strain of *Bacillus* species KT6). *Biokhimiya (Moscow)*, 59 (1994) 1730-1738.
- 2309 Tsuchiya, M., Osago, H. and Shimoyama, M.: Assay of arginin-specific adenosine-5'-diphosphate-ribosyltransferase by capillary electrophoresis. *Anal. Biochem.*, 224 (1995) 486-489.
- 2310 Zhang, J., Fukui, T. and Ichikawa, A.: A third type of nucleoside diphosphate kinase from spinach leaves: purification, characterization and amino-acid sequence. *Biochim. Biophys. Acta*, 1248 (1995) 19-26.
- See also 2107, 2274.
- 20d. *Hydrolases, acting on ester bonds (E.C. 3.1.-.-)*
- 2311 Carrea, G., D'Arrigo, P., Piergianni, V., Roncaglio, S., Secundo, F. and Servi, S.: Purification and properties of two phospholipases D from *Streptomyces* sp. *Biochim. Biophys. Acta*, 1255 (1995) 273-279.
- 2312 Cheung, C.K., Panesar, N.S., Haines, C., Masarei, J. and Swaminathan, R.: Immunoassay of a tartrate-resistant acid phosphatase in serum. *Clin. Chem. (Washington)*, 41 (1995) 679-686.
- 2313 Kálmán, F., Ma, S., Hodel, A., Fox, R.O. and Horváth, C.: Charge and size effects in the capillary zone electrophoresis of nuclease A and its variants. *Electrophoresis (Weinheim)*, 16 (1995) 595-603.
- 2314 Pedersen, J., Andersen, J., Roepstorff, P., Filimonova, M. and Biedermann, K.: (Characterization of *Serratia marcescens* nuclease isoforms by electrospray mass spectrometry). *Biokhimiya (Moscow)*, 60 (1995) 462-469.
- 2315 Rugani, N., Carrière, F., Thim, L., Borgstrom, B. and Sarda, L.: Lipid binding and activating properties of porcine pancreatic colipase split at the Ile⁷⁹-Thr⁸⁰ bond. *Biochim. Biophys. Acta*, 1247 (1995) 185-194.
- 2316 Sembaj, A., Carriazo, C., Sanz, E. and Barral, J.M.: Determination of alkaline phosphatase isozymes in amniotic fluid. *Eur. J. Clin. Chem. Clin. Biochem.*, 33 (1995) 281-284.

- 2317 Teissère, M., Borel, M., Caillol, B., Nari, J., Gardies, A.M. and Noat, G.: Purification and characterization of a fatty acyl-ester hydrolase from post-germinated sunflower seeds. *Biochim. Biophys. Acta*, 1255 (1995) 105-112.
- 2318 Uritani, M., Takai, M. and Yoshinaga, K.: Protective effect of disaccharides on restriction endonucleases during drying under vacuum. *J. Biochem. (Tokyo)*, 117 (1995) 774-779.
- 2319 Withiam-Leitch, M., Rubin, R.P., Koshlukava, S.E. and Aletta, J.M.: Identification and characterization of carboxyl ester hydrolase as a phospholipid hydrolyzing enzyme of zymogen granule membranes from rat exocrine pancreas. *J. Biol. Chem.*, 270 (1995) 3780-3787.
- 2320 Yamazaki, Y., Ogawa, Y., Afify, A.S., Kageyama, Y.-i., Okada, T., Okuno, H., Yoshii, Y. and Nose, T.: Difference between cancer cells and the corresponding normal tissue in view of stereoselective hydrolysis of synthetic esters. *Biochim. Biophys. Acta*, 1243 (1995) 300-308.
- See also 2030, 2088, 2223, 2274, 2297.
- 20e. *Hydrolases, acting on glycosyl compounds (E.C. 3.2.-.-)*
- 2321 Ara, K., Saeki, K., Igarashi, K., Takaiwa, M., Uemura, T., Hagi-hara, H., Kawai, S. and Ito, S.: Purification and characterization of an alkaline amylopullulanase with both α -1,4 and α -1,6 hydrolytic activity from alkalophilic *Bacillus* sp. KSM-1378. *Biochim. Biophys. Acta*, 1243 (1995) 315-324.
- 2322 Beyer, E., Ivleva, T., Artykova, G. and Wiederschain, G.: Change of isoforms' spectra of α -L-fucosidase from human skin fibroblasts in intracellular storage of nonhydrolyzable substances. *Biochim. Biophys. Acta*, 1270 (1995) 7-11.
- 2323 Kwon, K.-S., Lee, J., Kang, H.G., Hah, Y.C.: Detection of β -glucosidase activity in polyacrylamide gels with esculin as substrate. *Appl. Environ. Microbiol.*, 60 (1994) 4584-4586; *C.A.*, 122 (1995) 26377r.
- 2324 Lee, E.-O. and Kim, J.-D.: Palmitoyl lysozyme-induced stabilization of PE (phosphatidylethanolamine) liposomes and their interaction with *Candida albicans*. *J. Biochem. (Tokyo)*, 117 (1995) 54-58.
- 2325 Martino, S., Emiliani, C., Orlacchio, A., Hosseini, R. and Stirling, J.L.: β -N-Acetylhexosaminidases A and S have similar sub-cellular distributions in HL-60 cells. *Biochim. Biophys. Acta*, 1243 (1995) 489-495.
- 2326 Miura, R.O., Yamagata, S., Miura, Y., Harada, T. and Yamagata, T.: Analysis of glycosaminoglycan-degrading enzymes by substrate gel electrophoresis (zymography). *Anal. Biochem.*, 225 (1995) 333-340.
- 2327 Moriyama, T., Tozawa, T., Nobuoka, M. and Ikeda, H.: Sialyl salivary-type amylosemia associated with immunoglobulin D-type multiple myeloma. *Clin. Chim. Acta*, 233 (1995) 127-134.
- 2328 Yoshigi, N., Sahara, H. and Koshino, S.: Role of the C-terminal region of α -amylase from barley. *J. Biochem. (Tokyo)*, 117 (1995) 63-67.
- See also 1974, 2111, 2408.
- 20f. *Other hydrolases*
- 2329 Akasaki, K., Yoshimoto, H., Nakamura, A., Shiomi, H. and Tsuji, H.: Purification and characterization of a major kyotorphin-hydrolyzing peptidase of rat brain. *J. Biochem. (Tokyo)*, 117 (1995) 897-902.
- 2330 Anner, B.M., Imesch, E. and Moosmayer, M.: Normal sensitivity of Na⁺/K⁺-ATPase isolated from brain and kidney of spontaneously hypertensive rats to sodium, ouabain or mercury. *Biochim. Biophys. Acta*, 1270 (1995) 95-99.
- 2331 Balaban, N.P., Sharipova, M.R., Itskovich, E.L., Leshchinskaya, I.B. and Rudenskaya, G.N.: (Secreted serine proteinase from sporogeneous bacteria *Bacillus intermedius* 3-19). *Biokhimiya (Moscow)*, 59 (1994) 1393-1400.
- 2332 Bañuelos, M., Quintero, F.J. and Rodríguez-Navarro, A.: Functional expression of the ENA1(PMR2)-ATPase of *Saccharomyces cerevisiae* in *Schizosaccharomyces pombe*. *Biochim. Biophys. Acta*, 1229 (1995) 233-238.
- 2333 Belinga, H.F., Steghens, J.P. and Collombel, C.: Firefly luciferase purification using polyethylene glycol and Dyematrix Orange A. *J. Chromatogr. A*, 695 (1995) 33-40.
- 2334 Bergmann, U., Tuuttila, A., Stetler-Stevenson, W.G. and Tryggvason, K.: Autolytic activation of recombinant human 72 kilodalton type IV collagenase. *Biochemistry*, 34 (1995) 2819-2825.
- 2335 Bockelmann, W., Hoppe-Seyler, T. and Heller, K.J.: Quantitative determination of endopeptidase activity from lactic acid bacteria with capillary electrophoresis. *Milchwissenschaft*, 50 (1995) 13-17; *C.A.*, 122 (1995) 208206s.
- 2336 Deperthes, D., Gauthier, E.R., Chapdelaine, P., Lazure, C., Tremblay, R.R. and Dubé, J.Y.: Identification of glandular kallikrein in dog pancreas and determination of its tissue distribution. *Biochim. Biophys. Acta*, 1243 (1995) 291-294.
- 2337 Gary, J.D. and Clarke, S.: Purification and characterization of an isoaspartyl dipeptidase from *Escherichia coli*. *J. Biol. Chem.*, 270 (1995) 4076-4087.
- 2338 Hashimoto, T., Yamamoto, Y., Yoshida, Y. and Tagawa, K.: Cleavage of bovine mitochondrial ATPase inhibitor with endopeptidases, and binding of the resulting peptides to the interface between the α - and β -subunits of F₁ATPase. *J. Biochem. (Tokyo)*, 117 (1995) 641-647.
- 2339 Hymes, J., Fleischhauer, K. and Wolf, B.: Biotinylation of biotinidase following incubation with biocytin. *Clin. Chim. Acta*, 233 (1995) 39-45.
- 2340 Imai, K., Yokohama, Y., Nakanishi, I., Ohuchi, E., Fujii, Y., Nakai, N. and Okada, Y.: Matrix metalloproteinase 7 (matrilysin) from human rectal carcinoma cells. Activation of the precursor, interaction with other matrix metalloproteinases and enzymic properties. *J. Biol. Chem.*, 270 (1995) 6691-6697.
- 2341 Inomata, M. and Kawashima, S.: The possible self-down-regulation of calpain triggered by cell membranes. *Biochim. Biophys. Acta*, 1235 (1995) 107-114.
- 2342 Itoh, C. and Nagamatsu, A.: An aminopeptidase activity from porcine kidney that hydrolyzes oxytocin and vasopressin: purification and partial characterization. *Biochim. Biophys. Acta*, 1243 (1995) 203-208.
- 2343 Jeng, A.Y., Wong, M., Dueller, T., Shapiro, S.D., Kramer, R.A. and Hu, S.-i.: Mouse macrophage metalloelastase expressed in bacteria absolutely requires zinc for activity. *J. Biochem. (Tokyo)*, 117 (1995) 216-221.

