

Some Properties of Silver-Loaded Silica Gel Supports for Liquid Chromatography 2

Silver halide supports show good selectivity for the separation of isomers with electron-donor properties. The electro-negativity of the halide can strongly influence retention times.

R. Aigner and H. Spitzzy, Department of General-Chemistry, Micro, and Radio-Chemistry Technical University, Graz, Austria, and **R. W. Frei,*** Analytical Research and Development, Pharmaceutical Department, Sandoz Ltd., Basle, Switzerland

Anal. Chem., 48 (1976)

Mobile Phase Effects on Atomic Absorption Detectors for High Speed Liquid Chromatography 7

Atomic absorption is a useful and sensitive detector for assays of metals or metal-containing compounds in liquid chromatography. Several interesting flame phenomena related to solvent flow rate are discussed.

D. R. Jones IV, H. C. Tung, and S. E. Manahan,* Department of Chemistry, 123 Chemistry Building, University of Missouri, Columbia, Mo. 65201

Anal. Chem., 48 (1976)

Determination of 1,4-Benzodiazepines and -diazepin-2-ones in Blood by Electron-Capture Gas-Liquid Chromatography 10

The method is used to measure blood concentrations in man following single oral therapeutic doses of diazepam, bromazepam, clonazepam, and flunitrazepam and has a sensitivity limit of the order of 1.0 to 10.0 ng of compound/ml of blood.

J. Arthur F. de Silva,* Ithor Bekersky, Carl V. Puglisi, Marvin A. Brooks, and Robert E. Weinfeld, Department of Biochemistry and Drug Metabolism, Hoffmann-La Roche Inc., Nutley, N.J. 07110

Anal. Chem., 48 (1976)

Oscillating Mirror Rapid Scanning Ultraviolet-Visible Spectrometer as a Detector for Liquid Chromatography 20

Three-dimensional chromatograms in which the spectral range 200–328 nm is scanned each second during the separation of uracil, cytosine, and adenine are obtained.

Mark S. Denton, Thomas P. DeAngelis, Alexander M. Yacynych, William R. Heineman,* and T. W. Gilbert,* Department of Chemistry, University of Cincinnati, Cincinnati, Ohio 45221

Anal. Chem., 48 (1976)

Analysis of Marijuana Samples from Different Origins by High-Resolution Gas-Liquid Chromatography for Forensic Application 24

A simple concentration method, capillary GC and GC/MS are used for determination of characteristic chromatographic profiles of marijuana for forensic purposes and structural elucidation of their nonpolar profile constituents.

Milos Novotny,* M. L. Lee, Chow-Eng Low, and Alain Raymond, Department of Chemistry, Indiana University, Bloomington, Ind. 47401

Anal. Chem., 48 (1976)

Determination of the Component Phenols in Natural and Technical Cashew Nut-Shell Liquid by Gas-Liquid Chromatography 30

The component phenols are hydrogenated and methylated and determined on the stationary phase polyethylene glycol adipate with improved precision.

John H. Tyman, School of Chemistry, Brunel University, Uxbridge, Middlesex, England

Anal. Chem., 48 (1976)

Gas-Liquid Chromatographic Determination of Cocaine and Benzoyllecgonine in Urine 34

Sensitivity ($<0.2 \mu\text{g/ml}$ for a 5-ml specimen) and precision (5% *rsd*) for the method described are significantly below previously reported values for those compounds.

Jack E. Wallace,* Horace E. Hamilton, David E. King, Diana J. Bason, Harvey A. Schwertner, and Steven C. Harris, Department of Pathology, The University of Texas Health Science Center at San Antonio, San Antonio, Texas 78284

Anal. Chem., 48 (1976)

Gas Chromatographic Determination of Ethylene in Large Air Volumes at the Fractional Parts-per-Billion Level 38

A Porapak-S precolumn is used in measuring ethylene concentrations as low as 0.01 ppb in a quantitative and highly reproducible manner.

