# **VOLUMES 501-550**



#### Absorbance ratio

Separation and determination of molecular species of phosphatidylcholine in biological samples by high-performance liquid chromatography 507(1990)339

Post-column continuous-flow analysis combined with reversed-phase liquid chromatography and computer-aided detection for the characterisation of peptides 535(1990)33

#### $\alpha_1$ -Acid glycoprotein column

Comparison of a new ovomucoid and a secondgeneration  $\alpha_1$ -acid glycoprotein-based chiral column for the direct high-performance liquid chromatography resolution of drug enantiomers 545(1991)43

#### Active sites

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

#### Activity coefficients

Application of the UNIFAC method for assessment of retention in reversed-phase liquid chromatography 543(1991)267

#### Acute toxicity data

Lipophilic character of cardiac glycosides: correlation between  $R_M$  values and acute toxicity data in different animal species. 547(1991)523

#### Acylamide stationary phases

Gas-phase synthesis, properties and some applications of acylamide stationary phases for high-performance liquid chromatography 521(1990)29

#### Adsorbate-ligand systems

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

# Adsorbents

see also Affinity adsorbents

Retention times and heats of adsorption of aromatic compounds on carbon adsorbents 506(1990)335

Gas chromatographic analysis of light hydrocarbons using aluminium oxide micropacked columns 509(1990)59

Chromatographie en couche mince sur gel de silice avec double imprégnation ascendante à sens inversés à l'huile de silicone 509(1990)400

Fate of superabsorbents in the environment. Analytical techniques 513(1990)93

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53

Carbon adsorbents in gas adsorption chromatography 520(1990)55

Preseparation of uranium by reversed-phase partition chromatography. Application to the determination of trace elements in nuclear-grade uranium compounds by inductively coupled plasma atomic emission spectrometry 537(1991)287

Application of a hydrogen storage alloy to the determination of trace impurities in high-purity hydrogen by gas chromatography. Group analysis of  $C_1$ ,  $C_2$  and  $C_3$  hydrocarbons 541(1991)75

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

#### Adsorption

Influence of adsorption at the gas-liquid interface on the determination of gas chromatographic retention indices on open-tubular columns coated with cyanosilicones 502(1990)1

Adsorption effect on the retention volume of hydrocarbons and dialkyl ethers in gas-liquid chromatography using a polar stationary phase and silica gel support 503(1990)25

Improvement of activated carbon for air sampling 503(1990)33

Separation of poly(styrene-vinyl acetate) block copolymers by liquid adsorption chromatography 503(1990)411

Adsorption behaviour of albumin and conalbumin on TSK-DEAE 5PW anion exchanger 504(1990)335

Two-component protein adsorption to the cation exchanger S Sepharose<sup>®</sup> FF 505(1990)329

Analysis of poly(styrene-co-methyl acrylate) and poly(styrene-co-butyl acrylate) by highperformance liquid chromatography 508(1990)319

Effect of polyethylene glycol on the non-specific adsorption of proteins to Eupergit C and agarose 510(1990)271

Adsorption chromatography on cellulose. VI. Further studies on the separation of D- and L-tryptophan on cellulose with aqueous solvents 510(1990)367

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101 Use of a gamma energy distribution to model the gas chromatographic temperature dependence of solute retention on aryl-siloxane chemically modified porous carbon 513(1990)1

Fundamental study of hydroxyapatite highperformance liquid chromatography. II. Experimental analysis on the basis of the general theory of gradient chromatography 515(1990)91

Fundamental study of hydroxyapatite highperformance liquid chromatography. III. Direct experimental confirmation of the existence of two types of adsorbing surface on the hydroxyapatite crystal 515(1990)125

Binding capacities of hydroxyapatite for globular proteins 515(1990)193

Capillary electrophoresis of proteins under alkaline conditions 516(1990)123

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

Influence of uncharged mobile phase additives on retention and enantioselectivity of chiral drugs using an  $\alpha_1$ -acid glycoprotein column 519(1990)271

Retention and heats of adsorption of n-alkanes, aromatic hydrocarbons, aliphatic alcohols and ketones on macroporous silicas 520(1990)47

Spacer-displacement and carrier spacerdisplacement thin-layer chromatography 520(1990)287

Chromatographic investigations of macromolecules in the "critical range" of liquid chromatography. I. Functionality type and composition distribution in polyethylene oxide and polypropylene oxide copolymers 523(1990)91

Determination of contributions of different types of solute-sorbent interactions in gas-adsorption chromatography by linear regression of adsorption energies 537(1991)295

Behaviour of concanavalin A on DEAE-Sephadex and CM-Sephadex 537(1991)460

Investigation of liquid phase cooperative binding interactions on the capacity of insoluble affinity adsorbents 539(1991)245

Equilibria of biomolecules on ion-exchange adsorbents 542(1991)19

Separation of <sup>125</sup>I-labelled derivatives of 5hydroxy-6,8,11,14-eicosatetraenoic acid 543(1991)307

Improved capillary zone electrophoretic separation of basic proteins, using a fluorosurfactant buffer additive 547(1991)544

Application of the split-peak effect to study the adsorption kinetics of human serum albumin on a reversed-phase support 548(1991)81

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

High-performance displacement electrophoresis in 0.025- to 0.050-mm capillaries coated with a polymer to suppress adsorption and electroendosmosis 550(1991)811

#### Adsorption capacity

Preparative high-performance liquid chromatography on a unique high-speed macroporous resin 512(1990)365

Titania and zirconia: possible new ceramic microparticulates for high-performance liquid chromatography 515(1990)149

Adsorption of proteins on porous and nonporous poly(ethyleneimine) and tentacle-type anion exchangers 522(1990)77

Adsorption chromatography, salt-promoted Salt-promoted adsorption chromatography 510(1990)47

Adsorption density distributions Use of field-flow fractionation to study pollutant– colloid interactions 517(1990)435

# Adsorption isotherms

see also Freundlich isotherms

Adsorption behaviour of albumin and conalbumin on TSK-DEAE 5PW anion exchanger 504(1990)335

Two-component protein adsorption to the cation exchanger S Sepharose<sup>®</sup> FF 505(1990)329

Retention times and heats of adsorption of aromatic compounds on carbon adsorbents 506(1990)335

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Perturbation analysis of the influence of the isotherm coupling factor on the resolution between two compounds in chromatography 508(1990)27

Effect of pore size on the surface excess isotherm of silica packings 515(1990)159

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285

Sorption of primary *n*-alkanols on Tenax 518(1990)234

Separation of the enantiomers of  $\beta$ -receptor blocking agents and other cationic drugs using a CHIRAL-AGP\* column. Binding properties and characterization of immobilized  $\alpha_1$ -acid glycoprotein 519(1990)285

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

Studies on texture and properties of porous glass and silica gel used as supports for chemically bonded amino phases for high-performance liquid chromatography 520(1990)237

Study of the interaction between two overloaded bands injected successively in non-linear chromatography 522(1990)1

Measurement of the heats of adsorption of chiral isomers on an enantioselective stationary phase 522(1990)23

Adsorption of proteins on porous and nonporous poly(ethyleneimine) and tentacle-type anion exchangers 522(1990)77