- 2344 Kim, Y.-T., Muramatsu, T. and Takahashi, K.: Leader peptidase from *Escherichia coli*: overexpression, characterization, and inactivation by modification of tryptophan residues 300 and 310 with N-bromosuccinimide. *J. Biochem. (Tokyo)*, 117 (1995) 535-544.
- 2345 Kimoto, M., Whitley, G.S.J., Tsuji, H. and Ogawa, T.: Detection of N^G, N^G-dimethylarginine dimethylaminohydrolase in human tissues using a monoclonal antibody. *J. Biochem. (Tokyo)*, 117 (1995) 237-238.
- 2346 Lengyel, E., Gum, R., Juarez, J., Clayman, G., Seiki, M., Sato, H. and Boyd, D.: Induction of Mr 92,000 type IV collagenase expression in a squamous cell carcinoma cell line by fibroblasts. *Cancer Res.*, 55 (1995) 963-967.
- 2347 Mars, I. and Monnet, V.: An aminopeptidase P from *Lactococcus lactis* with original specificity. *Biochim. Biophys. Acta*, 1243 (1995) 209-215.
- 2348 Pedrosa, M.M. and Legaz, M.E.: Separation of arginase isoforms by capillary zone electrophoresis and isoelectric focusing in density gradient column. *Electrophoresis (Weinheim)*, 16 (1995) 659-669.
- 2349 Spruth, M., Reidlinger, J. and Müller, V.: Sodium ion dependence of inhibition of the Na⁺-translocating F₁F₀-ATPase from *Acetobacterium woodii*. Probing the site(s) involved in ion transport. *Biochim. Biophys. Acta*, 1229 (1995) 96-102.
- 2350 Srinivasan, M., Kalousek, F. and Curthoys, N.P.: *In vitro* characterization of the mitochondrial processing and the potential function of the 68-kDa subunit of renal glutaminase. *J. Biol. Chem.*, 270 (1995) 1185-1190.
- 2351 Ueno, S., Kusaba, M., Takeda, K., Maeda, M., Futai, M., Izumi, F. and Kawamura, M.: Functional consequences of substitution of the disulfide-bonded segment, Cys127-Cys150, located in the extracellular domain of the Na,K-ATPase β subunit: Arg148 is essential for the functional expression of Na,K-ATPase. *J. Biochem. (Tokyo)*, 117 (1995) 591-596.
- 2352 Weder, J.K.P. and Kaiser, K.-P.: Fluorogenic substrates for hydrolase detection following electrophoresis. *J. Chromatogr. A*, 698 (1995) 181-201 - a review with 92 refs.
- 2353 Yoshimoto, T., Tabira, J., Kabashima, T., Inoue, S. and Ito, K.: Protease II from *Moraxella lacunata*: cloning, sequencing, and expression of the enzyme gene, and crystallization of the expressed enzyme. *J. Biochem. (Tokyo)*, 117 (1995) 654-660.
- See also 2028, 2140, 2589.
- 20g. *Lyases*
- 2354 Zhang, R., Yatsuki, H., Kusakabe, T., Iwabe, N., Miyata, T., Imai, T., Yoshida, M. and Hori, K.: Structures of cDNAs encoding the muscle-type and non-muscle-type isozymes of lamprey fructose bisphosphate aldolases and the evolution of aldolase genes. *J. Biochem. (Tokyo)*, 117 (1995) 545-553.
- 20h. *Isomerases*
- 2355 Ashiuchi, M., Yoshimura, T., Kitamura, T., Kawata, Y., Nagai, J., Gorlatov, S., Esaki, N. and Soda, K.: *In vivo* effect of GroESL on the folding of glutamate racemase of *Escherichia coli*. *J. Biochem. (Tokyo)*, 117 (1995) 495-498.
- 2356 Kang, M.-K., Kim, C.-K., Johng, T.-N. and Paik, Y.-K.: Cholesterol biosynthesis from lanosterol: regulation and purification of rat hepatic sterol 8-isomerase. *J. Biochem. (Tokyo)*, 117 (1995) 819-823.
- 2357 Kaufmann, S.H., Charron, M., Burke, P.J. and Karp, J.E.: Changes in topoisomerase I level and localization during myeloid mutation *in vitro* and *in vivo*. *Cancer Res.*, 55 (1995) 1255-1260.
- 2358 Saito, M., Hori, K., Kurotsu, T., Kanda, M. and Saito, Y.: Three conserved glycine residues in valine activation of gramicidin S synthetase 2 from *Bacillus brevis*. *J. Biochem. (Tokyo)*, 117 (1995) 276-282.
- 2359 Staron, K., Kowalska-Loth, B., Zabek, J., Czerwinski, R.M., Nieznanski, K. and Szumiel, I.: Topoisomerase I is differently phosphorylated in two sublines of L5178Y mouse lymphoma cells. *Biochim. Biophys. Acta*, 1260 (1995) 35-42.
- 2360 Urade, Y., Tanaka, T., Eguchi, N., Kikuchi, M., Kimura, H., Toh, H. and Hayaishi, O.: Structural and functional significance of cysteine residues of glutathione-independent prostaglandin D synthase. Identification of Cys⁶⁵ as an essential thiol. *J. Biol. Chem.*, 270 (1995) 1422-1428.
- 20i. *Ligases*
- See 2078.
- 20j. *Complex mixtures and incompletely identified enzymes*
- 2361 Gao, X.-D., Katsumoto, T. and Onodera, K.: Purification and characterization of chitin deacetylase from *Absidia coerulea*. *J. Biochem. (Tokyo)*, 117 (1995) 257-263.
- 2362 Misra, I., Charlier, H.A., Jr. and Miziorko, H.M.: Avian cytosolic 3-hydroxy-3-methylglutaryl-CoA synthase: evaluation of the role of cysteines in reaction chemistry. *Biochim. Biophys. Acta*, 1247 (1995) 253-259.
21. PURINES, PYRIMIDINES, NUCLEIC ACIDS AND THEIR CONSTITUENTS
- 21a. *Purines, pyrimidines, nucleosides, nucleotides*
- 2363 Baba, Y., Inoue, H., Tsuchiko, M., Sawa, T., Kishida, A. and Akashi, M.: Evaluation of the selective binding ability of oligodeoxynucleotides to poly(9-vinyladenine) using capillary affinity gel electrophoresis. *Anal. Sci.*, 10 (1994) 967-969; *C.A.*, 122 (1995) 23137b.
- 2364 Chen, N., Manabe, T., Terabe S., Yohda, M. and Endo, I.: High-resolution separation of oligonucleotides and DNA sequencing reaction products by capillary electrophoresis with linear polyacrylamide and laser-induced fluorescence detection. *J. Microcolumn Sep.*, 6 (1994) 539-543; *C.A.*, 122 (1995) 73236d.
- 2365 Edel, C.M., Hartog, A.F. and Berden, J.A.: Analysis of the inhibitory non-catalytic ADP binding site on mitochondrial F₁, using NAP₃-2N₃ADP as probe. Effects of the modification of ATPase and ITPase activity. *Biochim. Biophys. Acta*, 1229 (1995) 103-114.
- 2366 Mao, B.: Studies of site-specific and stereospecific BPDE-N²-dG oligodeoxynucleotide adducts by gel electrophoresis. Avail. *Univ. Microfilms Int.*, Order No. DA9422939, 1993, 249 pp.; *C.A.*, 122 (1995) 232767w.

- 2367 Shah, G.M., Poirier, D., Duchaine, C., Brochu, G., Desnoyers, S., Lagux, J., Verreault, A., Hoflack, J.-C., Kirkland, J.B. and Poirier, G.G.: Methods for biochemical study of poly(ADP-ribose) metabolism *in vitro* and *in vivo*. *Anal. Biochem.*, 227 (1995) 1-13 - review with some papers cited.
- 2368 Takenaka, A., Matsumoto, O., Chen, Y., Hasegawa, S.-i., Chatake, T., Tsunoda, M., Ohta, T., Komatsu, Y., Koizumi, M. and Ohtsuka, E.: Structural composition of hammerhead ribozymes. *J. Biochem. (Tokyo)*, 117 (1995) 850-855.
- 2369 Zhao, Z., Wahl, J.H., Udseth, H.R., Hofstadler, S.A., Fuciarelli, A.F. and Smith, R.D.: On-line capillary electrophoresis-electrospray ionization mass spectrometry of nucleotides. *Electrophoresis (Weinheim)*, 16 (1995) 389-395.
- See also 1926, 2063, 2488, 2528, 2642.
- 21b. *Nucleic acids, RNA*
- 2370 Aas-Eng, D.A., Åsheim, H.C., Deggerdal, A., Smeland, E. and Funderud, S.: Characterization of a promoter region supporting transcription of a novel human β -galactoside α -2,6-sialyltransferase transcript in HepG2 cells. *Biochim. Biophys. Acta*, 1261 (1995) 166-169.
- 2371 Boon, W.C., Roche, P.J., Hammond, V.E., Jeyaseelan, K., Crawford, R.J. and Coghlan, J.P.: Cloning and expression analysis of a cytochrome P-450_{11 β} cDNA in sheep. *Biochim. Biophys. Acta*, 1260 (1995) 109-112.
- 2372 Cary, J.W. and Bhatnagar, D.: Nucleotide sequence of a *Aspergillus parasiticus* gene strongly repressed by thiamine. *Biochim. Biophys. Acta*, 1261 (1995) 319-320.
- 2373 De Kleijn, D.P.V., de Leeuw, E.P.H., van den Berg, M.C., Martens, G.J.M. and van Herp, F.: Cloning and expression of two mRNAs encoding structurally different crustacean hyperglycemic hormone precursors in the lobster *Homarus americanus*. *Biochim. Biophys. Acta*, 1260 (1995) 62-66.
- 2374 Dinchuk, J., Hart, J., Gonzalez, G., Karmann, G., Schmidt, D. and Wirak, D.O.: Remodelling of lipoproteins in transgenic mice expressing human cholesteryl ester transfer protein. *Biochim. Biophys. Acta*, 1255 (1995) 301-310.
- 2375 Doll, R.F., Bruce, A. and Smith, F.I.: Regulation of the human acid β -glucosidase promoter in multiple cell types. *Biochim. Biophys. Acta*, 1261 (1995) 57-67.
- 2376 Ferreras, J.M., Iglesias, R., Barbieri, L., Alegre, C., Bolognesi, A., Rojo, M.A., Carbajales, M.L., Escarmis, C. and Girbes, T.: Effects and molecular action of ribosome-inactivating proteins on ribosomes from *Streptomyces lividans*. *Biochim. Biophys. Acta*, 1243 (1995) 85-93.
- 2377 Ganga, M.A., Gonzalez, M.P., Lopez-Lastra, M. and Sandino, A.M.: Polyacrylamide gel electrophoresis of viral genomic RNA as a diagnostic method for infectious pancreatic necrosis virus detection. *J. Virol. Methods*, 50 (1994) 227-236; *C.A.*, 122 (1995) 100882v.
- 2378 Gao, G., Widmer, J., Stapleton, D., Teh, T., Cox, T., Kemp, B.E. and Witters, L.A.: Catalytic subunits of the porcine nad rat 5'-AMP-activated protein kinase are members of the SHF1 protein kinase family. *Biochim. Biophys. Acta*, 1266 (1995) 73-82.
- 2379 Grombacher, T. and Kaina, B.: Constitutive expression and inducibility of O⁶-methylguanine-DNA methyltransferase and N-methylpurine-DNA glycosylase in rat liver cells exhibiting different status of differentiation. *Biochim. Biophys. Acta*, 1270 (1995) 63-72.
- 2380 Hata, S., Emi, Y., Iyanagi, T. and Osumi, T.: cDNA cloning of a putative G protein-coupled receptor from brain. *Biochim. Biophys. Acta*, 1261 (1995) 121-125.
- 2381 Hata, S., Inoue, T., Kosuga, K., Nakashima, T., Tsukamoto, T. and Osumi, T.: Identification of two splice isoforms of mRNA for mouse hepatocyte nuclear factor 4 (HNF-4). *Biochim. Biophys. Acta*, 1260 (1995) 55-61.
- 2382 Henco, K., Harders, J., Wiese, U. and Riesner, D.: Temperature gradient gel electrophoresis (TGGE) for the detection of polymorphic DNA and RNA. *Methods Mol. Biol. (Totowa)*, 31(Protocols for Gene Analysis) (1994) 211-228; *C.A.*, 122 (1995) 73179n.
- 2383 Hepburn, A.G.: SIZE: a program to determine the size of nucleic acid and protein molecules from gel mobilities. *BioTechniques*, 17 (1994) 1140-1143; *C.A.*, 122 (1995) 27216z.
- 2384 Hydén, H.: Isolation and biochemical mapping in the range of 10⁷ to 10¹² g of fresh, single mammalian neurons in brain. I. Techniques. *TrAC*, 14 (1995) 141-148.
- 2385 Inoguchi, K., Yoshioka, H., Khaleduzzaman, M. and Ninomiya, Y.: The mRNA for α 1(XIX) collagen chain, a new member of FACITs, contains a long unusual 3' untranslated region and displays many unique splicing variants. *J. Biochem. (Tokyo)*, 117 (1995) 137-146.
- 2386 Jaffe, J., Hochberg, M., Riss, J., Hasin, T., Reich, L. and Laskow, R.: Cloning, sequencing and expression of two isoforms of the murine oct-1 transcription factor. *Biochim. Biophys. Acta*, 1261 (1995) 201-209.
- 2387 Johnsen, L.B., Sørensen, E.S., Petersen, T.E. and Berglund, L.: Characterization of a bovine mammary gland PP3 cDNA reveals homology with mouse and rat adhesion molecule GlyCAM-1. *Biochim. Biophys. Acta*, 1260 (1995) 116-118.
- 2388 Kanbara, H., Okano, K., Kawamoto, K. and Furuyama, H.: Methods for determination and separation of mRNA using DNA probes and two-dimensional gel electrophoresis. *Jpn. Kokai Tokkyo Koho*, JP 06,294,796 [94,294,796] (Cl. GO1N33/50), 21 Oct. 1994, Appl. 93/84,433, 12 Apr. 1993; 8 pp.; *C.A.*, 122 (1995) 125336h.
- 2389 Kang, J., Harders, J., Riesner, D. and Henco, K.: TGGE in quantitative PCR of DNA and RNA. *Methods Mol. Biol. (Totowa)*, 31(Protocols for Gene Analysis) (1994) 229-235; *C.A.*, 122 (1995) 73180f.
- 2390 Kawakami, M.: (Gel electrophoresis of nucleic acids. Basic principle and applications). *Seibutsu Butsuri Kagaku*, 38 (1994) 349-353; *C.A.*, 122 (1995) 155308t - a review with 9 refs.
- 2391 Kikuchi, Y. and Suzuki-Fujita, K.: Synthesis and self-cleavage reaction of a chimeric molecule between RNase P-RNA and its model substrate. *J. Biochem. (Tokyo)*, 117 (1995) 197-200.
- 2392 Larochele, S. and Suter, B.: Molecular cloning of the *Drosophila* homologue of the rat ribosomal protein L11 gene. *Biochim. Biophys. Acta*, 1261 (1995) 147-150.
- 2393 Li, H.-O., Tang, X., Kitabayashi, I., Gachelin, G., Chiu, R. and Yokoyama, K.: Induction by adenovirus-5 E1A of the differentiation phenotype of F9 teratocarcinoma cells involves a conserved region (CR1) of E1A. *Biochim. Biophys. Acta*, 1266 (1995) 148-156.