J. De Greef* and M. De Proft, Department of Biology, University of Antwerpen, Universiteitsplein, 1, B-2610 Wilrijk, Belgium, and **F. De Winter**, L'Air Liquide Belgium, Scientific Division Laboratories, B-2621 Schelle, Belgium

Anal. Chem., 48 (1976)

Gas Chromatographic Determination of Free Mono-, Di-, and Trimethylamines in Biological Fluids 41

A gas chromatographic method is developed to determine nanogram amounts of free mono-, di-, and trimethylamines in biological fluids using an ammonia column conditioner and a caustic-coated liner.

Stephen R. Dunn,* Michael L. Simenhoff, and Laurence G. Wesson, Jr., Division of Nephrology, Department of Medicine, Jefferson Medical College of Thomas Jefferson University, Philadelphia, Pa. 19107

Anal. Chem., 48 (1976)

Bound-Monolayer Cation Exchanger for Gas-Liquid Chromatographic Separation of cis and trans Alkenes 44

A new synthesis of sulfobenzylsilica is developed and the material is used, in the Ag^+ form, for the GC separation of long chain cis and trans alkenes.

Paul Magidman, R. A. Barford, D. H. Saunders, and H. L. Rothbar,* Eastern Regional Research Center, Agricultural Research Service, U.S. Department of Agriculture, Philadelphia, Pa. 19118

Anal. Chem., 48 (1976)

Chromatographic Determination of Vinyl Chloride in Tobacco Smoke 47

Vinyl chloride is found in the mainstream smoke in concentrations of 5–27 ng/cigarette or little cigar.

Dietrich Hoffmann,* Constantin Patrianakos, and Klaus D. Brunnemann, Division of Environmental Carcinogenesis, American Health Foundation, Valhalla, N.Y. 10595; and **Gio B. Gori**, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Md. 20014

Anal. Chem., 48 (1976)

* Corresponding author.

Thin Layer Chromatography/Densitometry with Transferable Calibration Factors 50

The principle of a transferable calibration technique is discussed and introduced with examples of dihydroergotamine.

H. Bethke and R. W. Frei,* Analytical Research and Development, Pharmaceutical Division, Sandoz Ltd., 4002 Basle, Switzerland
Anal. Chem., 48 (1976)

Solvent Extraction of Niobium-4-(2-Pyridylazo)resorcinol Complex and Spectrophotometric Determination of Niobium in Oxalate Solutions 55

The sensitivity and selectivity of the determination is increased, and Beer's law is obeyed in a significantly wider concentration range.

Marija Široki,* Ljiljana Marić, and Marko J. Herak, Laboratory of Analytical Chemistry, Faculty of Science, The University of Zagreb, Strossmayerov trg 14, 41000 Zagreb, Yugoslavia, and **Cirila Djordjević,** Department of Chemistry, College of William and Mary, Williamsburg, Va. 23185
Anal. Chem., 48 (1976)

Extraction of Colored Complexes with Amberlite XAD-2 59

An evaluation is made of the effects of using a solid adsorbent in the same way an organic solvent would be used in the extraction of the colored species in a colorimetric procedure.

Raymond B. Willis* and Darrel Sangster, Department of Chemistry, Kentucky State University, Frankfort, Ky. 40601
Anal. Chem., 48 (1976)

Separation of Gallium(III), Indium(III), and Thallium(III) by Solvent Extraction with 4-Methyl-2-pentanol 62

The method permits separation and determination of each metal ion in about 20–25 min. Average recoveries of Ga, In, and Tl are 99.84, 99.96, and 99.88%, respectively.

S. B. Gawali and V. M. Shinde,* Department of Chemistry, Shivaji University, Kolhapur-416 004, India
Anal. Chem., 48 (1976)

Solvent Extraction Study for Simultaneous Determination of Six Trace Metals in River Water 64

The solvent extraction-AA study shows that five of the six metals selected can simultaneously be recovered in a distilled water system. Only Cu is quantitatively recovered using the standard addition method for river water.