Frontal chromatographic techniques in preparative chromatography 523(1990)11

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography 537(1991)497

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography. A reply 537(1991)507

Computer simulations of displacement chromatography of systems with speciesdependent saturation capacities 538(1991)285

Effect of the intersection of the individual isotherms in displacement chromatography 541(1991)195

Equilibria of biomolecules on ion-exchange adsorbents 542(1991)19

Use of the LeVan–Vermeulen isotherm model for the calculation of elution band profiles in nonlinear chromatography 545(1991)1

Charged surface and mass transfer in dynamic ion exchangers 546(1991)17

Peak interactions under concave isotherm conditions in preparative ion chromatography 546(1991)27

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

Multivalent ion-exchange model of biopolymer chromatography for mass overload conditions 548(1991)61

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

Affinity of trypsin for amidine derivatives immobilized on dextran-coated silica supports 548(1991)255

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

Metal affinity displacement chromatography of proteins 549(1991)89

Stationary phase effects in reversed-phase liquid chromatography under overload conditions 550(1991)301

Dependence of retention on the organic modifier concentration and multicomponent adsorption

behavior in reversed-phase chromatography 550(1991)411

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

# Adsorption isotherms, S shaped

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

# Adsorption kinetics

Kinetic behaviour of a novel matrix ion exchanger, carboxymethyl-HVFM operated at high flow-rate 539(1991)255

# Adsorption mechanism

Molecular interactions in liquid chromatography 537(1991)33

#### Adsorption-thermal desorption

Adsorption/thermal desorption for the determination of volatile organic compounds in water 537(1991)321

# Affinity adsorbents

Use of an activated nylon membrane (Immunodyne) as an affinity adsorbent for the purification of phosphofructokinase and phosphoglycerate kinase from yeast 502(1990)171

High-performance affinity chromatography of DNA 508(1990)279

Hydrazido-derivatized supports in affinity chromatography (Review) 510(1990)13

Double-coated silica supports for highperformance affinity chromatography of proteins 510(1990)71

Affinity purification of tissue plasminogen activator using transition-state analogues 510(1990)83

High-performance affinity chromatography of concanavalin A 510(1990)95

Tresyl-activated support for high-performance affinity chromatography 510(1990)101

Novel media for chromatography and immobilization using a radiation grafting technique 510(1990)115 Specific adsorption of serine proteases on coated silica beads substituted with amidine derivatives 510(1990)123

High-performance affinity chromatography of basic fibroblast growth factor on polystyrene sulphonate resins modified with serine 510(1990)141

Rapid protein purification using phenylbutylamine–Eupergit: a novel method for large-scale procedures 510(1990)149

Screening method for large numbers of dyeadsorbents for enzyme purification 510(1990)155

Immobilization of reactive dyes on several matrices that allow high and very high flow-rates to be used. Application to the purification of a proteinase inhibitor from corn 510(1990)165

Affinity chromatography on novel perfluorocarbon supports. Immobilisation of C.I. Reactive Blue 2 on a polyvinyl alcohol-coated perfluoropolymer support and its application in affinity chromatography 510(1990)177

Competitive elution of lactate dehydrogenase from Cibacron Blue-bead cellulose with Cibacron Blue-dextrans 510(1990)197

Composite affinity sorbents and their cleaning in place 510(1990)213

One-step purification of trypsin and  $\alpha$ -chymotrypsin by affinity chromatography on Eupergit–aprotinin, a novel carrier for purification of serine proteases 510(1990)239

Chemistry and preparation of affinity ligands useful in immunoglobulin isolation and serum protein separation 510(1990)281

Site-directed immobilization of proteins 510(1990)293

Eupergit C as a carrier for high-performance liquid chromatographic-based immunopurification of antigens and antibodies 510(1990)311

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101 Synthetic antibody fragment as ligand in immunoaffinity chromatography 512(1990)337

Immobilization of Protein A at high density on azlactone-functional polymeric beads and their use in affinity chromatography 512(1990)345

High-performance liquid affinity chromatography for the purification of immunoglobulin A from human serum using jacalin 514(1990)219

Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides 516(1990)333

Purification of anti-paraquat monoclonal antibodies by affinity chromatography on immobilised hapten 516(1990)433

Fractionation of basic nuclear proteins of human sperm by zinc chelate affinity chromatography 518(1990)123

Comparative study of reaction kinetics in membrane and agarose bead affinity systems 519(1990)53

Use of chromatography for the preparation of homologous tetanus antitoxin 520(1990)425

Synthesis and protein-binding properties of spacer-free thioalkyl agaroses 521(1990)1

Chromatographic separation of four Ser/Thrprotein phosphatases from solubilized ciliary membranes of *Paramecium tetraurelia* by heparin–Sepharose 521(1990)179

Application of high-performance liquid chromatography to the purification of the putative intestinal peptide transporter 521(1990)199

Hydrophobic interaction chromatography of proteins on Separon HEMA. II. Influence of sorbent modification on efficiency of separation 523(1990)131

Metal ligand-induced alterations in the surface structures of lactoferrin and transferrin probed by interaction with immobilized copper(II) ions 536(1991)1

Purification of proteins on an epoxy-activated support by high-performance affinity chromatography 536(1991)95

High-performance affinity chromatography of immunoglobulin E on a column of dinitrophenylamino acids covalently bound to a highly cross-linked polymeric micropellicular support 536(1991)155

Investigation of liquid phase cooperative binding interactions on the capácity of insoluble affinity adsorbents 539(1991)245

Immobilization of dermatan sulphate on a silica matrix and its possible use as an affinity chromatography support for heparin cofactor II purification 539(1991)289

Comparative affinity chromatographic studies using novel grafted polyamide and poly(vinyl alcohol) media 539(1991)307

Microfiltration membranes as pseudo-affinity adsorbents: modification and comparison with gel beads 539(1991)315

Highly active enzyme preparations immobilized via matrix-conjugated anti-Fc antibodies 539(1991)335

Affinity chromatography of fibroblast growth factors on coated silica supports grafted with heparin 539(1991)417

Use of dye pseudo-affinity chromatography in the purification of homoserine dehydrogenase 539(1991)507

Monosized adsorbents for high-performance affinity chromatography. Application to the purification of calf intestinal alkaline phosphatase and human urinc urokinase 540(1991)103

Model studies on iron(III) ion affinity chromatography. Interaction of immobilized metal ions with nucleotides 541(1991)333

Comparison of site-specific coupling chemistry for antibody immobilization on different solid supports 542(1991)41

Coated silica and its behaviour in dye-affinity chromatography 543(1991)9

New ligands for boronate affinity chromatography. Synthesis and properties 543(1991)17

Automated aflatoxin analysis of foods and animal feeds using immunoaffinity column clean-up and

high-performance liquid chromatographic determination 543(1991)220

High-performance affinity chromatography of a chick lectin on an adsorbent based on hydrophilic polymer gel 543(1991)315

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

A ten-residue fragment of an antibody (miniantibody) directed against lysozyme as ligand in immunoaffinity chromatography 548(1991)235

Effect of antigen size on optimal ligand density of immobilized antibodies for a high-performance liquid chromatographic support 548(1991)243