- 2394 Li, X., Wistow, G.J. and Piatigorsky, J.: Linkage and expression of the argininosuccinate lyase/ δ -crystallin genes of the duck: insertion of a CR1 element in the intergenic spacer. *Biochim. Biophys. Acta*, 1261 (1995) 25-34.
- 2395 Lina, B., Bornstein, N., Tuil, E., Meugnier, H., Bes, M. and Fleurette, J.: Use of pulsed-field gel electrophoresis, ribotyping and multilocus enzyme electrophoresis to characterize methicillin-resistant *Staphylococcus aureus* strains isolated from a nosocomial outbreak. *Zentralbl. Bakteriol., Suppl.*, 26 (1994) 104-106; C.A., 122 (1995) 234772t.
- 2396 Ludolph, D.C., Neff, A.W., Parker, M.A., Mescher, A.L., Smith, R.C. and Malacinski, G.M.: Cloning and expression of the axolotl proto-oncogene ski. *Biochim. Biophys. Acta*, 1260 (1995) 102-104.
- 2397 Lumelsky, N.L.: Decay of globin mRNA during megakaryocytic differentiation of erythroleukemic cell line is accomplished through shortening of the poly(A) tail and degradation from the 3' end of the transcript. *Biochim. Biophys. Acta*, 1261 (1995) 265-271.
- 2398 Martinotti, S., Toniato, E., Colagrande, A., Alesse, E., Alleva, C., Screpanti, I., Morrone, S., Scarpa, S., Frati, L., Hayday, A.C., Piovella, F. and Gulino, A.: Heavy-metal modulation of the human intercellular adhesion molecule (ICAM-1) gene expression. *Biochim. Biophys. Acta*, 1261 (1995) 107-114.
- 2399 Mercier, T., Gaillard-Sanchez, I., Martel, P., Seillan-Heberden, C.: Constitutive overexpression of c-fos protein in rat liver epithelial cells decreases TGF- β synthesis and increases TGF- β_1 receptors. *Biochim. Biophys. Acta*, 1266 (1995) 64-72.
- 2400 Mizumoto, K., Muroya, K., Takagi, T., Ornata-Yamada, T., Shibuta, H. and Iwasaki, K.: Protein factors required for *in vitro* transcription of Sendai virus genome. *J. Biochem. (Tokyo)*, 117 (1995) 527-534.
- 2401 Montell, C., Fillastre, J.-P. and Morin, J.-P.: Expression and subcellular distribution of phosphoenolpyruvate carboxykinase in primary cultures of rabbit kidney proximal tubule cells: comparative study with renal and hepatic PEPCK *in vivo*. *Biochim. Biophys. Acta*, 1243 (1995) 437-445.
- 2402 Moor, N.A., Stepanov, V.G., Repkova, M.N., Venyaminova, A.G., Vratskikh, L.V., Yamkovo, V.I., Motorin, Yu.A. and Lavrik, O.I.: (The role of 3'-CCA end in the interaction of tRNA^{Pro} from *E. coli* and *Thermus thermophilus* with homologous phenylalanyl-tRNA synthetases). *Biokhimiya (Moscow)*, 59 (1994) 1299-1303.
- 2403 Nacken, W., Kingsman, A.J., Kingsman, S.M., Sablitzky, F. and Sorg, C.: A homologue of the human MSS1 gene, a positive modulator of HIV-1 gene expression, is massively expressed in *Xenopus oocytes*. *Biochim. Biophys. Acta*, 1261 (1995) 293-295.
- 2404 Nagata, Y., Tashiro, F., Yi, S., Murakami, T., Maeda, S., Takahashi, K., Shimada, K., Okamura, H. and Yamamura, K.-i.: A 6-kb upstream region of the human transthyretin gene can direct developmental, tissue-specific, and quantitatively normal expression in transgenic mouse. *J. Biochem. (Tokyo)*, 117 (1995) 169-175.
- 2405 Ogata, K., Kurahashi, A., Ohno, R., Takahashi, K. and Terao, K.: Interaction of 5S rRNA-L5 protein complex, methionyl-tRNA, and methionyl-tRNA synthetase in the macromolecular ARS complex. *J. Biochem. (Tokyo)*, 117 (1995) 750-757.
- 2406 Oshiro, S. and Katsura, N.: An improved method for extraction of mRNA and protein from the fungus *Chaetomium gracile* with anhydrous hydrogen fluoride. *J. Biochem. (Tokyo)*, 117 (1995) 475-479.
- 2407 Reyes Engel, A. and Dieguez Lucena, J.L.: Determination of genetic expression by specific capture of RNA and its direct quantitation by free-zone capillary electrophoresis. *Span. ES 2,055,661 (Cl. C12Q1/68)*, 16 Aug. 1994, Appl. 9,300,103, 20 Jan. 1993; 5 pp.; C.A., 122 (1995) 101139v.
- 2408 Ribeiro, M.G., Pinto, R., Sa Miranda, M.C. and Suzuki, K.: Tay-Sachs disease: intron 7 splice junction mutation in two Portuguese patients. *Biochim. Biophys. Acta*, 1270 (1995) 44-51.
- 2409 Saito, S., Sakakura, S., Enomoto, M., Ichijo, M., Matsumoto, K. and Nakamura, T.: Hepatocyte growth factor promotes the growth of cytotrophoblasts by the paracrine mechanism. *J. Biochem. (Tokyo)*, 117 (1995) 671-676.
- 2410 Shimizu, M.: Specific aminoacylation of C4N hairpin RNAs with the cognate aminoacyl-adenylates in the presence of a dipeptide: origin of the genetic code. *J. Biochem. (Tokyo)*, 117 (1995) 23-26.
- 2411 Stromstedt, M. and Waterman, M.R.: A full-length cDNA encoding mouse adrenodoxin. *Biochim. Biophys. Acta*, 1261 (1995) 126-128.
- 2412 Tajima, S., Wachi, H. and Takehana, M.: Post-translational regulation of type I collagen synthesis by heparin in vascular smooth muscle cells. *J. Biochem. (Tokyo)*, 117 (1995) 353-358.
- 2413 Takeda, R., Mizobuchi, M., Muroa, K., Sato, M. and Takahara, J.: Characterization of three cDNAs encoding two isozymes of an isoaspartyl protein carboxyl methyltransferase from human erythroid leukemia cells. *J. Biochem. (Tokyo)*, 117 (1995) 683-685.
- 2414 Tanaka, M., Maeda, K. and Nakashima, K.: Chicken α -enolase but not β -enolase has a Src-dependent tyrosine-phosphorylation site: cDNA cloning and nucleotide sequence analysis. *J. Biochem. (Tokyo)*, 117 (1995) 554-559.
- 2415 Terui, Y., Furukawa, Y., Sakoe, K., Ohta, M. and Saito, M.: Expression of differentiation-related phenotypes and apoptosis are independently regulated during myeloid cell differentiation. *J. Biochem. (Tokyo)*, 117 (1995) 77-84.
- 2416 Thomas, T., Macpherson, A. and Rogers, P.: Ceruloplasmin gene expression in the rat uterus. *Biochim. Biophys. Acta*, 1261 (1995) 77-82.
- 2417 Tomita, Y., Yuasa, C., Ni, R., Ishimura, K. and Ichihara, A.: Long-term maintenance of functional rat hepatocytes in primary culture by additions of pyruvate and various hormones. *Biochim. Biophys. Acta*, 1243 (1995) 329-335.
- 2418 Trayhurn, P., Duncan, J.S., Nestor, A., Thomas, M.E.A., Eastmond, N.C. and Rayner, D.V.: Rapid chemiluminescent detection of mRNAs on Northern blots with digoxigenin end-labelled oligonucleotides. *Electrophoresis (Weinheim)*, 16 (1995) 341-344.
- 2419 Van Neck, J.W., Medina, J.J., Onnekink, C., Schwartz, S.M. and Bloemers, H.P.J.: Expression of basic fibroblast growth factor and fibroblast growth factor receptor genes in cultured rat aortic smooth muscle cells. *Biochim. Biophys. Acta*, 1261 (1995) 210-214.

- 2420 Vasseur, S., Frigerio, J.-M., Dusetti, N.J., Keim, V., Dagorn, J.-C. and Iovanna, J.L.: Two transcripts are generated from the Pancreatitis Associated Protein II gene by alternative splicing in the 5' untranslated region. *Biochim. Biophys. Acta*, 1261 (1995) 272-274.
- 2421 Wachi, H., Seyama, Y., Yamashita, S. and Tajima, S.: Enhanced tropoelastin-degrading activity during cell passages in cultured smooth muscle cells. *Biochim. Biophys. Acta*, 1243 (1995) 393-398.
- 2422 Wilson, R., Allen, A.J., Oliver, J., Brookman, J.-L., High, S. and Bulleid, N.J.: The translocation, folding, assembly and redox-dependent degradation of secretory and membrane proteins in semi-permeabilized mammalian cells. *Biochem. J.*, 307 (1995) 679-687.
- 2423 Yasutake, H., Goda, T. and Takase, S.: Dietary regulation of sucrase-isomaltase gene expression in rat jejunum. *Biochim. Biophys. Acta*, 1243 (1995) 270-276.
- 2424 Yu, J., Nagarajan, S., Liu, J., Young, N. and Medof, M.E.: Cloning and characterization of the mouse PIG-A gene. *Biochim. Biophys. Acta*, 1255 (1995) 344-350.
- 2425 Zhang, H., Wang, J., Hwang, I. and Goodman, H.M.: Isolation and expression of an *Arabidopsis* 14-3-3-like protein gene. *Biochim. Biophys. Acta*, 1266 (1995) 113-116.
- See also 1865, 1868, 1939, 2050, 2090, 2093, 2279, 2436, 2441, 2455, 2457, 2484, 2503, 2516, 2523, 2527, 2558, 2567.
- 21c. *Nucleic acids, DNA*
- 2426 Alonso, A., Martin, P., Albarran, C. and Sancho, M.: Evaluation of the Tris-glycine/Tris-chloride discontinuous buffer system for the electrophoretic analysis of VNTR and STR loci. *Adv. Forensic Haemogenet.*, 5 (1994) 124-126; *C.A.*, 122 (1995) 179552u.
- 2427 Ashby, J., Tinwell, H., Lefevre, P.A. and Browne, M.A.: Comparative mutagenicity of 2-methylpropene (isobutene), its epoxide 2-methyl-1,2-epoxypropane and propylene oxide in the *in vitro* micronucleus test using human lymphocytes. *Mutagenesis*, 10 (1995) 85-89; *C.A.*, 122 (1995) 233163h.
- 2428 Aubert, D., Lapan, H., Lemaire, P., Foudrinier, F., Marx-Chemla, C., Bonhomme, A. and Pinon, J.-M.: Rapid detection of toxoplasmic nucleic acid by enzyme-linked immunofiltration-assay after membrane transfer. *Electrophoresis (Weinheim)*, 16 (1995) 354-356.
- 2429 Berka, J., Pariat, Y.F., Müller, O., Hebenbrock, K., Heiger, D.N., Foret, F. and Karger, B.L.: Sequence dependent migration behavior of double-stranded DNA in capillary electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 377-388.
- 2430 Bianchi, N., Mischiati, C., Feriotto, G., Fiorentino, D., Di Biase, S., Apicella, N. and Gambari, R.: Capillary electrophoresis: detection of hybridization between synthetic oligonucleotides and HIV-1 genomic DNA amplified by polymerase-chain reaction. *J. Virol. Methods*, 47 (1994) 321-329; *C.A.*, 122 (1995) 73139z.
- 2431 Birren, B. and Lai, E.: Rapid pulsed field separation of DNA molecules up to 250 kb. *Nucleic Acids Res.*, 22 (1994) 5366-5370; *C.A.*, 122 (1995) 100900z.
- 2432 Callaghan, A. and Laias, N.: Pulsed-field gel electrophoresis of mosquito DNA. *Trends Genet.*, 11 (1995) 40-41; *C.A.*, 122 (1995) 206328j.
- 2433 Cane, P.A. and Pringle, C.R.: Molecular epidemiology of respiratory syncytial virus: a review of the use of reverse transcription-polymerase chain reaction in the analysis of genetic variability. *Electrophoresis (Weinheim)*, 16 (1995) 329-333.
- 2434 Carlsson, C., Larsson, A., Jonsson, M. and Norden, B.: Dancing DNA in capillary solution electrophoresis. *J. Am. Chem. Soc.*, 117 (1995) 3871-3872; *C.A.*, 122 (1995) 209053b.
- 2435 Carter, G.L., Wilson, L.J. and Dunn-Coleman, N.S.: Molecular characterization of chromosomes by pulsed field electrophoresis. *Prog. Ind. Microbiol.*, 29 (Aspergillus: 50 Years on) (1994) 667-683; *C.A.*, 122 (1995) 97509w - a review with refs.
- 2436 Ciesla, J., Weiner, K.X.B., Weiner, R.S., Reston, J.T., Maley, G.F. and Maley, F.: Isolation and expression of rat thymidylate synthase cDNA: Phylogenetic comparison with human and mouse thymidylate synthases. *Biochim. Biophys. Acta*, 1261 (1995) 233-243.
- 2437 Den Dunnen, J.T., Grootsholten, P.M. and van Ommen, G.J.B.: Pulsed-field gel electrophoresis in the analysis of genomic DNA and YAC clones. In: Davies, K.E. (Editor), *Hum. Genet. Dis. Anal.*, (2nd ed.), IRL, Oxford, 1993, pp. 35-58; *C.A.*, 122 (1995) 97465d.
- 2438 Doria, A., Warram, J.H., Rich, S.S. and Krolewski, A.S.: Angiotensin I-converting enzyme (ACE): estimation of DNA haplotypes in unrelated individuals using denaturing gradient gel blots. *Hum. Genet.*, 94 (1994) 117-123; *C.A.*, 122 (1995) 231881s.
- 2439 Duewer, D.L., Currie, L.A., Reeder, D.J., Leigh, S.D., Liu, H.-K. and Mudd, J.L.: Interlaboratory comparison of autoradiographic DNA profiling measurements. 2. Measurement uncertainty and its propagation. *Anal. Chem.*, 67 (1995) 1220-1231.
- 2440 Fukunaga, M. and Takahashi, Y.: Pulsed field gel electrophoresis analysis of *Borrelia burgdorferi sensu lato* isolated in Japan and taxonomic implications with Lyme disease spirochetes. *Microbiol. Immunol.*, 38 (1994) 747-751; *C.A.*, 122 (1995) 27521v.
- 2441 Gow, J., Cash, P., Behan, W., McGarry, F., Simpson, K. and Behan, P.: Detection of picornavirus genomic and template RNA strands by a novel semi-nested polymerase chain reaction-technique and agarose gel electrophoresis. *Electrophoresis (Weinheim)*, 16 (1995) 338-340.
- 2442 Gyobu, Y., Hosorogi, S., Kodama, H. and Shimada, T.: (Pulsed-field gel electrophoresis of *Vibrio cholerae* O1 distribution in the environment). *Toyama-ken Eisei Kenkyusho Nenpo*, 17 (1994) 125-128; *C.A.*, 122 (1995) 128365c.
- 2443 Hellman, B., Vaghef, H. and Bostrom, B.: The concepts of tail moment and tail inertia in the single cell gel electrophoresis assay. *Mutat. Res.*, 336 (1995) 123-131; *C.A.*, 122 (1995) 180389c.
- 2444 Holland, M.M., Turni, L.A., DelRio, S., Marino, M., Lofts, R.S., Fisher, D.L., Ross, J., Schumm, J.W. and Williams, P.L.: Typing human DNA using capillary electrophoresis: comparison of slab gel and capillary formats. *Adv. Forensic Haemogenet.*, 5 (1994) 156-159; *C.A.*, 122 (1995) 155526n.
- 2445 Hutson, M.S., Holzwarth, G., Duke, T. and Viovy, J.-L.: Two-dimensional motion of DNA bands during 120° pulsed-field gel electrophoresis. I. Effect of molecular weight. *Biopolymers*, 35 (1995) 297-306; *C.A.*, 122 (1995) 155536r.