T. N. Tweeten* and J. W. Knoeck, Department of Chemistry, North Dakota State University, Fargo, N.D. 58102
Anal. Chem., 48 (1976)

Preconcentration of Certain Anions Using Reagents Immobilized via Silylation 67

Oxanions present at the ng/ml concentration level may be recovered using controlled pore glass treated with *N*-β-aminoethyl-γ-aminopropyltrimethoxysilane.

Donald E. Leyden,* G. Howard Luttrell, William K. Nonidez, and Dennis B. Werho, Department of Chemistry, University of Georgia, Athens, Ga. 30602
Anal. Chem., 48 (1976)

Investigation of the Wet Oxidation Efficiencies of Perchloric Acid Mixtures for Various Organic Substances and the Identities of Residual Matter 70

Total carbon content and identities of residual matter after wet oxidation with perchloric acid mixtures are determined for 85 different organic substances.

Gary D. Martinie and Alfred A. Schilt,* Department of Chemistry, North Illinois University, DeKalb, Ill. 60115
Anal. Chem., 48 (1976)

Evaluation of Combined Applications of Ultrafiltration and Complexation Capacity Techniques to Natural Waters 74

The apparent copper complexation capacities of various molecular weight fractions of dissolved organic matter in estuarine waters are determined by a combination of ultrafiltration and anodic stripping voltammetry techniques.

Ralph G. Smith, Jr., Skidaway Institute of Oceanography, P.O. Box 13687, Savannah, Ga. 31406
Anal. Chem., 48 (1976)

Analysis of Organic Solvents Taken on Charcoal Tube Samplers by a Simplified Technique 76

A technique is described for the analysis of the carbon disulfide eluate from charcoal tube samplers used to determine individual personal exposure to organic solvent vapors.

Benjamin Levadie* and Stephen M. MacAskill, State of Vermont Division of Occupational Health, P.O. Box 607, Barre, Vt. 05641
Anal. Chem., 48 (1976)

Confirmation of Phthalate Esters from Environmental Samples by Derivatization 78

A method is described for the conversion of trace quantities of phthalate esters to phthalic acid and then to *N*-(2-chloroethyl)phthalimide.

C. S. Giam,* H. S. Chan, T. F. Hammargren, and G. S. Neff, Department of Chemistry, Texas A&M University, College Station, Texas 77843, and **D. L. Stalling,** Bureau of Sport Fisheries and Wildlife, Fish Pesticide Research Laboratory, Columbia, Mo. 65201
Anal. Chem., 48 (1976)

Catalytic Determination of Palladium(II) and Inhibitors by the Application of Palladium(0) Catalysis in the Reduction of Dyes in the Presence of Hypophosphite 80

Submicrogram amounts of palladium(II) are determined by a variable-time procedure based on the in situ generation of palladium(0).

V. V. S. Eswara Dutt and Horacio A. Mottola,* Chemistry Department, Oklahoma State University, Stillwater, Okla. 74074
Anal. Chem., 48 (1976)

Micro, Ultramicro, and Trace Determination of Fluorine 84

Organic and inorganic samples up to 1 g are decomposed by combustion with tungsten trioxide. Combustion gases are hydrogenated and absorbed. Fluorine is measured spectrophotometrically down to 0.2 μg.

Wolfgang J. Kirsten, Department of Chemistry, Agricultural College of Sweden, S-750 07 Uppsala 7, Sweden
Anal. Chem., 48 (1976)

Linear Graphical Kinetic Analysis of Mixtures 87

A graphical method uses all of the kinetic data to generate a linear plot giving initial reactant concentrations of a two-component mixture.

Kenneth A. Connors, School of Pharmacy, University of Wisconsin, Madison, Wis. 53706
Anal. Chem., 48 (1976)

Thermoparticulation Analyses of Malonic Acid Compounds 89

A new technique known as organoparticulate analysis has been developed for studying the decomposition of organic materials. The method is applied to malonic acid and related carboxylic acid compounds.