Affinity of trypsin for amidine derivatives immobilized on dextran-coated silica supports 548(1991)255

High-performance liquid chromatography of synthetic oligonucleotides. A new affinity protecting group 549(1991)207

Isolation of an interleukin 2-binding receptor from activated lymphocytes by high-performance immunoaffinity chromatography 550(1991)741

Cascade-mode multiaffinity chromatography. Fractionation of human serum proteins 550(1991)751

# Affinity distribution

Adsorption of proteins on porous and nonporous poly(ethyleneimine) and tentacle-type anion exchangers 522(1990)77

## Affinity gel chromatography

Affinity gel interactions of alcohol and polyol dehydrogenases: anomalous behaviour and structural correlations 502(1990)69

# Affinity handles

Use of the 4-methoxy-4'-octyloxytrityl group as an affinity handle for the purification of synthetic oligonucleotides 541(1991)341

# Affinity ligands

Design and applications of biomimetic anthraquinone dyes. III. Anthraquinoneimmobilised C.I. Reactive Blue 2 analogues and their interaction with horse liver alcohol dehydrogenase and other adenine nucleotidebinding proteins 508(1990)109

Chemistry and preparation of affinity ligands useful in immunoglobulin isolation and serum protein separation 510(1990)281

Use of chromatography for the preparation of homologous tetanus antitoxin 520(1990)425

Combination of polymer-bound charged groups and affinity ligands for extraction of enzymes by partitioning in aqueous two-phase systems 523(1990)119

Protein-ligand interactions studied on bovine serum albumin with free and polymer-bound Cibacron Blue F3G-A as ligand with reference to affinity partitioning 537(1991)219

Investigations of liquid-liquid partition chromatography of proteins 548(1991)3

# Affinity partitioning

Protein-ligand interactions studied on bovine serum albumin with free and polymer-bound Cibacron Blue F3G-A as ligand with reference to affinity partitioning 537(1991)219

Affinity partitioning of restriction endonucleases. Application to the purification of EcoR I and EcoR V 538(1991)311

Investigations of liquid-liquid partition chromatography of proteins 548(1991)3

# Affinity purification

Immobilization of  $\alpha$ -human atrial natriuretic peptide on insoluble supports and affinity purification of specific antibodies from a polyclonal goat anti- $\alpha$ -human atrial natriuretic peptide serum 510(1990)339

# Affinity-repulsion chromatography

Affinity-repulsion chromatography 510(1990)49

#### Affinophores

Progress in affinophoresis (Review) 510(1990)251

#### Agarose

Comparative study of reaction kinetics in membrane and agarose bead affinity systems 519(1990)53

# Ageing, stability of stationary phases

Characterization and stability of silanized and polymer-coated octadecyl reversed phases 540(1991)53

# Air

Analysis of nitrogen dioxide in ambient air by ion-exclusion chromatography with electrochemical detection 503(1990)466

# Air sampling

Improvement of activated carbon for air sampling 503(1990)33

# Albernaria porri

High-performance liquid chromatographic determination of tentoxin in fermentation of *Alternaria porri* (Ellis) Ciferri 539(1991)211

#### Albumin-binding ligands

Separation of albumin-binding ligands present in uremic serum by high-performance affinity chromatography 529(1990)424

# Alkaline etch solutions

Improved determination of alkanolamines by liquid chromatography with electrochemical detection 546(1991)381

# Alkyl chain length

Performance of wide-pore silica- and polymerbased packing materials in polypeptide separation: effect of pore size and alkyl chain length 535(1990)13

#### Allium cepa

Analysis of lipids in aging seed using capillary supercritical fluid chromatography 547(1991)393

# Alternating current plasma emission detector

Evaluation of an alternating current plasma emission detector for high-performance liquid chromatography 513(1990)159

# Althaea officinalis

Computer-aided optimization of highperformance liquid chromatographic analysis of flavonoids from some species of the genus *Althaea* 550(1991)71

#### Alumina supports

Anomalous retention behaviour of some synthetic nucleosides on aluminium oxide layers 543(1991)425

Comparative investigation of the retention behaviour of nucleoside derivatives on alumina stationary phases in thin-layer chromatography and high-performance liquid chromatography 550(1991)667

# Aluminium, immobilized

Recognition of phosphate groups by immobilized aluminium(III) ions 539(1991)327

#### Aluminum ion complexation

Isolation of 6-mercaptopurine in human plasma by aluminum ion complexation for highperformance liquid chromatographic analysis 536(1991)349

#### Amino cartridge

Improvement of chemical analysis of antibiotics. XVII. Application of an amino cartridge to the determination of residual sulphonamide antibacterials in meat, fish and egg 541(1991)393

#### 3-(*β*-Aminoethoxy)propylsilica

Effect of chain length of oligosaccharide in high-performance affinity chromatography of a lectin on oligosaccharide-immobilized columns 502(1990)297

#### Aminopropylsilica

Modification of silica with glucose for the separation of proteins by high-performance liquid chromatography 508(1990)289

Chromatographic stability of silica-based aminopropyl-bonded stationary phases 543(1991)1

#### Analysis of variance

Effect of stationary phase on predictions of the statistical model of overlap from gas chromatograms 550(1991)135

#### Andrade equation

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521

# Anhydrotrypsin-immobilized precolumn

Application of an anhydrotrypsin-immobilized precolumn for selective separation of peptides having arginine or lysine at their C-termini by column-switching high-performance liquid chromatography 543(1991)59

#### Anion exchangers

Study of the dynamic binding capacity of two anion exchangers using bovine serum albumin as a model protein 504(1990)89

Rapid high-performance liquid chromatography of nucleic acids with polystyrene-based micropellicular anion exchangers 508(1990)61

Systematic optimization of protein separations on high-performance ion-exchange chromatographic media 512(1990)13

High-performance liquid chromatography of amino acids, peptides and proteins. XCVIII. The influence of different displacer salts on the bandwidth properties of proteins separated by gradient elution anion-exchange chromatography 512(1990)41

Ion chromatography of nitrite, bromide and nitrate ions in brine samples using a chlorideform anion-exchange resin column 514(1990)355

Novel silica-based strong anion exchanger for single-column ion chromatography 515(1990)49

Determination of free catecholamines in human urine by direct injection of urine into a liquid chromatographic column-switching system with fluorimetric detection 515(1990)435

Simultaneous ion chromatography of inorganic anions together with some organic anions and alkaline earth metal cations using chelating agents as eluents 516(1990)383

Adsorption of proteins on porous and nonporous poly(ethyleneimine) and tentacle-type anion exchangers 522(1990)77

New family of high-resolution ion exchangers for protein and nucleic acid purifications from laboratory to process scales 535(1990)127

High-performance liquid chromatography of oligoguanylates at high pH 538(1991)474

Naphthalenesulfonates as mobile phases for anion-exchange chromatography using indirect photometric detection 542(1991)101

Universal stationary phase for the separation of anions on suppressor-based and single-column ion chromatographic systems 546(1991)89

Principles and applications of ion-exclusion chromatography (Review) 546(1991)111