- 2446 Inoue, T., Osumi, T. and Hata, S.: Molecular cloning and functional expression of a cDNA for mouse squalene synthase. *Biochim. Biophys. Acta*, 1260 (1995) 49-54.
- 2447 Ishihara, H., Engel, J.D. and Yamamoto, M.: Structure and regulation of the chicken GATA-3 gene. *J. Biochem. (Tokyo)*, 117 (1995) 499-508.
- 2448 Johansson, E., Joensson, J.O., Henriksson, P., Brismar, K. and Heneen, W.K.: Comparison of electrophoretic methods for identification of the 1BL/1RS rye translocation in wheat, simultaneous screening for high-molecular-weight glutenins, and detection of chromosome deletions. *J. Genet. Breed.*, 48 (1994) 291-299; *C.A.*, 122 (1995) 182488h.
- 2449 Johnston, J.R.: Pulsed field gel electrophoresis. In: Johnston, J.R. (Editor), *Mol. Genet. Yeast*, IRL, Oxford, 1994, pp. 83-95; *C.A.*, 122 (1995) 208836x - a review with 54 refs.
- 2450 Jong, A.Y., Wang, B. and Zhang, S.Q.: Pulsed field gel electrophoresis labeling method to study the pattern of *Saccharomyces cerevisiae* chromosomal DNA synthesis during the G1/S phase of the cell cycle. *Anal. Biochem.*, 227 (1995) 32-39.
- 2451 Jonsson, M., Jacobsson, U., Norden, B. and Eriksson, T.: Electrophoretic orientation of large DNA in free solution. *Eur. Space Agency, [Spec. Publ.] ESA SP*, ESA SP-1132(Vol. 4 Final Reports of Sounding Rocket Experiments in Fluid Science and Materials Sciences) (1994) 87-97; *C.A.*, 122 (1995) 182499n.
- 2452 Kaufmann, M.E. and Pitt, T.L.: Pulsed-field gel electrophoresis of bacterial DNA. In: Chart, H. (Editor), *Methods Pract. Lab. Bacteriol.*, CRC, Boca Raton, 1994, pp. 83-92; *C.A.*, 122 (1995) 208817s - a review with 14 refs.
- 2453 Kim, Y. and Morris, M.D.: Rapid pulsed field capillary electrophoretic separation of megabase nucleic acids. *Anal. Chem.*, 67 (1995) 784-786.
- 2454 Kleparnik, K., Mala, Z., Doskar, J., Rosypal, S. and Bocek, P.: An improvement of restriction analysis of bacteriophage DNA using capillary electrophoresis in agarose solution. *Electrophoresis (Weinheim)*, 16 (1995) 366-376.
- 2455 Komura, J.-i., Okada, T. and Ono, T.: Repression of transient expression by DNA methylation in transcribed regions of reporter genes introduced into cultured human cells. *Biochim. Biophys. Acta*, 1260 (1995) 73-78.
- 2456 Laber, T.L., Giese, S.A., Iverson, J.T. and Liberty, J.A.: Validation studies on the forensic analysis of restriction fragment length polymorphism (RFLP) on LE agarose gels without ethidium bromide: effects of contaminants, sunlight, and the electrophoresis of varying quantities of deoxyribonucleic acid (DNA). *J. Forensic Sci.*, 39 (1994) 707-730; *C.A.*, 122 (1995) 74088u.
- 2457 Lee, Y.L., Helman, L., Hoffman, T. and Laborda, J.: dlk, pG2 and Pref-1 mRNAs encode similar proteins belonging to the EGF-like superfamily. Identification of polymorphic variants of this RNA. *Biochim. Biophys. Acta*, 1261 (1995) 223-232.
- 2458 Lim, R.W., Zhu, C.Y. and Stringer, B.: Differential regulation of primary response gene expression in skeletal muscle cells through multiple signal transduction pathways. *Biochim. Biophys. Acta*, 1266 (1995) 91-100.
- 2459 Lin, B., Diao, H., Zhang, Y. and Chu, X.: (Determination of polymerase chain reaction-amplified products of hepatitis B virus with non-gel sieving capillary electrophoresis). *Fenxi Huaxue*, 22 (1994) 449-452; *C.A.*, 122 (1995) 152414p.
- 2460 Liu, M.-S., Zang, J., Evangelista, R.A., Rampal, S. and Chen, F.-T.A.: Double-stranded DNA analysis by capillary electrophoresis with laser-induced fluorescence using ethidium bromide as an intercalator. *BioTechniques*, 18 (1995) 316-323; *C.A.*, 122 (1995) 128034u.
- 2461 Ma, C. and Bloomfield, V.A.: Gel electrophoresis measurement of counterion condensation on DNA. *Biopolymers*, 35 (1995) 211-216; *C.A.*, 122 (1995) 127907u.
- 2462 Manicardi, G.C., Bizzaro, D., Azzoni, P. and Bianchi, U.: Cytological and electrophoretic analysis of DNA methylation in the holocentric chromosomes of *Megoura viciae* (Homoptera, Aphididae). *Genome*, 37 (1994) 625-630; *C.A.*, 122 (1995) 179748n.
- 2463 Martin, T., Hughes, S., Hughes, K. and Dawson, M.: Direct sequencing of PCR amplified pig PrP genes. *Biochim. Biophys. Acta*, 1270 (1995) 211-214.
- 2464 Matsumoto, M. and Doi, M.: Brownian dynamics simulation of DNA gel electrophoresis. *Mol. Simul.*, 12 (1994) 219-226; *C.A.*, 122 (1995) 73160z.
- 2465 Maule, J.C.: Colored microparticles for clear visualization beads and plugs. *Trends Genet.*, 11 (1995) 127; *C.A.*, 122 (1995) 234658k.
- 2466 Moll, R., Schmidtke, S. and Schäfer, G.: Nucleotide sequence of a gene cluster encoding ribosomal proteins in the thermoacidophilic crenarchaeon *Sulfolobus acidocaldarius*. *Biochim. Biophys. Acta*, 1261 (1995) 315-318.
- 2467 Monaco, A.P., Larin, Z. and Lehrach, H.: Construction of yeast artificial chromosome libraries by pulsed-field gel electrophoresis. *Mol. Biotechnol.*, 1 (1994) 241-249; *C.A.*, 122 (1995) 97747x.
- 2468 Nagy, A., Vagvoelgyi, C. and Ferenczy, L.: Simple method for obtaining chromosomal DNA for orthogonal field alteration gel electrophoresis analysis from *Phaffia rhodozyma*. *BioTechniques*, 18 (1995) 63-65; *C.A.*, 122 (1995) 75838a.
- 2469 Nedved, M.L. and Moe, G.R.: The use of affinity coelectrophoresis to characterize cooperative, nonspecific maleic acid binding peptides. *Anal. Biochem.*, 227 (1995) 80-84.
- 2470 Nixon, G.I. and Slater, G.W.: DNA electrophoretic collisions with single obstacles. *Phys. Rev. E: Stat. Phys., Plasmas, Fluids, Relat. Interdiscip. Top.*, 50 (1994) 5033-5038; *C.A.*, 122 (1995) 50522e.
- 2471 Nozawa, M.: Method with antibody for DNA determination. *Jpn. Kokai Tokkyo Koho JP 06,289,027 [94,289,027]* (Cl. G01N33/561), 18 Oct. 1994, Appl. 93/77,926, 05 Apr. 1993; 3 pp.; *C.A.*, 122 (1995) 50752e.
- 2472 Ohizumi, H., Masuda, Y., Nakajo, S., Sakai, I., Ohsawa, S. and Nakaya, K.: Geranylgeraniol is a potent inducer of apoptosis in tumor cells. *J. Biochem. (Tokyo)*, 117 (1995) 11-13.
- 2473 Raghava, G.P.S.: DNAOPT: a computer program to aid optimization of DNA gel electrophoresis and SDS-PAGE. *BioTechniques*, 18 (1995) 274-280; *C.A.*, 122 (1995) 127921u.
- 2474 Robertson, J.M.: Evaluation of native and denaturing polyacrylamide gel electrophoresis for short tandem repeat analysis. *Adv. Forensic Haemogenet.*, 5 (1994) 320-322; *C.A.*, 122 (1995) 152564n.
- 2475 Rodriguez, P., Allardet-Servent, A., de Barbeyrac, B., Ramuz, M. and Bebear, C.: Genetic variability among *Chlamydia trachomatis* reference and clinical strains analyzed by pulsed-field gel electrophoresis. *J. Clin. Microbiol.*, 32 (1994) 2921-2928; *C.A.*, 122 (1995) 98493y.