J. D. B. Smith, D. C. Phillips,* and T. D. Kaczmarek, Westinghouse Research Laboratories, Pittsburgh, Pa. 15235
Anal. Chem., 48 (1976)

Study of Lead(II)-Manganese(II) Energy Transfer in Sodium Chloride Pellets 95

A special pellet holder is devised for the Turner filter fluorometer to permit routine fluorometric measurement of traces of lead(II).

Richard G. Delumyea and George H. Schenk,* Department of Chemistry, Wayne State University, Detroit, Mich. 48202
Anal. Chem., 48 (1976)

Quantitative Determination of Asbestos Fiber Concentrations 101

A transmission electron microscope equipped with an energy dispersive spectrometer is used to measure asbestos fiber concentrations with a precision of $\pm 30\%$.

D. R. Beaman* and D. M. File, The Dow Chemical Company, Midland, Mich. 48640
Anal. Chem., 48 (1976)

Automated Method for the Determination of Total and Inorganic Mercury in Water and Wastewater Samples 110

A dichromate-nitric acid preservative and persulfate digestion procedure is given for mercury determinations in the range of 0.05–6 $\mu\text{g/l.}$ with a COD of less than 700 mg/l.

Abbas A. El-Awady,* Robert B. Miller, and Mark J. Carter, U.S. Environmental Protection Agency, Central Regional Laboratory, 1819 West Pershing Road, Chicago, Ill. 60609
Anal. Chem., 48 (1976)

Gelatin Multicomponent Trace Element Reference Material 116

A new gelatin reference material containing 25 trace elements ranging in concentrations from 38 to 62 $\mu\text{g/g}$ is compounded and analyzed by eleven independent laboratories.

D. H. Anderson,* J. J. Murphy, and W. W. White, Industrial Laboratory, Kodak Park Division, Eastman Kodak Company, Rochester, N.Y. 14650
Anal. Chem., 48 (1976)

Sensitivity and Cathode Geometry of the Hollow Cathode Ionization Source 118

Cathode geometry, especially bore depth and diameter, is a critical factor affecting the sensitivity of the hollow cathode ionization source.

J. R. Wallace and D. F. S. Natusch, Department of Chemistry, University of Illinois, Urbana, Ill. 61801, and **B. N. Colby and C. A. Evans, Jr.,*** Materials Research Laboratory, University of Illinois, Urbana, Ill. 61801
Anal. Chem., 48 (1976)

Sequential Determination of Arsenic, Selenium, Antimony, and Tellurium in Foods via Rapid Hydride Evolution and Atomic Absorption Spectrometry 120

The analytical procedure is accurate, precise, and rapid with detection limits for all four elements about 10–20 ng/g.

J. A. Fiorino, J. W. Jones,* and S. G. Capar, Bureau of Foods, Food and Drug Administration, Washington, D.C. 20204
Anal. Chem., 48 (1976)

Matrix Effects in the Determination of Copper and Manganese in Biological Materials Using Carbon Furnace Atomic Absorption Spectrometry 125

Matrix effects of several salts on Mn and Cu are investigated as a function of the concentration of the interfering substance and of different measurement conditions.

Johanna Smeyers-Verbeke, Yvette Michotte, Pierre Van den Winkel, and Désiré L. Massart,* Vrije Universiteit Brussel, Farmaceutisch Instituut, Paardenstratt 67, B-1640 Sint Genesius Rode, Belgium
Anal. Chem., 48 (1976)

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Inorganic (to 5 ppb), volatile organic (to 5 ppb), and non-volatile organic (to 50 ppb) carbons are separately isolated and transformed into pure CO_2 samples for isotopic and quantitative analysis.

Larry M. Games and J. M. Hayes,* Departments of Chemistry and Geology, Indiana University, Bloomington, Ind. 47401
Anal. Chem., 48 (1976)

Variables in the Determination of Mercury by Cold Vapor Atomic Absorption 136

Losses of mercury from premature reduction are prevented by oxidation or complexation. The partition constant for Hg^0 between aqueous and gas phases is independent of most variables studied.