Low-capacity latex-coated resins for anion chromatography 547(1991)11

High-performance liquid chromatography of amino acids, peptides and proteins. CXI. Retention behaviour of proteins with macroporous tentacle-type anion exchangers . 548(1991)117

Ion chromatography of inorganic iodine species using  $C_{18}$  reversed-phase columns coated with cetyltrimethylammonium 549(1991)265

# Antibody-antigen complexes

Separation of antibody-antigen complexes by capillary zone electrophoresis, isoelectric focusing and high-performance size-exclusion chromatography 539(1991)177

#### Antibody density

Effect of feed flow-rate, antigen concentration and antibody density on immunoaffinity purification of coagulation factor IX 522(1990)153

#### Antibody ligands

Evaluation of factors which affect column performance with immobilized monoclonal antibodies. Model studies with a lysozymeantilysozyme system 512(1990)23

#### Antigen concentration

Effect of feed flow-rate, antigen concentration and antibody density on immunoaffinity purification of coagulation factor IX 522(1990)153

# Apricot puree

Characterization of volatile components in apricot purées by gas chromatography-mass spectrometry 518(1990)221

#### **Aqueous streams**

Continuous automatic monitoring of volatile organic compounds in aqueous streams by a modified purge-and-trap system 549(1991)335

# Arachis hypogaea

Separation and identification of phytoalexins from leaves of groundnut (*Arachis hypogaea*) and development of a method for their determination by reversed-phase high-performance liquid chromatography 547(1991)185

# Argentation chromatography

Dynamic impregnation of silica stationary phases for the argentation chromatography of lipids 519(1990)349 Separation of triacylglycerols by supercriticalfluid argentation chromatography 550(1991)765

#### Association constants

High-performance liquid chromatography of amino acids, peptides and proteins. CIX. Investigations on the relation between the ligand density of Cibacron Blue immobilized porous and non-porous sorbents and protein-binding capacities and association constants 550(1990)383

#### Asymmetry factors

Characterization of reversed phases by chemometric methods 544(1991)381

#### Atmosphere, Titan

Gas chromatography of the atmosphere of Titan. II. Analysis of low-molecular-weight hydrocarbons and nitriles with a potassium chloride-deactivated alumina PLOT capillary column 514(1990)65

#### Atmospheric precipitation

Analysis of atmospheric precipitation by reversedphase ion-pair chromatography 514(1990)362

#### Atmospheric pressure chemical ionization

Packed-column supercritical fluid chromatography-mass spectrometry and supercritical fluid chromatography-tandem mass spectrometry with ionization at atmospheric pressure 511(1990)257

#### Atomic emission detector

Pesticide analysis by gas chromatography with a novel atomic emission detector 517(1990)131

#### Atomic emission spectroscopy

The speciation of iron, manganese, phosphorus and platinum in aqueous solutions by using ion chromatography coupled with an element selective detector 547(1991)211

# Automation

Automated amino acid analysis using precolumn derivatization with dansylchloride and reversedphase high-performance liquid chromatography 504(1990)129

On-line chromatography with capillary columns and temperature programming. Determination of traces of 2-butenes in 1-butene and analysis of a reformate 509(1990)33

Automated high-resolution two-dimensional liquid chromatographic system for the rapid and

sensitive separation of complex peptide mixtures 515(1990)313

Gas chromatographic determination of phenol compounds with automatic continuous extraction and derivatization 518(1990)59

Improvements in automated analysis of catecholamine and related metabolites in biological samples by column-switching highperformance liquid chromatography 541(1991)273

Fully automatic high-performance liquid chromatographic optimization 550(1991)27

#### Autosamplers

Compensated delay volume as an approach to improve the inter-laboratory transferability of gradient high-performance liquid chromatographic assays 540(1991)373

#### Avidin-biotin technique

Application of avidin–biotin technology to affinity-based separations (Review) 510(1990)3

Studies on the interaction of a surface-bound ligand with a multi-valent high-molecular-weight ligate. The biotinylcellulose-avidin system 510(1990)23

Purification of gonadotropin releasing hormone receptors using the avidin–biotin technique 510(1990)233

# Axial-beam absorbance detection

Axial-beam absorbance detection for capillary electrophoresis 550(1991)831

# Axial dispersion

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521



# **Background electrolyte**

Selection of the background electrolyte composition with respect to electromigration dispersion and detection of weakly absorbing substances in capillary zone electrophoresis 545(1991)239

#### **Bacterial fermentations**

Applications of high-performance liquid chromatography in bacteriology. I. Determination of metabolites (Review) 515(1990)415

#### Bacteriology

Applications of high-performance liquid chromatography in bacteriology. I. Determination of metabolites (Review) 515(1990)415

# **Band broadening**

Variance contributions to band spread in capillary zone electrophoresis 504(1990)1

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Thermal model of capillary electrophoresis and a method for counteracting thermal band broadening 516(1990)191

Dispersion in the interstitial space of packed columns 517(1990)31

Direct deconvolution of Tung's integral equation using a multi-Gaussian function model for instrumental band broadening in gel-permeation chromatography 522(1990)57

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

Efficiency in chiral high-performance ligandexchange chromatography. Influence of the complexation process, flow-rate and capacity factor 542(1991)221

Anomalous bandspreading of ethylenediaminetetraacetato-chromium(III) ion in reversed-phase high-performance liquid chromatography. An example of slow equilibrium kinetics 545(1991)123

Two-dimensional viscous flow analysis in a micro flow-cell of an ultraviolet absorption detector for high-performance liquid chromatography 549(1991)101

# **Band** interaction

Study of the interaction between two overloaded bands injected successively in non-linear chromatography 522(1990)1

Peak interactions under concave isotherm conditions in preparative ion chromatography 546(1991)27

#### **Band migration**

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

# **Band** overlap

Preparative high-performance liquid chromatography based on reversed-phase gradient elution. Optimum experimental conditions for heavily overloaded separation 540(1991)21

#### **Band profiles**

see also Peak shape

Magnetic resonance imaging in reversed-phase liquid chromatography 517(1990)263

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography 537(1991)497

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography. A reply 537(1991)507

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

Use of the LeVan–Vermeulen isotherm model for the calculation of elution band profiles in nonlinear chromatography 545(1991)1

Equilibrium elution chromatography. The column-origin boundary condition 550(1991)247

# Band spacing

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

#### Bands, touching

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

# Bandwidth

High-performance liquid chromatography of amino acids, peptides and proteins. XCVIII. The influence of different displacer salts on the bandwidth properties of proteins separated by gradient elution anion-exchange chromatography 512(1990)41

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

#### Betula pendula

Chemical characteristics of herbivore defenses in *Betula pendula* winter-dormant young stems 547(1991)367

#### **Bile salts**

Separation and determination of lipophilic corticosteroids and benzothiazepin analogues by micellar electrokinetic chromatography using bile salts 513(1990)279

#### **Binary adsorption isotherm**

Dependence of retention on the organic modifier concentration and multicomponent adsorption behavior in reversed-phase chromatography 550(1991)411

# **Binary mixtures**

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography 523(1990)63

Computer-assisted sample clean-up in liquid chromatography from thin-layer chromatographic data 550(1991)657