- 2476 Schmidt, M., Svendsen, I. and Feierabend, J.: Analysis of the primary structure of the chloroplast isozyme of triosephosphate isomerase from rye leaves by protein and cDNA sequencing indicates a eukaryotic origin of its gene. *Biochim. Biophys. Acta*, 1261 (1995) 257-264.
- 2477 Semenov, A.N., Duke, T.A.J. and Viovy, J.-L.: Gel electrophoresis of DNA in moderate fields: the effect of fluctuations. *Phys. Rev. E.: Stat. Phys., Plasmas, Fluids, Relat. Interdiscip. Top.*, 51 (1995) 1520-1537; *C.A.*, 122 (1995) 155532m.
- 2478 Sinha, B.K., Yamazaki, H., Eliot, H.M., Schneider, E., Borner, M.M. and O'Connor, P.M.: Relationships between proto-oncogene expression and apoptosis induced by anticancer drugs in human prostate tumor cells. *Biochim. Biophys. Acta*, 1270 (1995) 12-18.
- 2479 Slater, G.W., Mayer, P., Hubert, S.J. and Drouin, G.: The biased reptation model of DNA gel electrophoresis: a user guide for constant field mobilities. *Appl. Theor. Electrophor.*, 4 (1994) 71-79; *C.A.*, 122 (1995) 50534k.
- 2480 Spitzner, J.R., Chung, I.K. and Muller, M.T.: Determination of 5' and 3' DNA triplex interference boundaries reveals the core DNA binding sequence for topoisomerase II. *J. Biol. Chem.*, 270 (1995) 5932-5943.
- 2481 Stellwagen, N.C.: Toward understanding electrophoretic anomalies in polyacrylamide gels: kilobase-sized DNAs. In: Sarma, R.H. and Sarma, M.H. (Editors), *Struct. Biol. State of the Art, Proc. Conversation Discip. Biomol. Stereodyn.*, 8th 1993, Adenine, Schenectady, 1994, pp. 285-299; *C.A.*, 122 (1995) 126452e.
- 2482 Takasaki, Y., Iwanaga, T. and Tsuji, N.: Quantitative analysis of DNA and proteins on personal computer. *Sasego Kogyo Koto Senmon Gakko Kenkyu Hokoku*, 31 (1994) 23-27; *C.A.*, 122 (1995) 155684n.
- 2483 Tornar, A., Garofano, L., Vecchio, C., Pizzamiglio, M., Albonici, L. and Manzari, V.: The use of capillary electrophoresis in forensic DNA analysis. *Adv. Forensic Haemogenet.*, 5 (1994) 390-392; *C.A.*, 122 (1995) 153480u.
- 2484 Tulchinsky, E., Grigorian, M., Tkatch, T., Georgiev, G. and Lukanidin, E.: Transcriptional regulation of the mts1 gene in human lymphoma cells: the role of DNA-methylation. *Biochim. Biophys. Acta*, 1261 (1995) 243-248.
- 2485 Uesugi, M., Kusakabe, T. and Sugiura, Y.: Hydrophobic DNA binding of esperamicin requires conformational distortion of the host DNA. *Biochim. Biophys. Acta*, 1261 (1995) 99-106.
- 2486 Uhrberg, M., Enczmann, J. and Wernet, P.: Rapid DNA cross-match analysis of HLA class II genotypic polymorphisms by temperature gradient gel electrophoresis in unrelated bone marrow donor selection. *Eur. J. Immunogenet.*, 21 (1994) 313-324; *C.A.*, 122 (1995) 24765s.
- 2487 Vijg, J.: Detecting individual genetic variation. *BioTechnology*, 13 (1995) 137-139; *C.A.*, 122 (1995) 124426a.
- 2488 Wang, M.-Y. and Liehr, J.G.: Lipid hydroperoxide-induced endogenous DNA adducts in hamster: possible mechanism of lipid hydroperoxide-mediated carcinogenesis. *Arch. Biochem. Biophys.*, 316 (1995) 38-46.
- 2489 Wheeler, D.L. and Chrambach, A.: Computer simulation of the directional displacement of rod-shaped, arc-shaped, and circular objects in an array of obstacles, representing a simple model for the gel electrophoresis of small DNA. *Biopolymers*, 35 (1995) 179-185; *C.A.*, 122 (1995) 128022p.
- 2490 Wolf, S.M. and Vouros, P.: Incorporation of sample stacking techniques into the capillary electrophoresis CF-FAB mass spectrometric analysis of DNA adducts. *Anal. Chem.*, 67 (1995) 891-900.
- 2491 Woodward, T.M., Carlson, J., McClelland, C. and DeMartini, J.C.: Analysis of lentiviral genomic variation by denaturing gradient gel electrophoresis. *BioTechniques*, 17 (1994) 366-371; *C.A.*, 122 (1995) 97797p.
- 2492 Xu, W.-H., Sato, Y., Ikeda, M. and Yamashita, O.: Molecular characterization of the gene encoding the precursor protein of diapause hormone and pheromone biosynthesis activating neuropeptide (DH-PBAN) of the silkworm, *Bombyx mori* and its distribution in some insects. *Biochim. Biophys. Acta*, 1261 (1995) 83-89.
- 2493 Yakubu, D.E. and Pennington, T.H.: Epidemiological evaluation of *Neisseria meningitidis* serogroup B by pulsed-field gel electrophoresis. *FEMS Immunol. Med. Microbiol.*, 10 (1995) 185-190; *C.A.*, 122 (1995) 232010u.
- 2494 Yarmola, E. and Chrambach, A.: Band width measurement in automated gel electrophoresis apparatus: DNA dispersion in a discontinuous system and in a single buffer. *Electrophoresis (Weinheim)*, 16 (1995) 345-349.
- 2495 Yurovsky, V.V., Schulze, D.H. and White, B.: Analysis of diversity of T cell antigen receptor genes using polymerase chain reaction and sequencing gel electrophoresis. *J. Immunol. Methods*, 175 (1994) 227-236; *C.A.*, 122 (1995) 78532g.
- 2496 Zhizhina, G.P., Korobko, V.G. and Alessenko, A.V.: (Correlation of DNA degradation induced by the tumour necrosis factor α with nuclear sphingosin content and DNA peroxide accumulation). *Biokhimiya (Moscow)*, 59 (1994) 1756-1765.
- 2497 Zhou, Y.-H. and Ragan, M.A.: Characterization of the polyubiquitin gene in the marine red alga *Gracilaria verrucosa*. *Biochim. Biophys. Acta*, 1261 (1995) 215-222.
- See also 1838, 1844, 1862, 1865, 1868, 1877, 1881, 1882, 1939, 2050, 2265, 2279, 2370, 2382, 2383, 2386, 2389, 2390, 2395, 2425, 2524, 2554, 2647.
- 21d. *Structural studies on RNA and RNA mapping*
- 2498 Aoki, H., Tanaka, K. and Ida, S.: The genomic organization of the gene encoding a nitrate-inducible ferredoxin-NADP⁺ oxidoreductase from rice roots. *Biochim. Biophys. Acta*, 1229 (1995) 389-392.
- 2499 Bogdanova, S.L., Degtyarev, A.I., Baranov, P.V., Dokudovskaya, S.S., Lavrik, I.N., Dontsova, O.A., Oretskaya, T.S., Krynetskaya, N.F., Shabarova, Z.A. and Bogdanov, A.A.: (Site-directed cleavage of single internucleotide bonds of ribosomal RNA). *Biokhimiya (Moscow)*, 60 (1995) 297-307.
- 2500 Cramer, G.S., Wang, L.-F. and Eaton, B.T.: Differentiation of cognate dsRNA genome segments of bluetongue virus reassortants by temperature gradient gel electrophoresis. *J. Virol. Methods*, 51 (1995) 211-220; *C.A.*, 122 (1995) 182482b.
- 2501 Heller, C.: Field inversion gel electrophoresis. *Methods Mol. Biol. (Totowa)*, 31(Protocols for Gene Analysis) (1994) 135-146; *C.A.*, 122 (1995) 75617c - a review with 18 refs.

- 2502 Yamamoto, H., Naruse, A., Ohsaki, T. and Sekiguchi, J.: Nucleotide sequence and characterization of the large mitochondrial rRNA gene of *Penicillium urticae*, and its comparison with those of other filamentous fungi. *J. Biochem. (Tokyo)*, 117 (1995) 888-896.
- See also 2376, 2420, 2561.
- 21e. *Structural studies on DNA and DNA mapping*
- 2503 Allard, S., Labbé, M. and Falardeau, P.: Recombination of endogenous D₂ dopamine receptor gene with a metallothionein promoter in GH4C1 cells confers functional and inducible D₂ response. *Biochim. Biophys. Acta*, 1260 (1995) 43-48.
- 2504 Appel, E., Eisenberg, S. and Roitman, J.: Improved PCR amplification/HhaI restriction for unambiguous determination of apolipoprotein E alleles. *Clin. Chem. (Washington)*, 41 (1995) 187-190.
- 2505 Athma, P., Liu, J. and Swift, M.: PCR detection of the TaqI restriction fragment length polymorphism linked to the ataxia telangiectasia locus. *Clin. Chem. (Washington)*, 41 (1995) 625-626.
- 2506 Baba, Y.: (PCR analysis and DNA sequencing by capillary electrophoresis in human genome project). *Dojin News*, 71 (1994) 8-14; C.A., 122 (1995) 97534a.
- 2507 Baba, Y., Tshako, M., Hayashi, K., Okubo, K., Matsubara, K., Hattori, M., Sakaki, Y., Miki, T. and Ogihara, T.: (Human genome analysis and gene diagnosis using capillary electrophoresis with laser-induced fluorescence detector). *Kuromatogurafi*, 15 (1994) 218-219; C.A., 122 (1995) 124376j.
- 2508 Bautsch, W.: Bacterial genome mapping by two-dimensional pulsed-field gel electrophoresis (2D-PFGE). *Mol. Biotechnol.*, 2 (1994) 29-44; C.A., 122 (1995) 124298k.
- 2509 Boultonwood, J.: Physical mapping of the human genome by pulsed field gel electrophoresis. *Methods Mol. Biol. (Totowa)*, 31(Protocols for Gene Analysis) (1994) 121-133; C.A., 122 (1995) 73178m.
- 2510 Brillante, R., Yang, V., Proos, A. and Burnett, L.: PCR analysis of hair root specimens to detect Tay-Sachs disease carriers in Ashkenazi Jews. *Clin. Chem. (Washington)*, 41 (1995) 321-322.
- 2511 Butler, J.M., McCord, B.R., Jung, J.M. and Allen, R.O.: Rapid analysis of the short tandem repeat HUMBH01 by capillary electrophoresis. *BioTechniques*, 17 (1994) 1062-1070; C.A., 122 (1995) 231925j.
- 2512 Chung, I.K., Soisson, S.M. and Muller, M.T.: Clustering of Sp1 sites near the promoter region of ICP34.5 in herpes simplex virus type 1. *J. Biochem. (Tokyo)*, 117 (1995) 19-22.
- 2513 Dahm-Daphi, J. and Dikomey, E.: Separation of DNA fragments induced by ionizing irradiation using a graded-field gel electrophoresis. *Int. J. Radiat. Biol.*, 67 (1995) 161-168; C.A., 122 (1995) 234335c.
- 2514 Donabedian, S., Chow, J.W., Shlaes, D.M., Green, M. and Zervos, M.J.: DNA hybridization and contour-clamped homogeneous electric field electrophoresis for identification of enterococci to the species level. *J. Clin. Microbiol.*, 33 (1995) 141-145; C.A., 122 (1995) 152550e.
- 2515 Dovichi, N.J.: Capillary gel electrophoresis for DNA sequencing: separation and detection. In: Landers, J.P. (Editor), *Handb. Capillary Electrophor.*, CRC, Boca Raton, 1994, pp. 369-387; C.A., 122 (1995) 97473e.
- 2516 Duncan, M.K., Roth, H.J., Thompson, M., Kantorow, M. and Piatigorsky, J.: Chicken β B1 crystallin: gene sequence and evidence for functional conservation of promoter activity between chicken and mouse. *Biochim. Biophys. Acta*, 1261 (1995) 68-76.
- 2517 Eng, B., Ainsworth, P. and Waye, J.S.: Anomalous migration of PCR products using nondenaturing polyacrylamide gel electrophoresis: the amelogenin sex-typing system. *J. Forensic Sci.*, 39 (1994) 1356-1359; C.A., 122 (1995) 48617w.
- 2518 Fuller, C.W.: An improved polyacrylamide gel containing ethylene glycol for DNA sequencing. *PCT Int. Appl. WO 94 23,092 (Cl. C2587/00)*, 13 Oct. 1994, US Appl. 37,608, 26 Mar. 1993; 8 pp.; C.A., 122 (1995) 73953k.
- 2519 Gejman, P.V. and Weinstein, L.S.: Detection of mutations and polymorphisms of G_{s α} subunit gene by denaturing gradient gel electrophoresis. *Methods Enzymol.*, 237(Heterotrimeric G Proteins) (1994) 308-320; C.A., 122 (1995) 124030s - a review with 46 refs.
- 2520 Greiner, T.C., Raffeld, M., Lutz, C., Dick, F. and Jaffe, E.S.: Technical advance. Analysis of T cell receptor- γ gene rearrangements by denaturing gradient gel electrophoresis of GC-clamped polymerase chain reaction products: correlation with tumor-specific sequences. *Am. J. Pathol.*, 146 (1995) 46-55; C.A., 122 (1995) 211880n.
- 2521 Gyobu, Y., Isobe, J. and Tanaka, D.: (Use of pulsed field gel electrophoresis for epidemiology of *Salmonella*). *Toyama-ken Eisei Kenkyusho Nenpo*, 17 (1994) 129-132; C.A., 122 (1995) 128469q.
- 2522 Hillier, A.J. and Davidson, B.E.: The use of pulsed-field gel electrophoresis for microbial strain identification. *Australas. Biotechnol.*, 4 (1994) 167-168; C.A., 122 (1995) 100661x.
- 2523 Hoesche, C., Bartsch, P. and Kilmann, M.W.: The CRE consensus sequence in the synapsin I gene promoter region confers constitutive activation but no regulation by cAMP in neuroblastoma cells. *Biochim. Biophys. Acta*, 1261 (1995) 249-256.
- 2524 Huh, G.H., Matsuura, Y., Meshi, T. and Iwabuchi, M.: Differential expression of the two types of histone H2A genes in wheat. *Biochim. Biophys. Acta*, 1261 (1995) 155-160.
- 2525 Itoh, M., Nakamura, M., Suzuki, T., Kawai, K., Horitsu, H. and Takamizawa, K.: Mechanism of chromium(VI) toxicity in *Escherichia coli*: is hydrogen peroxide essential in Cr(VI) toxicity? *J. Biochem. (Tokyo)*, 117 (1995) 780-786.
- 2526 Jaakkola, S., Vornanen, T., Leinonen, J., Rannikko, S. and Stenman, U.-H.: Detection of prostatic cells in peripheral blood: correlation with serum concentrations of prostate-specific antigen. *Clin. Chem. (Washington)*, 41 (1995) 182-186.
- 2527 Kamachi, G.L., Kofuji, P., Wang, J.B., Fernando, J.C.R., Liu, Z., Mathura, J.R., Jr. and Burt, D.R.: GABA_A receptor β ₁, β ₂, and β ₃ subunits: comparisons in DBA/2J and C57BL/6J mice. *Biochim. Biophys. Acta*, 1261 (1995) 134-142.
- 2528 Katsube, T. and Fukumaki, Y.: A role for the distal CCAAT box of the β -globin gene in Hb switching. *J. Biochem. (Tokyo)*, 117 (1995) 68-76.