S. R. Koirtyohann* and Moheb Khalil, Department of Biochemistry and Environmental Trace Substances Research Center, University of Missouri, Columbia, Mo. 65201
Anal. Chem., 48 (1976)

Atomic Absorption Continuum Studies at Wavelengths below 320 Nanometers 140

A comparison is made, for wavelengths below 320 nm, between line and continuum sources in conjunction with a high resolution echelle grating monochromator.

Peter N. Keliher* and Charles C. Wohlers, Chemistry Department, Villanova University, Villanova, Pa. 19085
Anal. Chem., 48 (1976)

Luminescence Determination of Pharmaceuticals of the Tetrahydrocarbazole, Carbazole, and 1,4-Benzodiazepine Class 144

Luminescence studies are performed on TLC plates at 77 K and also with a Farrand Mark I Spectrofluorometer which is modified to accommodate a commercially available phosphoroscope.

J. Arthur F. de Silva,* Norman Strojny, and Katherine Stika, Department of Biochemistry and Drug Metabolism, Hoffmann-La Roche Inc., Nutley, N.J. 07110 *Anal. Chem.*, 48 (1976)

Fluorescence Reactions of Aminophosphonic Acids 155

The fluorescence emitted by 21 aminophosphonic acids upon reaction with *o*-diacetylbenzene, *o*-phthalaldehyde, and fluorescamine is studied and compared to the fluorescence observed with the corresponding carboxylic analogues.

Jeanne Fourche, Hélène Jensen, and Eugène Neuzil,* Laboratoire de Biochimie Médicale, Université de Bordeaux II, 146, rue Léo-Saignat, 33076-Bordeaux, France *Anal. Chem.*, 48 (1976)

Fluorescent Detection of Hydrazines via Fluorescamine and Isomeric Phthalaldehydes 159

The intensity of product fluorescence and, thus, the likely degree of reaction between a given hydrazine and fluorogen within a few minutes time, is very much a function of the pH of the analyte system.

Robert W. Weeks, Jr.,* Stanley K. Yasuda, and Brenda J. Dean, Industrial Hygiene Group, Los Alamos Scientific Laboratory, University of California, Los Alamos, N.M. 87545 *Anal. Chem.*, 48 (1976)

Some Bonding Properties of D-Penicillamine and Related Compounds Measured by X-Ray Photoelectron Spectroscopy 162

Photoelectron spectra of D-penicillamine and related compounds provide new information concerning their structure.

C. R. Cothorn,* Department of Physics, University of Dayton, Dayton, Ohio 45469, and **W. E. Moddeman,** Research Institute, University of Dayton, Dayton, Ohio 45469, and **R. G. Albridge,** Department of Physics, Vanderbilt University, Nashville, Tenn. 37235, and **W. J. Sanders, P. L. Kelly, W. S. Hanley, and Lamar Field,** Department of Chemistry, Vanderbilt University, Nashville, Tenn. 37235 *Anal. Chem.*, 48 (1976)

Irradiation of Elements from $Z = 3$ to $Z = 42$ with 10-MeV Protons and Application to Activation Analysis 167

10-MeV proton activation of 22 elements from $Z = 3$ to $Z = 42$ is studied and results of nondestructive trace analysis in 20 different matrixes are given.

J. L. Debrun,* J. N. Barrandon, and P. Benaben, Groupe d'Application des Réactions Nucleaires a l'Analyse Chimique CNRS, Service du Cyclotron, 45045 Orleans, Cedex, France *Anal. Chem.*, 48 (1976)

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The background of energy-dispersive electron-excited x-ray spectra from Si(Li) detectors can be calculated from measured intensities at two energies.