#### **Binary systems**

Modified sorbents in binary stationary phase systems in gas chromatography 508(1990)193

Effect of pore size on the surface excess isotherm of silica packings 515(1990)159

Protein-ligand interactions studied on bovine serum albumin with free and polymer-bound Cibacron Blue F3G-A as ligand with reference to affinity partitioning 537(1991)219

#### **Binding capacity**

Effects of isotherm non-linearity on the determination of the binding constant in affinity chromatography 504(1990)55

Study of the dynamic binding capacity of two anion exchangers using bovine serum albumin as a model protein 504(1990)89

Binding capacities of hydroxyapatite for globular proteins 515(1990)193

High-performance affinity chromatography of immunoglobulin E on a column of dinitrophenylamino acids covalently bound to a highly cross-linked polymeric micropellicular support 536(1991)155

Comparison of site-specific coupling chemistry for antibody immobilization on different solid supports 542(1991)41

New ligands for boronate affinity chromatography. Synthesis and properties 543(1991)17

#### **Binding constants**

Effects of isotherm non-linearity on the determination of the binding constant in affinity chromatography 504(1990)55

# **Binding sites**

High-performance liquid chromatography of amino acids, peptides and proteins. C. Characterisation of coulombic interactive regions on hen lysozyme by high-performance liquid anion-exchange chromatography and computer graphic analysis 517(1990)317

#### Bioautography

Separation and detection of monensin, lasalocid and salinomycin by thin-layer chromatography/ bioautography 508(1990)386

#### **Biological monitoring**

Analytical isotachophoresis in biological monitoring of exposure to industrial chemicals (Review) 545(1991)369

# Biomarkers

Tandem mass spectrometry —an additional dimension of chromatography for the determination of biomarkers in fossil fuels (Review) 550(1991)193

#### **Biomass pyrolysis**

Analysis of biomass pyrolysis liquids: separation and characterization of phenols 542(1991)263

# Biomass tar

Separation of phenols and aromatic hydrocarbons from biomass tar using aminopropylsilane normal-phase liquid chromatography 538(1991)303

#### **Biomimetic dye sorbent**

High-performance liquid chromatography of amino acids, peptides and proteins. CIX. Investigations on the relation between the ligand density of Cibacron Blue immobilized porous and non-porous sorbents and protein-binding capacities and association constants 550(1990)383

#### Biosensors

Biosensors (Review) 510(1990)347

Electrochemical biosensors on thin-film metals and conducting polymers 510(1990)355

#### **Biospecific adsorption**

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

#### **Biospecific ligands**

Investigations of liquid-liquid partition chromatography of proteins 548(1991)3

# Biota orientalis

Re-examination of the fatty acid composition of *Biota orientalis* seed oil by gas chromatographymass spectrometry of the picolinyl ester derivatives 543(1991)257

#### **Biphasic liquid systems**

Practical approach to high-speed counter-current chromatography 550(1991)677

#### Blood cells, peripheral

Surface affinity chromatographic separation of blood cells. VII. Relationship between capacity

factors of human peripheral blood cells and the rate of penetration of liquids into xerogel column packings 504(1990)69

#### Blotting

Sensitive blotting assay for the detection of glycopeptides in peptide maps 510(1990)225

# **Boiling point**

Chromatographic study of methylcyclopentadiene dimers and iso-dimers and determination of their boiling points 508(1990)363

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

#### Bonded phases, characterization

Design requirements of silica-based matrices for biopolymer chromatography 544(1991)413

#### **Book reviews**

Principles and practice of chromatography (by B. Ravindranath) 503(1990)471

Inverse GC characterization of polymers and other materials (edited by D. R. Lloyd, T. C. Ward and H. P. Schreiber) 503(1990)473

Supercritical fluid extraction and chromatography (ACS Symposium Series, No. 366) (edited by B. A. Charpentier and M. R. Sevenants) 503(1990)475

Advances in Chromatography, Vol. 30, Selectivity and retention in chromatography (edited by J. C. Giddings, E. Grushka and P. R. Brown) 504(1990)469

Computerized multiple input chromatography (by M. Kaljurand and E. Küllik) 504(1990)471

Chemiluminescence and photochemical reaction detection in chromatography (edited by J. W. Birks) 504(1990)473

Business opportunity report: chromatography-Markets, systems, applications (by R. H. Vermuyten) 504(1990)476

Practical HPLC method development (by L. R. Snyder, J. L. Glajch and J. J. Kirkland) 509(1990)406

Chiral liquid chromatography (edited by W. J. Lough) 509(1990)408

Process chromatography, a practical guide (by G. K. Sofer and L. E. Nystrom) 509(1990)411

High performance liquid chromatography (edited by P. R. Brown and R. A. Hartwick) 509(1990)413

Protein–dye interactions: development and applications (edited by M. A. Vijayalakshmi and O. Bertrand) 516(1990)478

Selectivity and detectability optimizations in HPLC (edited by S. Ahuja) 516(1990)480

Detection-oriented derivatization techniques in liquid chromatography (edited by H. Lingeman and W. J. M. Underberg) 518(1990)391

Chromatography/Fourier transform infrared spectroscopy and its applications (by R. White) 522(1990)344

Modern thin-layer chromatography (edited by N. Grinberg) 522(1990)345

Advances in chromatography, Vol. 29 (edited by J. C. Giddings, E. Grushka and P. R. Brown) 527(1990)502

Determination of beta-blockers in biological material (edited by V. Marko) 527(1990)504

Benzodiazepines II-a handbook (by H. Schütz) 529(1990)263

Analytical aspects of drug testing (Chemical Analysis Series, Vol. 100) (edited by D. G. Deutsch) 529(1990)507

Protein purification. Principles, high resolution methods and applications (edited by J.-C. Janson and L. Rydén) 532(1989)207

Liquid chromatography-mass spectrometry: applications in agricultural, pharmaceutical, and environmental chemistry (edited by M. A. Brown) 538(1991)510

Troubleshooting LC systems: a comprehensive approach to troubleshooting LC equipment and separations (by J.W. Dolan and L. R. Snyder) 539(1991)241

Gas chromatography: A practical course (by G. Schomburg) 542(1991)545

Continuous-flow fast atom bombardment mass spectrometry (edited by R. M. Caprioli 542(1991)547

Polymer thermodynamics by GC (by R. Vilcu and M. Leca) 542(1991)549

HPLC of biological macromolecules (edited by K. M. Gooding and F. E. Regnier) 543(1991)483

Chromatographic analysis of pharmaceuticals (edited by J. A. Adamovics) 545(1991)219

Chromatographic analysis of alkaloids (by M. Popl, J. Fähnrich and V. Tatar) 545(1991)221

Countercurrent chromatography: apparatus, theory and applications (by W. D. Conway) 547(1991)560

#### **Boronate ligands**

New ligands for boronate affinity chromatography. Synthesisandproperties 543(1991)17

# **Boundary conditions**

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

Equilibrium elution chromatography. The column-origin boundary condition 550(1991)247

# Breakthrough curves

Charged surface and mass transfer in dynamic ion exchangers 546(1991)17

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

#### Breath analysis

Identification of exposure markers in smokers' breath 511(1990)291

#### Brine

Hollow-fibre membrane-based sample preparation device for the clean-up of brine samples prior to ion chromatographic analysis 538(1991)497