- 2529 Kawabata, H., Anzai, N., Yoshida, Y. and Okuma, M.: A new method for quantitative estimation of the degree of DNA fragmentation utilizing agarose gel electrophoresis. *Int. J. Hematol.*, 59 (1994) 311-316; C.A., 122 (1995) 100887a.
- 2530 Kleparnik, K., Garner, M. and Bocek, P.: Injection bias of DNA fragments in capillary electrophoresis with sieving. *J. Chromatogr. A*, 698 (1995) 375-383.
- 2531 Kneba, M., Bolz, I., Linke, B., Bertram, J., Rothaupt, D. and Hiddemann, W.: Characterization of clone-specific rearranged T-cell receptor γ -chain genes in lymphomas and leukemias by the polymerase chain reaction and DNA sequencing. *Blood*, 84 (1994) 574-581; C.A., 122 (1995) 103446s.
- 2532 Knoblauch, H., Weiss, N., Eggersdorfer, I., Keller, C. and Schuster, H.: A nonisotopic single-strand conformation polymorphism protocol using a direct blotting electrophoresis, a chemiluminescent detection system, and a multiplex approach. *PCR Methods Appl.*, 4 (1994) 52-55; C.A., 122 (1995) 97851b.
- 2533 Kuff, E.L. and Mietz, J.A.: Analysis of DNA restriction enzyme digests by two-dimensional electrophoresis in agarose gels. *Methods Mol. Biol. (Totowa)*, 31(Protocols for Gene Analysis) (1994) 177-186; C.A., 122 (1995) 97815t.
- 2534 Kuick, R., Asakawa, J.-i., Neel, J.V., Satoh, C. and Hanash, S.M.: High yield of restriction fragment length polymorphisms in two-dimensional separations of human genomic DNA. *Genomics*, 25 (1995) 345-353; C.A., 122 (1995) 179656f.
- 2535 Kurvinen, K., Hietanen, S., Syrjaenen, K. and Syrjaenen, S.: Rapid and effective detection of mutations in the p53 gene using nonradioactive single-strand conformation polymorphism (SSCP) technique applied on PhastSystem. *J. Virol. Methods*, 51 (1995) 43-54; C.A., 122 (1995) 124389r.
- 2536 Lareu, M.V., Phillips, C.P., Pestoni, C., Barros, F., Munoz, J. and Carracedo, A.: Anomalous electrophoretic behavior of HUMACTBP2 (SE33). *Adv. Forensic Haemogenet.*, 5 (1994) 121-123; C.A., 122 (1995) 152562k.
- 2537 Laubscher, K.H., Glew, R.H., Lee, R.E. and Okinaka, R.T.: Use of denaturing gradient gel electrophoresis to identify mutant sequences in the β -glucocerebrosidase gene. *Hum. Mutat.*, 3 (1994) 411-415; C.A., 122 (1995) 97862f.
- 2538 Law, H.-Y., Ong, J., Yoon, C.-S., Cheng, H., Tan, C.-L. and Ng, I.: Rapid antenatal diagnosis in Chinese of β -thalassemia caused by the common 4-bp deletion in codons 41/42 using high-resolution agarose gel electrophoresis and heteroduplex detection. *Biochem. Med. Metab. Biol.*, 53 (1994) 149-151; C.A., 122 (1995) 124435c.
- 2539 Lefevre, J.C., Gasc, A.M., Lemozy, J., Sicard, A.M. and Faucon, G.: Pulsed field gel electrophoresis for molecular epidemiology of penicillin resistant *Streptococcus pneumoniae* strains. *Pathol. Biol.*, 42 (1994) 547-552; C.A., 122 (1995) 27070x.
- 2540 Little, R.D. and Schildkraut, C.L.: Mapping sites of replication initiation and termination in circular viral genomes using two-dimensional agarose gel electrophoresis. *Methods Mol. Genet.*, 4(Molecular Virology I) (1994) 326-344; C.A., 122 (1995) 97543c - a review with 26 refs.
- 2541 Loomans, D., Sokolov, I.M. and Blumen, A.: Tension and mobility of a DNA fragment in the lakes-straits model. *Macromol. Theory Simul.*, 4 (1995) 145-154; C.A., 122 (1995) 75843y.
- 2542 Maekawa, M., Sudo, K., Kanno, T., Kotani, K., Key, D.C., Ishikawa, J., Izumi, M. and Etoh, K.: Genetic basis of the silent phenotype of serum butyrylcholinesterase in three compound heterozygotes. *Clin. Chim. Acta*, 235 (1995) 41-57.
- 2543 Makowski, G.S., Aslanzadeh, J. and Hopfer, S.M.: *In situ* PCR amplification of Guthrie card DNA to detect cystic fibrosis mutations. *Clin. Chem. (Washington)*, 41 (1995) 477-479.
- 2544 Murray, V., Moore, A.G., Matias, C. and Wickham, G.: The interaction of hedamycin and DC92-B in a sequence selective manner with DNA in intact human cells. *Biochim. Biophys. Acta*, 1261 (1995) 195-200.
- 2545 Na, W.-J. and Chung, Y.-B.: The variable number of tandem repeats allele distribution in the Korean population (II): analysis by polymerase chain reaction and high-resolution agarose gel electrophoresis. *Mol. Cells*, 4 (1994) 495-504; C.A., 122 (1995) 152624g.
- 2546 Nair, S., Poh, C.L., Lim, Y.S., Tay, L. and Goh, K.T.: Genome fingerprinting of *Salmonella typhi* by pulsed-field gel electrophoresis for subtyping common phage types. *Epidemiol. Infect.*, 113 (1994) 391-402; C.A., 122 (1995) 152560h.
- 2547 Nam, H.S., Kim, K.E., Lee, L.-J. and Kim, E.-H.: Polymerase chain reaction and denaturing gradient gel electrophoresis for screening new alleles in HLA-DQA. *Mol. Cells*, 5 (1995) 52-57; C.A., 122 (1995) 184922u.
- 2548 Nissen, H., Hansen, P.S., Færgeman, O. and Hørdler, M.: Mutation screening of the codon 3500 region of the apolipoprotein B gene by denaturing gradient-gel electrophoresis. *Clin. Chem. (Washington)*, 41 (1995) 419-423.
- 2549 Ochiai, Y., Inazawa, J., Ueyama, H. and Ohkubo, I.: Human gene for β -microseminoprotein: its promoter structure and chromosomal localization. *J. Biochem. (Tokyo)*, 117 (1995) 346-352.
- 2550 Okayama, N. and Noriyasu, H.: (PCR-SSCP of silver stain for analysis of β -thalassemia mutation). *Igaku Kensa*, 44 (1995) 18-22; C.A., 122 (1995) 152546h.
- 2551 Oldroyd, N.J., Urquhart, A.J., Kimpton, C.P., Millican, E.S., Watson, S.K., Downes, T. and Gill, P.D.: A highly discriminating octoplex short tandem repeat polymerase chain reaction system suitable for human individual identification. *Electrophoresis (Weinheim)*, 16 (1995) 334-337.
- 2552 Oto, M., Suehiro, T., Akiyama, Y. and Yuasa, Y.: Microsatellite instability in cancer identified by non-gel sieving capillary electrophoresis. *Clin. Chem. (Washington)*, 41 (1995) 482-483.
- 2553 Pan, J.-P., Chiang, A.-N., Tai, J.J., Wang, S.-P. and Chang, M.-S.: Restriction fragment length polymorphism of apolipoprotein B gene in Chinese population with coronary heart disease. *Clin. Chem. (Washington)*, 41 (1995) 424-429.
- 2554 Rutberg, S.E., Fuchs, S.Y. and Ronai, Z.: Ultraviolet irradiation and c-jun over-expression regulates replication of polyoma sequences in WOP cells through a PEBP2 binding site. *Biochim. Biophys. Acta*, 1261 (1995) 90-98.
- 2555 Saad, F.A., Halliger, B., Mueller, C.R., Roberts, R.G. and Danieli, G.A.: Single base substitutions are detected by double strand conformation analysis. *Nucleic Acids Res.*, 22 (1994) 4352-4353; C.A., 122 (1995) 24770q.
- 2556 Samigullin, T.Kh., Miroshnichenko, G.P., Antonov, A.S., Yakovlev, S.P. and Yankovskaya, M.B.: (A comparative study of ribosomal DNA repeats of fruit plants of the Rosaceae juss family). *Biokhimiya (Moscow)*, 59 (1994) 1349-1359.

- 2557 Schlax, P.E., Jr., Capp, M.W. and Record, M.T., Jr.: Preparative-scale purification of DNA restriction fragments by continuous-flow gel electrophoresis. *BioTechniques*, 18 (1995) 94-100; C.A., 122 (1995) 75839b.
- 2558 Schuetz, J.D. and Guzelian, P.S.: Isolation of CYP3A5P cDNA from human liver: a reflection of a novel cytochrome P-450 pseudogene. *Biochim. Biophys. Acta*, 1261 (1995) 161-165.
- 2559 Shimadzu, M., Nunoi, H., Terasaki, H., Ninomiya, R., Iwata, M., Kanegasaka, S. and Matsuda, I.: Structural organization of the gene for CD40 ligand: molecular analysis for diagnosis of X-linked hyper-IgM syndrome. *Biochim. Biophys. Acta*, 1260 (1995) 67-72.
- 2560 Sidman, C.L. and Shaffer, D.J.: Large-scale genomic comparison using two-dimensional DNA gels. *Genomics*, 23 (1994) 15-22; C.A., 122 (1995) 179497e.
- 2561 Smit, J.J.M., Mol, C.A.A.M., van Deemter, L., Wagenaar, E., Schinkel, A.H. and Borst, P.: Characterization of the promoter region of the human MDR3 P-glycoprotein gene. *Biochim. Biophys. Acta*, 1261 (1995) 44-56.
- 2562 Snopkova, S., Goetz, F., Doskar, J. and Rosypal, S.: Pulsed-field gel electrophoresis of the genomic restriction fragments of coagulase-negative staphylococci. *FEMS Microbiol. Lett.*, 124 (1994) 131-140; C.A., 122 (1995) 24799f.
- 2563 Sokolova, I.A., Cowan, K.H. and Schneider, E.: Ca²⁺/Mg²⁺-dependent endonuclease activation is an early event in VP-16-induced apoptosis of human breast cancer MCF7 cells *in vitro*. *Biochim. Biophys. Acta*, 1266 (1995) 135-142.
- 2564 Srinivasan, K.: Development of capillary electrophoretic separation methods for PCR-amplified DNA products. Avail. *Univ. Microfilms Int.*, Order No. DA9426898, 1993, 244 pp.; C.A., 122 (1995) 155528q.
- 2565 Steffens-Nakken, H.M., Zwart, G. and van den Bergh, F.A.J.T.M.: Validation of allele-specific polymerase chain reaction for DNA typing of HLA-B27. *Clin. Chem. (Washington)*, 41 (1995) 687-692.
- 2566 Tanaka, M., Fukada, S., Matsuyama, M. and Nagahama, Y.: Structure and promoter analysis of the cytochrome P-450 aromatase gene of the teleost fish, medaka (*Oryzias latipes*). *J. Biochem (Tokyo)*, 117 (1995) 719-725.
- 2567 Tang, L., Pelech, S. and Berger, J.D.: Isolation of the cell cycle control gene *cdc2* from *Paramecium tetraurelia*. *Biochim. Biophys. Acta*, 1265 (1995) 161-167.
- 2568 Thonnard, J., Deldime, F., Heusterspreute, M., Delepaut, B., Hanon, F., de Bruyère, M. and Philippe, M.: HLA class II genotyping: two assay systems compared. *Clin. Chem. (Washington)*, 41 (1995) 553-556.
- 2569 Tomisaki, R., Baba, Y. and Tshako, M.: (Rapid separation of DNA sequencing reaction product using capillary electrophoresis). *Bunseki Kagaku*, 43 (1994) 1205-1207; C.A., 122 (1995) 75815r.
- 2570 Wan, Q. and Schuchman, E.H.: A novel polymorphism in the human acid sphingomyelinase gene due to size variation of the signal peptide region. *Biochim. Biophys. Acta*, 1270 (1995) 207-210.
- 2571 Wang, Y., Ju, J., Carpenter, B.A., Atherton, J.M., Sensabaugh, G.F. and Mathies, R.A.: Rapid sizing of short tandem repeat alleles using capillary array electrophoresis and energy-transfer fluorescent primers. *Anal. Chem.*, 67 (1995) 1197-1203.
- 2572 Wenz, H.M.: Capillary electrophoresis as a technique to analyze sequence-induced anomalously migrating DNA fragments. *Nucleic Acids Res.*, 22 (1994) 4002-4008; C.A., 122 (1995) 47727v.
- 2573 Wijnen, J., Fodde, R. and Khan, P.M.: DGGE polymorphism in intron 10 of MSH2, the HNPCC gene. *Hum. Mol. Genet.*, 3 (1994) 2268; C.A., 122 (1995) 98485x.
- 2574 Woolley, A.T. and Mathies, R.A.: Ultra-high-speed DNA fragment separations using microfabricated capillary array electrophoresis chips. *Proc. Natl. Acad. Sci. U.S.A.*, 91 (1994) 11348-11352; C.A., 122 (1995) 47745z.
- 2575 Yasuoka, A., Abe, K., Saigo, K., Arai, S. and Emori, Y.: Molecular cloning of a fish gene encoding a novel seven-transmembrane receptor related distantly to catecholamine, histamine, and serotonin receptors. *Biochim. Biophys. Acta*, 1235 (1995) 467-469.
- 2576 Zheleznyaya, L.A., Fedorov, O.V., Brik, A.F. and Matvienko, N.I.: (The nucleotide sequence of the flagellin gene of *Escherichia coli* B38). *Biokhimiya (Moscow)*, 59 (1994) 1621-1637.
- See also 1876, 1881, 2296, 2318, 2364, 2370, 2381, 2395, 2408, 2433, 2454, 2462, 2485, 2492.
22. ALKALOIDS
- 2577 Zhang, Z.-Y., Fasco, M.J. and Kaminsky, L.S.: Determination of theophylline and its metabolites in rat liver microsomes and human urine by capillary electrophoresis. *J. Chromatogr. B*, 665 (1995) 201-208.
23. OTHER SUBSTANCES CONTAINING HETEROCYCLIC NITROGEN
- 23c. Indole derivatives and plant hormones (gibberelins)
- See 2004.
24. ORGANIC SULPHUR COMPOUNDS (INCL. GLUCOSINOLATES)
- 2578 Okafo, G.N., Rana, K.K. and Camilleri, P.: Improved separation of diastereoisomers in capillary electrophoresis using a mixture of β -cyclodextrin and sodium taurodeoxycholate. *Chromatographia*, 39 (1994) 627-630.
25. ORGANIC PHOSPHORUS COMPOUNDS (INCL. SUGAR PHOSPHATES)
- See 1859, 2013, 2022, 2080, 2099, 2168, 2365.
26. ORGANOMETALLIC AND RELATED COMPOUNDS
- 26a. Organometallic compounds
- See 2662.