C. E. Fiori,* R. L. Myklebust, and K. F. J. Heinrich, Analytical Chemistry Division, Institute for Materials Research, National Bureau of Standards, Washington, D.C. 20234, and **Harvey Yakowitz,** Metallurgy Division, Institute for Materials Research, National Bureau of Standards, Washington, D.C. 20234 *Anal. Chem.*, 48 (1976)

Analytical Utility of the M Series X-Ray Emission Lines Applied to Uranium, Neptunium, Plutonium, and Americium 176

The better analytical characteristics of the $M\alpha$ and $M\beta$ X-ray lines produce detection limits up to 20 times lower than their L series counterparts.

A. G. Miller, Process Control Laboratories, Atlantic Richfield Hanford Company, Richland, Wash. 99352 *Anal. Chem.*, 48 (1976)

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Simple empirical expressions, based on detailed computer simulations of several thousand samples with various particle shapes, sizes, orientations, and compositions, account for major effects.

J. W. Criss, Naval Research Laboratory, Washington, D.C. 20375 *Anal. Chem.*, 48 (1976)

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A spectrograph using a holographically ruled diffraction grating and image-intensified vidicon detection yields the resonance Raman spectrum of a dilute heme-protein solution.

William H. Woodruff* and George H. Atkinson,* Department of Chemistry, Syracuse University, Syracuse, N.Y. 13210 *Anal. Chem.*, 48 (1976)

Interference from Ethanol-Stabilized Chloroform in the Infrared Spectrometric Determination of Certain Deuterated Compounds 190

Ethanol can serve as an agent for de-deuterating certain labeled solutes having deuterium situated at a readily exchangeable site.

S. Edward Krikorian, Department of Medicinal Chemistry, University of Maryland, School of Pharmacy Baltimore, Md. 21201 *Anal. Chem.*, 48 (1976)

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The use of vacuum techniques on an oil sample prior to measurement of the sample's infrared spectrum provides a new and more accurate method for matching a naturally weathered oil to the original oil.

Chris W. Brown* and Patricia F. Lynch, Department of Chemistry, University of Rhode Island, Kingston, R.I. 02881 *Anal. Chem.*, 48 (1976)

Ultraviolet Spectrophotometric Method for Inorganic Mercury in Presence of Methylmercury 195

The uv absorbance of mercuric salts in aqueous 6 M HCl is used to determine inorganic mercury (Hg^{II}) in the presence of methylmercury if other absorbers are either known or absent.

Reginald O. Arah and Bruce McDuffie,* Laboratory for Trace Methods and Environmental Analysis, Department of Chemistry, State University of New York at Binghamton, Binghamton, N.Y. 13901
Anal. Chem., 48 (1976)

Analysis of Saturated Hydrocarbons by Field Ionization Mass Spectrometry 196

A method for analyzing low molecular weight saturated petroleum fractions by field ionization mass spectrometry is based on the equalizing of sensitivity coefficients of saturated hydrocarbons by adding an aromatic hydrocarbon.

Mečislav Kuraš, Laboratory of Synthetic Fuels, Institute of Chemical Technology, 166 28 Prague 6, Czechoslovakia, and **Mir-oslav Ryska,** Institute of Macromolecular Chemistry, Czechoslovak Academy of Sciences, 162 06 Prague 6, Czechoslovakia, and **Jiří Mostecký,*** Department of Petroleum Technology and Petrochemistry, Institute of Chemical Technology, 166 28 Prague 6, Czechoslovakia
Anal. Chem., 48 (1976)

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Michael Anbar* and Gilbert A. St. John, Mass Spectrometry Research Center, Stanford Research Institute, Menlo Park, Calif. 94025
Anal. Chem., 48 (1976)

Application of Chemical Ionization Mass Spectrometry to the Study of Stereoselective in vitro Metabolism of 1-(2,5-Dimethoxy-4-methylphenyl)-2-aminopropane 203

Direct sample insertion chemical ionization and stable isotope labeling techniques are described and utilized to identify and quantify metabolites formed on incubation in liver enzyme preparations.