#### **Buffer concentration**

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

#### **Buffer systems**

Quantitation of insulin injection by highperformance liquid chromatography and highperformance capillary electrophoresis 549(1991)357

#### Butter

Determination of sorbic acid in margarine and butter by high-performance liquid chromatography with fluorescence detection 543(1991)69



# Calcium antagonists

Optical resolution of dihydropyridine enantiomers by high-performance liquid chromatography using phenylcarbamates of polysaccharides as a chiral stationary phase 513(1990)375

# **Capacity factors**

Isocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

Three-dimensional network plots using colours for a fourth variable with binary mixtures of pentane and 1,4-dioxane under sub- and supercritical conditions 505(1990)109

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219

Reversed-phase chromatographic separation of selected hydroxyl aromatics with  $\beta$ -cyclodextrin as a mobile phase additive 514(1990)19

Retention reproducibility of basic drugs in highperformance liquid chromatography on a silica column with a methanol-high-pH buffer eluent. Effect of operating conditions on separations using an organic buffer 514(1990)97

Investigation of parameters in the separation of amino acid enantiomers by supercritical fluid chromatography 514(1990)253

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285

Chemically modified polymeric resins for highperformance liquid chromatography 522(1990)95

Supercritical fluid chromatography of polychlorinated biphenyls on packed columns 522(1990)267

Characterization of reversed phases by chemometric methods 544(1991)381

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical CO<sub>2</sub> 545(1991)135

Computer optimization in ion chromatography. II. A systematic evaluation of linear retention models for anions 546(1991)37

Multivariate characterization of solvent strength and solvent selectivity in reversed-phase highperformance liquid chromatography 550(1991)397

Chromatographic data for pharmacological classification of imidazol(in)e drugs 550(1991)573

# **Capillary** columns

see also Columns

Displacement chromatography on packed capillary columns 502(1990)11

Indirect fluorometric detection in open-tubular capillary column chromatography 506(1990)401

On-line chromatography with capillary columns and temperature programming. Determination of traces of 2-butenes in 1-butene and analysis of a reformate 509(1990)33 Gas chromatographic analysis of light hydrocarbons using aluminium oxide micropacked columns 509(1990)59

Behaviours of siloxane polymers containing phenyl or silarylene as stationary phases for high-temperature gas chromatography 514(1990)259

Isotachophoresis in open-tubular fused-silica capillaries. Impact of electroosmosis on zone formation and displacement 516(1990)211

Fabrication of columns for open-tubular liquid chromatography using photopolymerization of acrylates 516(1990)301

Design of liquid chromatography capillary columns 517(1990)297

Static coating of 5 to 50  $\mu$ m I.D. capillary columns for open tubular column chromatography 517(1990)503

Electrically driven open-tubular liquid chromatography 517(1990)557

Chromatographic characteristics of capillary packed columns with increased pressure drop 520(1990)91

Study of the characteristics and analytical application of a capillary chromatograph with an electrochemical detector 520(1990)307

High-performance liquid chromatography-timeof-flight mass spectrometry and its application to peptide analyses 536(1991)143

Direct determination of acetic acid in strongly acidic hydrolysates of chitin and chitin-containing biological products by capillary gas chromatography 538(1991)431

High-performance liquid chromatographic determination of cephalosporin antibiotics using 0.3 mm I.D. columns 539(1991)215

Surface treatment effects in microcolumn liquid chromatography 540(1991)77

Immobilization of chiral phases for enantiomer separations in supercritical fluid and gas chromatography 540(1991)217

Prediction of retention times in temperatureprogrammed multichromatography 540(1991)311

Computer spreadsheet calculation of the optimum temperature and column lengths for serially coupled capillary gas chromatographic columns 541(1991)59

Application of a metal capillary column in gas chromatographic determination of catechol-Omethyltransferase activity 549(1991)434

High-performance displacement electrophoresis in 0.025- to 0.050-mm capillaries coated with a polymer to suppress adsorption and electroendosmosis 550(1991)811

#### Capillary columns, coated

Polyethyleneimine-bonded phases in the separation of proteins by capillary electrophoresis 516(1990)69

Capillary electrophoresis of proteins under alkaline conditions 516(1990)123

#### Capillary columns, coaxial

Capillary zone electrophoresis-mass spectrometry using a coaxial continuous-flow fast atom bombardment interface 516(1990)167

#### Capillary columns, inner diameter

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

#### Capillary DNA chromatography

Application of capillary DNA chromatography to detect AIDS virus (HIV-1) DNA in blood 533(1990)87

#### **Capillary electrophoresis**

Detection and quantification of capillary electrophoresis zones by fluorescence microscopy 502(1990)247

Feasibility of capillary zone electrophoresis with suppression of electroendosmotic flow in completely closed systems 503(1990)245

Use of non-ionic and zwitterionic surfactants to enhance selectivity in high-performance capillary electrophoresis. An apparent micellar electrokinetic capillary chromatography mechanism 503(1990)449

Variance contributions to band spread in capillary zone electrophoresis 504(1990)1

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

Analysis of oligonucleotides by capillary gel electrophoresis 507(1990)113

Comparison of high-performance liquid chromatography, supercritical fluid chromatography and capillary zone electrophoresis in drug analysis 507(1990)125

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. I. Isotachophoresis with two leading ions 508(1990)3

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. II. Migration behaviour in capillary zone electrophoresis 508(1990)19

Purity control of riboflavin-5'-phosphate (vitamin B<sub>2</sub> phosphate) by capillary zone electrophoresis 508(1990)203

Separation and determination of lipophilic corticosteroids and benzothiazepin analogues by micellar electrokinetic chromatography using bile salts 513(1990)279

Capillary zone electrophoresis of pyridylamino derivatives of maltooligosaccharides 514(1990)57

Determination of arbutin in uvae-ursi folium (bearberry leaves) by capillary zone electrophoresis 514(1990)383

Capillary zone electrophoretic separation of chlorophenols in industrial waste water with on-column electrochemical detection 514(1990)389

Indirect fluorescence detection of sugars separated by capillary zone electrophoresis with visible laser excitation 515(1990)639

Analysis of the components of *Paeonia radix* by capillary zone electrophoresis 515(1990)653

Recent developments in electrophoretic methods (Review) 516(1990)3

Separation of DNA restriction fragments by high operformance capillary electrophoresis with low and zero crosslinked polyacrylamide using continuous and pulsed electric fields 516(1990)33

Separation and analysis of DNA sequence reaction products by capillary gel electrophoresis 516(1990)49 Capillary gel electrophoresis for DNA sequencing. Laser-induced fluorescence detection with the sheath flow cuvette 516(1990)61

Polyethyleneimine-bonded phases in the separation of proteins by capillary electrophoresis 516(1990)69

Analysis of dilute peptide samples by capillary zone electrophoresis 516(1990)79

High-performance capillary electrophoresis of hydrophobic membrane proteins 516(1990)89

Method optimization in capillary zone electrophoretic analysis of hGH tryptic digest fragments 516(1990)99