26c. Coordination compounds

- 2579 Lee, H.J., Lee, S.H., Chung, K.S. and Lee, K.W.: Determination of Pd(II) and Pt(II) metacyanocomplexes using capillary electrophoresis. *Bull. Korean Chem. Soc.*, 15 (1994) 945-949; *C.A.*, 122 (1995) 150395j.
- 2580 Tewari, B.B., Nautiyal, A.P., Kamaluddin, and Srivastava, S.K.: (Studies on electrophoretic behavior of biologically important iron(III) and chromium(III) binary complexes with cysteine). *Zh. Neorg. Khim.*, 39 (1994) 1170-1172; *C.A.*, 122 (1995) 27074b.

See also 2658.

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

- 2581 Shi, H., Ma, Y., Humphrey, J.H. and Craft, N.E.: Determination of vitamin A in dried human blood spots by high-performance capillary electrophoresis with laser-excited fluorescence detection. *J. Chromatogr. B*, 665 (1995) 89-96.

28. ANTIBIOTICS

- 2582 Altria, K.D., Clayton, N.G., Harden, R.C., Makwana, J.V. and Portsmouth, M.J.: Inter-company cross validation exercise on capillary electrophoresis. Quantitative determination of drug counter-ion level. *Chromatographia*, 40 (1995) 47-50.
- 2583 Blais, B.W., Cunningham, A. and Yamazaki, H.: A novel immunofluorescence capillary electrophoresis assay system for the determination of chloramphenicol. *Food Agric. Immunol.*, 6 (1994) 409-417; *C.A.*, 122 (1995) 185653u.
- 2584 Dunn, D.S., Raghavan, S. and Volz, R.G.: Ciprofloxacin attachment to porous-coated titanium surfaces. *J. Appl. Biomater.*, 5 (1994) 325-331; *C.A.*, 122 (1995) 89315q.
- 2585 Gu, J.-L. and Fu, R.-N.: Separation of chiral isomers of chloramphenicol metabolite by capillary zone electrophoresis using cyclodextrin as chiral selector. *Chin. Sci. Bull.*, 39 (1994) 1801-1805; *C.A.*, 122 (1995) 150708p.
- 2586 Kinashi, H., Mori, E., Hatani, A. and Nimi, O.: Isolation and characterization of linear plasmids from lankacidin-producing *Streptomyces* species. *J. Antibiot.*, 47 (1994) 1447-1455.

29. INSECTICIDES, PESTICIDES AND OTHER AGROCHEMICALS

29e. Herbicides

- 2587 Galceran, M.T., Carneiro, M.C. and Puignou, L.: Capillary electrophoresis of quaternary ammonium ion herbicides: paraquat, diquat and difenzoquat. *Chromatographia*, 39 (1994) 581-586.
- 2588 Song, L., Ou, Q., Yu, W. and Li, G.: Separation of six phenylureas and chloresulfuron standards by micellar, mixed micellar and microemulsion electrokinetic chromatography. *J. Chromatogr. A*, 699 (1995) 371-382.

29f. Fungicides

- 2589 Maillard, J.L., Favreau, C. and Reboud-Ravaux, M.: Role of monocyte/macrophage derived matrix-metalloproteinases (gelatinases) in prolonged skin inflammation. *Clin. Chim. Acta*, 233 (1995) 61-74.

30. SYNTHETIC AND NATURAL DYES

30a. Synthetic dyes

See 1941.

30b. Chloroplast and other natural pigments

- 2590 Coffey, J.S. and Castle, L.: Analysis for caramel color (Class III). *Food Chem.*, 51 (1994) 413-416; *C.A.*, 122 (1995) 30024r.
- 2591 Watanabe, T., Kotokawa, N., Yamamoto, A. and Terabe, S.: (Separation by capillary electrophoresis of natural yellow pigments used in food). *Kuromatogurafi*, 15 (1994) 212-213; *C.A.*, 122 (1995) 158855e.

31. PLASTICS AND THEIR INTERMEDIATES

- 2592 Gittings, M.R. and Saville, D.A.: Electrophoretic mobility and dielectric response measurements on electrokinetically ideal polystyrene latex particles. *Langmuir*, 11 (1995) 798-800; *C.A.*, 122 (1995) 162028u.
- 2593 McNair, H.M. and Sun, X.: Capillary zone electrophoresis for polyimide composition analysis. *J. High Resolut. Chromatogr.*, 18 (1995) 115-116.
- 2594 Okada, T.: Non-aqueous capillary electrophoretic separation of polyethers and evaluation of weak complex formation. *J. Chromatogr. A*, 695 (1995) 309-317.
- 2595 Ono, M., Tanaka, C. and Yoshinaga, K.: (The analysis of water-soluble components in latex by capillary electrophoresis). *Takeda Kenkyushoho*, 53 (1994) 104-114; *C.A.*, 122 (1995) 135701n.

See also 1880, 2652.

32. DRUG ANALYSIS

32a. Drug analysis, general techniques

- 2596 Altria, K.D. and Kersey, M.T.: Capillary electrophoresis and pharmaceutical analysis: a survey of industrial applications and their status in the United Kingdom and United States. *LC-GC Int.*, 8, No. 4 (1995) 201-208.
- 2597 Jellum, E.: Chromatography and capillary electrophoresis in biomedicine. *Spec. Publ. - R. Soc. Chem.*, 154 (Reviews on Analytical Chemistry-Euroanalysis VIII) (1994) 308-316; *C.A.*, 122 (1995) 50306n - a review with 14 refs.

- 2598 Lloyd, D.K., Li, S. and Ryan, P.: Protein chiral selectors in free-solution capillary electrophoresis and packed-capillary electrochromatography. *J. Chromatogr. A*, 694 (1995) 285-296.
- 2599 Naylor, S., Tomlinson, A.J., Benson, L.M. and Gorrod, J.W.: Capillary electrophoresis and capillary electrophoresis-mass spectrometry in drug and metabolite analysis. *Eur. J. Drug Metab. Pharmacokinet.*, 19 (1994) 235-240; C.A., 122 (1995) 23106r.
- 2600 Rashid, A., Xiang, B., Zhang, Z. and Au, D.: (Recent advances in high performance capillary electrophoresis (HPCE) and its application in the field of pharmaceutical analysis). *Zhongguo Yaoke Daxue Xuebao*, 25 (1994) 380-384; C.A., 122 (1995) 197089c - a review with 58 refs.
- 2601 Soini, H., Riekkola, M.-L. and Novotny, M.V.: A note on aspects of sample preparation for drug analysis in serum by capillary electrophoresis. In: Stevenson, D. and Wilson, I.D. (Editors), *Sample Prep. Biomed. Environ. Anal.*, [Proc. Chromatogr. Soc. Int. Symp.], 1991, Plenum, New York, 1994, pp. 167-169; C.A., 122 (1995) 23086j.
- 2602 Tanaka, Y. and Terabe, S.: Partial separation zone technique for the separation of enantiomers by affinity electrokinetic chromatography with proteins as chiral pseudo-stationary phases. *J. Chromatogr. A*, 694 (1995) 277-284.
- 2603 Yoshinaga, M. and Tanaka, M.: Chromatographic optical resolution in pharmaceutical analysis. *Jpn. Kokai Tokyo Koho JP 06,256,226 [94/256,226]* (Cl. C07B57/00), 13 Sep. 1994, Appl. 93/62,667, 26 Feb. 1993; 8 p.; C.A., 122 (1995) 122271x.
- See also 1917, 1929, 1931, 2580.
- 32b. *Antirheumatics and antiinflammatory drugs*
- 2604 Boonkerd, S., Lauwers, M., Detaevernier, M.R. and Michotte, Y.: Separation and simultaneous determination of the components in an analgesic tablet formulation by micellar electrokinetic chromatography. *J. Chromatogr. A*, 695 (1995) 97-102.
- 2605 Fanali, S. and Aturki, Z.: Use of cyclodextrins in capillary electrophoresis for the chiral resolution of some 2-arylpropionic acid non-steroidal anti-inflammatory drugs. *J. Chromatogr. A*, 694 (1995) 297-305.
- 32c. *Autonomic and cardiovascular drugs*
- 2606 Lozano, R., Warren, F.V., Jr., Perlman, S. and Joseph, J.M.: Quantitative analysis of fosinopril sodium by capillary zone electrophoresis and liquid chromatography. *J. Pharm. Biomed. Anal.*, 13 (1995) 139-148.
- 32d. *Central nervous system drugs*
- 2607 Chicharro, M., Zapardiel, A., Bermejo, E., Lopez, J.A.P. and Hernandez, L.: Direct determination of sympathomimetic drugs in human urine by capillary zone electrophoresis. *Quim. Anal. (Barcelona)*, 13 (1994) 134-137; C.A., 122 (1995) 74102u.
- See also 1933.
- 32e. *Chemotherapeutics (exc. cytostatics and antibiotics)*
- 2608 Cao, J. and Cross, R.F.: The separation of dihydrofolate reductase inhibitors and the determination of $pK_{a,1}$ values by capillary zone electrophoresis. *J. Chromatogr. A*, 695 (1995) 297-308.
- 2609 Taylor, R.B. and Reid, R.G.: Analysis of basic antimalarial drugs by CZE; Part 2. Validation and application to bioanalysis. *J. Pharm. Biomed. Anal.*, 13 (1995) 21-26.
- 32g. *Other drug categories*
- 2610 Hsieh, Y.-L., Cai, J., Li, Y.-T. and Henion, J.D.: Detection of noncovalent FKBP-FK506 and FKBP-rapamycin complexes by capillary electrophoresis-mass spectrometry and capillary electrophoresis-tandem mass spectrometry. *J. Am. Soc. Mass Spectrom.*, 6 (1995) 85-90; C.A., 122 (1995) 177576f.
- 2611 Noroski, J.E., Mayo, D.J. and Moran, M.: Determination of the enantiomer of a cholesterol-lowering drug by cyclodextrin-modified micellar electrokinetic chromatography. *J. Pharm. Biomed. Anal.*, 13 (1995) 45-52.
- 2612 Pietta, P.G., Bruno, A., Mauri, P.L., Gardana, C., Maffei-Facino, R. and Carini, M.: Determination of sunscreen agents by micellar electrokinetic chromatography. *J. Pharm. Biomed. Anal.*, 13 (1995) 229-235.
- See also 1933, 2624.
- 32h. *Toxicological and forensic applications*
- 2613 Jefferies, T.M., Brammer, G., Zotou, A., Brough, P.A. and Gallagher, T.: Determination of anatoxin-a, homoanatoxin and proplanatoxin in cyanobacterial extracts by HPLC, GC-mass spectrometry and capillary electrophoresis. *Spec. Publ. - R. Soc. Chem.*, 149(Detection Methods for Cyanobacterial Toxins) (1994) 34-39; C.A., 122 (1995) 74057h.
- 2614 Lurie, I.S.: Analysis of seized drugs by capillary electrophoresis. In: Adamovics, J.A. (Editor), *Anal. Addict. Misused Drugs*, Dekker, New York, 1995, pp. 151-219; C.A., 122 (1995) 232724e.
- See also 2444, 2456, 2483, 2517, 2536, 2607.
- 32i. *Plant extracts*
- 2615 King, B.J., Lee, L.S., Rackemann, R.G. and Scott, P.T.: Preparation of extracts for electrophoresis from citrus leaves. *J. Biochem. Biophys. Methods*, 29 (1994) 295-305; C.A., 122 (1995) 100905e.
- 2616 Song, L.G., Zhang, S.M., Ou, Q.Y. and Yu, W.L.: Studies of crude chloroform extracts of roots of *Podophyllum emodii* var. *chinensis* Sprague by micellar electrokinetic chromatography. *Chromatographia*, 39 (1994) 682-686.
33. CLINICO-CHEMICAL APPLICATIONS
- 33a. *General papers and reviews*
- 2617 Landers, J.P.: Clinical capillary electrophoresis. *Clin. Chem. (Washington)*, 41 (1995) 495-509 - a review with 72 refs.

2618 Young, D.S. and Tracy, R.P.: Clinical applications of two-dimensional electrophoresis. *J. Chromatogr. A*, 698 (1995) 163-179 - a review with 117 refs.

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

2619 Kowalchuk, R.M., Pollack, S.R. and Corcoran, T.A.: Zeta potential of bone from particle electrophoresis: solution composition and kinetic effects. *J. Biomed. Mater. Res.*, 29 (1995) 47-57; *C.A.*, 122 (1995) 170113u.

See also 1958, 1966, 1978, 1979, 1983, 1985, 1995, 2139, 2144, 2170, 2186, 2251, 2253, 2259, 2274, 2316, 2327, 2504, 2505, 2510, 2526, 2542, 2543, 2548, 2552, 2553, 2565, 2568, 2584, 2589.

34. FOOD ANALYSIS

34a. *General papers and reviews*

2620 Cancalon, P.F.: Capillary electrophoresis: a new tool in food analysis. *J. Assoc. Off. Anal. Chem.*, 78 (1995) 12-15 - a review with 95 refs.

2621 Delgado, C., Talou, T. and Gaset, A.: (Capillary electrophoresis: application and development in the domain of the food science and agrosresource industry). *Spectra Anal.*, 23 (1994) 42-46; *C.A.*, 122 (1995) 237990y - a review with many refs.