Robert J. Weinkam,* Joseph Gal, Patrick Callery, and Neal Castagnoli, Jr., Department of Pharmaceutical Chemistry, School of Pharmacy, University of California, San Francisco, Calif. 94143
Anal. Chem., 48 (1976)

Graphite-Epoxy Mercury Thin Film Working Electrode for Anodic Stripping Voltammetry 209

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Jeffrey E. Anderson and Dennis E. Tallman,* Department of Chemistry, North Dakota State University, Fargo, N.D. 58102
Anal. Chem., 48 (1976)

Determination of Trace Mercury(II) in 0.1 M Perchloric Acid by Differential Pulse Stripping Voltammetry at a Rotating Gold Disc Electrode 212

A single peak is obtained at a rotating gold disc electrode for the anodic stripping of less than one monolayer of deposited Hg in 0.1 M HClO_4 .

Richard W. Andrews, John H. Larochelle, and Dennis C. Johnson,* Department of Chemistry, Iowa State University, Ames, Iowa 50010
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Total uranium is determined with a detection limit of 0.17 $\mu\text{g/ml}$ in ^{238}Pu samples using sulfuric-ascorbic acid electrolyte.

N. C. Fawcett, Los Alamos Scientific Laboratory, University of California, Los Alamos, N.M. 87545
Anal. Chem., 48 (1976)

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Digital simulation is used to study the effects of charge transfer kinetics on differential pulse polarograms. Kinetic parameters are extracted from DPP data taken using micromolar solutions.

James W. Dillard and K. W. Hanck,* Department of Chemistry, North Carolina State University, Raleigh, N.C. 27607
Anal. Chem., 48 (1976)

Polarographic Determination of Chloride, Cyanide, Fluoride, Sulfate, and Sulfite Ions by an Amplification Procedure Employing Metal Iodates 222

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Ray E. Humphrey* and Stanley W. Sharp, Department of Chemistry, Sam Houston State University, Huntsville, Texas 77340
Anal. Chem., 48 (1976)

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A method based on ion exchange, precipitation separation, and gel scintillation counting is developed for the analysis of environmental samples.

I. S. Bhat,* R. S. Iyer, and S. Chandramouli, Environmental Survey Laboratory, TAPS Colony, PIN 401 504, Maharashtra, India
Anal. Chem., 48 (1976)

Separation and/or Concentration of Phenolic Materials from Dilute Aqueous Solutions 225

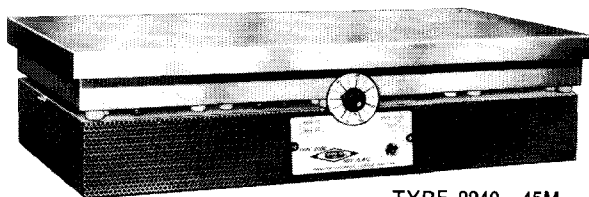
A resin which will tie up phenolic materials is used for separating and/or concentrating phenols to extend the lower limits of detection.

Alan Carpenter, Sidney Siggia,* and Stephen Carter, Department of Chemistry, University of Massachusetts, Amherst, Mass. 01002
Anal. Chem., 48 (1976)

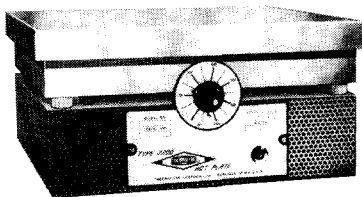
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Jordan L. Holtzman, Clinical Pharmacology Section, Veterans Administration Hospital, Minneapolis, Minn. 55417
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R. S. Tse,* S. C. Wong, and Shirley S. L. Wong, Department of Chemistry, University of Hong Kong, Pokfulam Road, Hong Kong
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Lawrence A. Pachla and Peter T. Kissinger,* Department of Chemistry, Purdue University, West Lafayette, Ind. 47907
Anal. Chem., 48 (1976)

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Paul A. Bristow, Imperial Chemical Industries Limited, Pharmaceuticals Division, Hurdsfield Industrial Estate, Macclesfield, Cheshire, England
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