Use of high-performance capillary electrophoresis to monitor charge heterogeneity in recombinant-DNA derived proteins 516(1990)115

Capillary electrophoresis of proteins under alkaline conditions 516(1990)123

Capillary zone electrophoresis for monitoring r-DNA protein purification in multi-compartment electrolysers with immobiline membranes 516(1990)133

Static and scanning array detection in capillary electrophoresis-mass spectrometry 516(1990)147

Sensitivity considerations for large molecule detection by capillary electrophoresis–electrospray ionization mass spectrometry 516(1990)157

Capillary zone electrophoresis-mass spectrometry using a coaxial continuous-flow fast atom bombardment interface 516(1990)167

Identification of aprotinin degradation products by the use of high-performance capillary electrophoresis, high-pressure liquid chromatography and mass spectrometry 516(1990)175

Continuous sample collection in capillary zone electrophoresis by coupling the outlet of a capillary to a moving surface 516(1990)185

Thermal model of capillary electrophoresis and a method for counteracting thermal band broadening 516(1990)191

Applicability of dynamic change of pH in the capillary zone electrophoresis of proteins 516(1990)219

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

Non-uniform electrical field effect caused by different concentrations of electrolyte in capillary zone electrophoresis 516(1990)233

Free solution capillary electrophoresis and micellar electrokinetic resolution of amino acid enantiomers and peptide isomers with L- and D-Marfey's reagents 516(1990)241

Capillary electrophoresis of urinary porphyrins with absorbance and fluorescence detection 516(1990)271

Separation and partial characterization of Maillard reaction products by capillary zone electrophoresis 516(1990)287

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521

Capillary electrophoretic separations of peptides using micelle-forming compounds and cyclodextrins as additives 519(1990)189

Capillary zone electrophoresis of  $\alpha_1$ -acid glycoprotein fragments from trypsin and endoglycosidase digestions 536(1991)31

Determination of absolute mobilities, pK values and separation numbers by capillary zone electrophoresis. Effective mobility as a parameter for screening 537(1991)407

Improvement of resolution in the capillary electrophoretic separation of catecholamines by complex formation with boric acid and control of electroosmosis with a cationic surfactant 538(1991)385

Isotachophoresis as an on-line concentration pretreatment technique in capillary electrophoresis 538(1991)393

Pharmaceutical analysis by capillary zone electrophoresis and micellar electrokinetic capillary chromatography 538(1991)506

Separation of antibody-antigen complexes by capillary zone electrophoresis, isoelectric focusing and high-performance size-exclusion chromatography 539(1991)177

Free-solution reactor for post-column fluorescence detection in capillary zone electrophoresis 540(1991)343

Simultaneous pH and ionic strength effects and buffer selection in capillary electrophoretic techniques 541(1991)483

Capillary electrophoresis in [<sup>2</sup>H]water solution 541(1991)489

Impact of experimental parameters on the resolution of positional isomers of aminobenzoic acid in capillary zone electrophoresis 542(1991)173

Separation of carbohydrate-mediated microheterogeneity of recombinant human erythropoietin by free solution capillary electrophoresis. Effects of pH, buffer type and organic additives 542(1991)459

Analysis of paralytic shellfish poisons by capillary electrophoresis 542(1991)483

Z-Shaped flow cell for UV detection in capillary electrophoresis 543(1991)439

Analysis of endoproteinase Arg C action on adrenocorticotrophic hormone by capillary electrophoresis and reversed-phase highperformance liquid chromatography 543(1991)451

Resolution and concentration detection limit in capillary gel electrophoresis 545(1991)177

Selection of the background electrolyte composition with respect to electromigration dispersion and detection of weakly absorbing substances in capillary zone electrophoresis 545(1991)239

Determination of halofuginone in feedstuffs by the combination of capillary isotachophoresis and capillary zone electrophoresis in a columnswitching system 545(1991)307

Step change of co-ion, a new option in capillary zone electrophoresis 545(1991)331

Capillary electrophoresis of peptides. Analysis of adrenocorticotropic hormone-related fragments 545(1991)379

Effect of sodium dodecyl sulphate in protein samples on separation with free capillary zone electrophoresis 545(1991)397

Use of cyclodextrins in capillary zone electrophoresis. Resolution of terbutaline and propranolol enantiomers 545(1991)437

Analysis of barbiturates in human serum and urine by high-performance capillary electrophoresis-micellar electrokinetic capillary chromatography with on-column multiwavelength detection 545(1991)445

Optimization of inorganic capillary electrophoresis for the analysis of anionic solutes in real samples 546(1991)411

Determination of organic acids in food samples by capillary electrophoresis 546(1991)423

Optimization of detection sensitivity in the capillary electrophoresis of inorganic anions 546(1991)431

Controlled changes of selectivity in the separation of ions by capillary electrophoresis 546(1991)445

Analysis of anion constituents of urine by inorganic capillary electrophoresis 546(1991)459

Improved capillary zone electrophoretic separation of basic proteins, using a fluorosurfactant buffer additive 547(1991)544

Capillary electrophoretic separation in both  $H_2O$ and  $^2H_2O$ -based electrolytes can provide more information on tryptic digests 547(1991)551

Structure-stability relationship of Immobiline chemicals for isoelectric focusing as monitored by capillary zone electrophoresis 548(1991)381

Quantitative analysis in capillary zone electrophoresis with conductivity and indirect UV detection 549(1991)345

Quantitation of insulin injection by highperformance liquid chromatography and highperformance capillary electrophoresis 549(1991)357

Separation of seven tricyclic antidepressants using capillary electrophoresis 549(1991)375

Capillary zone electrophoresis with a linear, non-cross-linked polyacrylamide gel: separation of proteins according to molecular mass 549(1991)446 High-performance capillary electrophoresis of proteins. Sodium dodecyl sulphate– polyacrylamide gel-filled capillary column for the determination of recombinant biotechnologyderived proteins 550(1991)823

Axial-beam absorbance detection for capillary electrophoresis 550(1991)831

# Capillary electrophoresis, coupling to gel permeation chromatography

Apparatus for coupled high-performance liquid chromatography and capillary electrophoresis in the analysis of complex protein mixtures 515(1990)659

# Capillary electrophoresis, high pressure

High-pressure and supercritical capillary electrophoresis 517(1990)573

# **Capillary flow cell**

Use of a focusing cylindrical lens for increasing sensitivity in the optical detector of a capillary flow-through cell 515(1990)357

#### **Capillary** isotachophoresis

Isotachophoretic separation of organic acids in biological fluids 516(1990)251

Determination of trimetaphosphate in pyrophosphate by capillary isotachophoresis 516(1990)473

Use of cyclodextrins in the isotachophoretic determination of various inorganic anions 518(1990)189

Isotachophoretic analyser equipped with a scanning ultraviolet photometric detection system 538(1991)403

Determination of disodium 3-amino-1hydroxypropylidene-1,1-bisphosphonate pentahydrate 545(1991)421

Characterization of humic substances by capillary isotachophoresis 545(1991)461

#### Capillary outlet interface

Continuous sample collection in capillary zone electrophoresis by coupling the outlet of a capillary to a moving surface 516(1990)185