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

2622 Craig, A., Ritchie, A.H. and Mackie, I.M.: Determining the authenticity of raw reformed breaded scampi (*Nephrops norvegicus*) by electrophoretic techniques. *Food Chem.*, 52 (1995) 451-454; *C.A.*, 122 (1995) 185710k.

2623 Scobbie, A.E. and Mackie, I.M.: The use of sodium dodecyl sulphate-polyacrylamide gel electrophoresis to confirm the presence of salmon (*Salmo salar*) eggs in an illegal fish bait. *Electrophoresis (Weinheim)*, 16 (1995) 306-307.

2624 Thompson, C.O., Trener, V.C. and Kemmerly, B.: Micellar electrokinetic capillary chromatographic determination of artificial sweeteners in low-Joule soft drinks and other foods. *J. Chromatogr. A*, 694 (1995) 507-514.

See also 2051, 2134, 2160, 2167, 2190, 2194, 2195, 2196, 2583, 2590, 2591.

34c. *Organoleptically important compounds (flavors, odors, volatiles)*

2625 Golc-Wondra, A., Skocir, E. and Prosek, M.: Determination of monosodium glutamate in food products. *J. Planar Chromatogr.*, 8 (1995) 117-121.

35. ENVIRONMENTAL ANALYSIS

35a. *General papers and reviews*

2626 DeWitt, C.M. and Moore, K.H.: Capillary electrophoretic assay of xenobiotic acyl-CoA formation. *Am. Lab. (Shelton)*, 27 (1995) 28C, 28D, 28F, 28G, 28H, 28I; *C.A.*, 122 (1995) 182495h.

2627 Magi, B., Marzocchi, B., Lazzeri, C., Bini, L., Santucci, A. and Pallini, V.: Detection of xenobiotic-protein adducts: electrophoretic and immunochemical approaches. In: Renzoni, A. (Editor), *Contam. Environ.*, Lewis, Boca Raton, 1994, pp. 129-133; *C.A.*, 122 (1995) 25427v.

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

2628 Praus, P.: Possibilities of simple steam distillation in combination with capillary isotachopheresis for the determination of chlorophenols in river and industrial waste waters. *Anal. Chim. Acta*, 302 (1995) 39-44.

2629 Yonekubo, J., Sasaki, H. and Takahashi, Y.: (Capillary ion analysis applied for forest environment and products. (II). Analysis of rain and acid washing water). *Kankyo Kagaku*, 4 (1994) 394-395; *C.A.*, 122 (1995) 196346x.

See also 2666.

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

2630 Verschaeve, L. and Gilles, J.: Single cell gel electrophoresis assay in the earthworm for the detection of genotoxic compounds in soils. *Bull. Environ. Contam. Toxicol.*, 54 (1995) 112-119; *C.A.*, 122 (1995) 238565a.

36. SOME TECHNICAL PRODUCTS AND COMPLEX MIXTURES

36c. *Complex mixtures, technical products and unidentified compounds*

2631 Chan, T., Carpio, R. and VanMeurs, R.: The use capillary electrophoresis for the evaluation of post metal etch cleaning processes. *Proc. Electrochem. Soc.*, 94-29 (1994) 260-269; *C.A.*, 122 (1995) 177202f.

2632 Zemann, A.J. and Bobleter, O.: Separation of biomass degradation products by capillary electrophoresis. In: Bridgwater, A.V. (Editor), *Adv. Thermochem. Biomass Convers.*, Blackie, Glasgow, 1994, pp. 953-965; *C.A.*, 122 (1995) 190674f.

See also 2595.

37. CELLS, CELLULAR PARTICLES AND SUPRAMOLECULAR STRUCTURES
- 2633 Akiba, T., Nishi, A., Takaoki, M., Nagaoka, S. and Tomita, F.: Electrophoretic free mobility and viability of microbial cells: a preliminary study in preparation for space experiments. *Appl. Theor. Electrophor.*, 4 (1994) 65-69; C.A., 122 (1995) 75832u.
- 2634 Bauer, J. (Editor): *Cell Electrophoresis*. CRC, Boca Raton, 1994, 328 pp.; C.A., 122 (1995) 75997b.
- 2635 Bruckheimer, E.M., Gillum, K.D. and Schroit, A.J.: Colocalization of Rh polypeptides and the aminophospholipid transporter in dilauroylphosphatidylcholine-induced erythrocyte vesicles. *Biochim. Biophys. Acta*, 1235 (1995) 147-154.
- 2636 Cohly, H.H.P. and Das, S.K.: Cell electrophoresis using antibodies and antigens as ligands. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 113-142; C.A., 122 (1995) 50318t.
- 2637 Friedrich, U., Ruyters, G. and Bauer, J.: Cell electrophoresis in microgravity. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 315-319; C.A., 122 (1995) 50328w.
- 2638 Goering, R.V.: Rapid epidemiological evaluation of staphylococci by field inversion gel electrophoresis. *Zentralbl. Bakteriolog., Suppl.*, 26 (1994) 97-103; C.A., 122 (1995) 234648g.
- 2639 Golovanov, M.V.: Electrophoresis of cells at a physiological ionic strength. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 181-196; C.A., 122 (1995) 50321p.
- 2640 Heinrich, J. and Wagner, H.: Electrode compartment-separating membranes for cell electrophoresis. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 103-112; C.A., 122 (1995) 50317s.
- 2641 Knisley, K.A. and Rodkey, L.S.: New buffer systems for cell electrophoresis. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 145-161; C.A., 122 (1995) 50319u.
- 2642 Kuzmanova, M., Ivanov, S., Nankova, V. and Markov, M.: Effects of extremely high frequency electromagnetic fields on electrophoretic mobility and ATP content in rat erythrocytes. *Bioelectrochem. Bioenerg.*, 35 (1994) 53-56; C.A., 122 (1995) 26810b.
- 2643 Matsumura, H., Mori, F., Kawahara, K., Obata, C. and Furusawa, K.: Effect of amino acids, polypeptides and proteins on electrophoretic mobilities of phospholipid liposomes. *Colloids Surf., A*, 92 (1994) 87-93; C.A., 122 (1995) 49598c.
- 2644 Morrison, D.R.: Cell electrophoresis in microgravity: past and future. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 283-313; C.A., 122 (1995) 50327v.
- 2645 Ohshima, H.: A simple expression of Henry's function for the retardation effect in electrophoresis of spherical colloidal particles. *J. Colloid Interface Sci.*, 168 (1994) 269-271; C.A., 122 (1995) 90352f.
- 2646 Schutt, W., Hashimoto, N. and Shimizu, M.: Application of cell electrophoresis for clinical diagnosis. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 255-266; C.A., 122 (1995) 50325t.
- 2647 Serwer, P., Khan, S.A. and Griess, G.A.: Non-denaturing gel electrophoresis of biological nanoparticles: viruses. *J. Chromatogr. A*, 698 (1995) 251-261 - a review with 84 refs.
- 2648 Seshi, B.: Cell adhesion to proteins separated by lithium dodecyl sulfate-polyacrylamide gel electrophoresis and blotted onto a polyvinylidene difluoride membrane: a new cell-blotting technique. *J. Immunol. Methods*, 176 (1994) 185-201; C.A., 122 (1995) 50641t.
- 2649 Slivinsky, G.G.: Simultaneous two-parameter measurements of the electrophoretic features of cell subpopulations and their different sedimentation characteristics. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 199-217; C.A., 122 (1995) 50322q.
- 2650 Todd, P.: The loading and unloading of cells in electrophoretic separations. In: Bauer, J. (Editor), *Cell Electrophor.*, CRC, Boca Raton, 1994, pp. 75-101; C.A., 122 (1995) 50316r.
- 2651 Walter, H. and Widen, K.E.: Differential electrophoretic behavior in aqueous polymer solutions of red blood cells from Alzheimer patients and from normal individuals. *Biochim. Biophys. Acta*, 1234 (1995) 184-190.
- 2652 Zeltner, W.A., Wang, J.-F., Omatete, O.O., Janney, M.A., Tejedor-Tejedor-M.I., Anderson, M.A., Riman, R.E., Shanefield, D.J. and Adair, J.H.: Model hydrous oxide colloids for particle electrophoresis. In: Adair, J.H., Casey, J.A. and Venigalla, S. (Editors), *Handb. Charact. Tech. Solid-Solution Interface*, Am. Ceram. Soc., Westerville, 1993, pp. 87-103; C.A., 122 (1995) 170829g - a review with 10 refs.
38. INORGANIC COMPOUNDS
- 38a. Cations
- 2653 Altria, K.D., Wood, T., Kitscha, R. and Roberts-McIntosh, A.: Validation of a capillary electrophoresis method for the determination of potassium counter-ion levels in an acidic drug salt. *J. Pharm. Biomed. Anal.*, 13 (1995) 33-38.
- 2654 Baraj, B., Martinez, M., Sastre, A. and Aguilar, M.: Simultaneous determination of Cr(III), Fe(III), Cu(II) and Pb(II) as UV-absorbing EDTA complexes by capillary zone electrophoresis. *J. Chromatogr. A*, 695 (1995) 103-111.
- 2655 Chen, G.J., Lee, N.M., Hu, C.C. and Liu, C.Y.: Chemical modification of capillary column for electrophoretic separations of transition metal ions. *J. Chromatogr. A*, 699 (1995) 343-351.
- 2656 Dadachova, E., Mirzadeh, S., Lambrecht, R.M., Hetherington, E.L. and Knapp, F.F., Jr.: Separation of carrier-free ¹⁶⁶Ho from Dy₂O₃ targets by partition chromatography and electrophoresis. *J. Radioanal. Nucl. Chem.*, 199 (1995) 115-123; C.A., 122 (1995) 144930p.
- 2657 Jia, L., Zhang, H. and Hu, Z.: Determination of platinum(II) in the presence of rhodium(III), ruthenium(III), osmium(III) and iridium(III) by micellar electrokinetic capillary chromatography. *Anal. Lett.*, 28 (1995) 917-930.
- 2658 Latva, M., Ala-Kleme, T., Bjennes, H., Kankare, J. and Haapakka, K.: Time-resolved luminiscence detection of europium(III) chelates in capillary electrophoresis. *Analyst (Cambridge)*, 120 (1995) 367-372.
- 2659 O'Keefe, M., Dunemann, L., Theobald, A. and Svehla, G.: Capillary electrophoresis in speciation analysis. Investigations of metal-polyaminopolycarboxylate complexes and effects of metals on proteins. *Anal. Chim. Acta*, 306 (1995) 91-97.

- 2660 Stathakis, C. and Cassidy, R.M.: Effect of electrolyte composition in the capillary electrophoretic separation of inorganic/organic anions in the presence of cationic polymers. *J. Chromatogr. A*, 699 (1995) 353-361.
- 2661 Wrobel, K., Gonzales, E.B., Wrobel, K. and Sanz-Medel, A.: Aluminium and silicon speciation in human serum by ion-exchange high-performance liquid chromatography - electrothermal absorption spectrometry and gel electrophoresis. *Analyst (Cambridge)*, 120 (1995) 809-815.

See also 1887, 1991, 2579, 2582.

38b. Anions

- 2662 Albert, M., Demesmay, C. and Rocca, J.L.: Analysis of organic and non-organic arsenious or selenious compounds by capillary electrophoresis. *Fresenius J. Anal. Chem.*, 351 (1995) 426-432.
- 2663 Boden, J., Bächmann, K., Kotz, L., Fabry, L. and Pahlke, S.: Application of capillary zone electrophoresis with an isotachophoretic initial state to determine anionic impurities on as-polished silicon wafer surfaces. *J. Chromatogr. A*, 696 (1995) 321-332.
- 2664 Fu, X. and Lue, J.: (Capillary electrophoresis of inorganic anions). *Fenxi Huaxue*, 22 (1994) 1019-1021; *C.A.*, 122 (1995) 177140j.
- 2665 Kelly, L., Burgi, D.S. and Nelson, R.J.: Controlled temperature anion separation by capillary electrophoresis. *U.S. US 5,385,654* (Cl. 204-180.1; G01N27/26), 31 Jan. 1995, Appl. 88,439, 07 Jul. 1993; 16 p.; *C.A.*, 122 (1995) 177331x.

- 2666 Li, K. and Li, S.F.Y.: Speciation of selenium and arsenic compounds in natural waters by capillary zone electrophoresis after on-column preconcentration with field-amplified injection. *Analyst (Cambridge)*, 120 (1995) 361-366.
- 2667 Salimi-Moosavi, H. and Cassidy, R.M.: Capillary electrophoresis of inorganic anions in nonaqueous media with electrochemical and indirect UV detection. *Anal. Chem.*, 67 (1995) 1067-1073.
- 2668 Song, L., Ou, Q., Yu, W. and Xu, G.: Effect of high concentrations of salts in samples on capillary electrophoresis of anions. *J. Chromatogr. A*, 696 (1995) 307-319.
- 2669 Tindall, G.W. and Perry, R.L.: Separation of fast anions by capillary electrophoresis without flow reversal. *J. Chromatogr. A*, 696 (1995) 349-352.

See also 1860, 1892, 2660, 2670.

39. RADIOACTIVE AND OTHER ISOTOPE COMPOUNDS

- 2670 Lucy, C.A. and McDonald, T.L.: Separation of chloride isotopes by capillary electrophoresis based on the isotope effect on ion mobility. *Anal. Chem.*, 67 (1995) 1074-1078.

See also 2656.