# Carbochrome

Carbon adsorbents in gas adsorption chromatography 520(1990)55

# Carbon adsorbents

Retention times and heats of adsorption of aromatic compounds on carbon adsorbents 506(1990)335

Development and use of carbon adsorbents in the liquid chromatographic separation of isomers 506(1990)371

# **Carbon black**

Carbon adsorbents in gas adsorption chromatography 520(1990)55

# Carbon number

Determination of plant triacylglycerols using capillary gas chromatography, high-performance liquid chromatography and mass spectrometry 542(1991)145

#### Carbotrap

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

# Carbowax 20M

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

#### Carcinus maenas

Quantification of methyl farnesoate levels in hemolymph by high-performance liquid chromatography 545(1991)71

#### Carrier composition

Effects of temperature, carrier composition and sample load in asymmetrical flow field-flow fractionation 548(1991)393

#### **Carrier effect**

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid chromatography-particle beam-mass spectrometry 549(1991)237

#### **Carrier electrolytes**

Optimization of detection sensitivity in the capillary electrophoresis of inorganic anions 546(1991)431

# Carrier media

Novel media for chromatography and immobilization using a radiation grafting technique 510(1990)115

#### Carriers

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin- $\beta$  by multi-dimensional displacement chromatogaphy 549(1991)175

#### **Catalytic effects**

Recent advances in the simultaneous determination of anions and silica in high-purity water 546(1991)209

#### Cation-exchange membranes

Sample preparation for ion chromatography by solid-phase extraction 546(1991)61

#### Cation exchangers

see also Ion exchangers

Separation of cations using methacrylate-based low-capacity cation exchangers 509(1990)369

Systematic optimization of protein separations on high-performance ion-exchange chromatographic media 512(1990)13

New family of high-resolution ion exchangers for protein and nucleic acid purifications from laboratory to process scales 535(1990)127

Cation-exchange high-performance liquid chromatography of synthetic salmon calcitonin 536(1991)123

Use of ion-exclusion chromatography for monitoring fatty acids produced by bacterial anaerobic degradation of tetrachloroethene in ground water 536(1991)193

Detection of choline and acetylcholine by highperformance liquid chromatography. Limitations, pitfalls, sample preparation 537(1991)514

Principles and applications of ion-exclusion chromatography (Review) 546(1991)111

Hydrophilic-interaction chromatography of peptides on hydrophilic and strong cationexchange columns 548(1991)13

# Cell culture extracts

Improved sample preparation method for highperformance liquid chromatography of deoxyribonucleoside triphosphates from cell culture extracts 508(1990)75

# **Cell** partioning

Partitioning of cells in dextran-poly(ethylene glycol) aqueous phase systems. A study of settling

time, vessel geometry and sedimentation effects on the efficiency of separation 542(1991)397

#### Cellulose-coated silica

Coated silica and its behaviour in dye-affinity chromatography 543(1991)9

#### Centrifugal affinity chromatography

Centrifugal affinity chromatography 510(1990)205

#### Centrifugal counter-current chromatography

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

#### Centrifugal partition chromatography

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

Toroidal coil centrifugal partition chromatography, a method for measuring partition coefficients 538(1991)119

Development of a phase system for intermediate polarity compounds in centrifugal partition chromatography 547(1991)69

# Chaotropic ions

Isolation of an interleukin 2-binding receptor from activated lymphocytes by high-performance immunoaffinity chromatography 550(1991)741

# Charge-based transient model

Optimization of isotachophoretic analysis: use of the charge-based transient-state model 545(1991)249

# Charge coupled device

On-line multichannel Raman spectroscopic detection system for capillary zone electrophoresis 540(1991)355

#### Charge determination

Determination of the charge of ions by partition coefficient measurements in gel permeation chromatography 504(1990)403

# Charge heterogeneity

Use of high-performance capillary electrophoresis to monitor charge heterogeneity in recombinant-DNA derived proteins 516(1990)115

#### Chelating agents

Formazan derivatives as the precolumn derivatization reagents in a coupled high-

performance liquid chromatographicspectrophotometric system for trace metal determination 515(1990)603

Simultaneous ion chromatography of inorganic anions together with some organic anions and alkaline earth metal cations using chelating agents as eluents 516(1990)383

# Chelating resins

Copper(II)-iminodiacetic acid chelating resin as a stationary phase in the immobilized metal ion affinity chromatography of some aromatic amines 515(1990)169

# Chelidonium majus

Reversed-phase high-performance liquid chromatographic separation of tertiary and quaternary alkaloids from *Chelidonium majus* L. 543(1991)123

#### Chemical ionization

Indirect thin-layer chromatography-fast atom bombardment and chemical ionization mass spectrometry determination of carbohydrates utilizing simple and rapid microtransfer techniques 514(1990)377

#### **Chemical weapons**

Chromatographic analysis of chemical warfare agents (Review) 503(1990)293

# Chemiluminescence detector

Post-column adjustment of conditions for peroxyoxalate chemiluminescence detection for high-performance liquid chromatography 503(1990)155

Naphthalene- and anthracene-2,3-dialdehyde as precolumn labelling reagents for primary amines using reversed- and normal-phase liquid chromatography with peroxyoxalate chemiluminescence detection 511(1990)155

High-performance liquid chromatography with a  $3\alpha$ -hydroxysteroid dehydrogenase postcolumn reactor and isoluminol-microperoxidase chemiluminescence detection 515(1990)329

Determination of methamphetamine, amphetamine and piperidine in human urine by high-performance liquid chromatography with chemiluminescence detection 515(1990)459

Sensitive assay system for bile acids and steroids having hydroxyl groups utilizing highperformance liquid chromatography with peroxyoxalate chemiluminescence detection 515(1990)577

Chemiluminescence detection of free fatty acids by high-performance liquid chromatography with immobilized enzymes 516(1990)450

Use of sulfur chemiluminescence detection after supercritical fluid chromatography 517(1990)491

Gas chromatographic and mass spectrometric determination of nitroaromatics in water 518(1990)21

Photochemical reaction coupled to solid-state peroxyoxalate chemiluminescence for the highperformance liquid chromatographic detection of compounds having weak chromophores 523(1990)163

High-performance liquid chromatography retention index and detection of nitrated polycyclic aromatic hydrocarbons 539(1991)1

Luminarin 4 as a labelling reagent for carboxylic acids in liquid chromatography with peroxyoxalate chemiluminescence detection 542(1991)295

# Chemometrics

Multiple absorbance ratio correlation — a new approach for assessing peak purity in liquid chromatography 506(1990)289

Characterization of reversed phases by chemometric methods 544(1991)381

Factor analysis and experiment design in highperformance liquid chromatography. X. Chemometric characterization of packings, solvents and solutes with hierarchical ascending classification and correspondence factor analysis 544(1991)393

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography 549(1991)159

#### Chemotaxonomy

Applications of high-performance liquid chromatography in bacteriology. I. Determination of metabolites (Review) 515(1990)415

# China

Environmental applications of ion chromatography in China 546(1991)317

# Chiral additives

Enantiomeric separation of amines using Nbenzoxycarbonylglycyl-L-proline as chiral additive and porous graphitic carbon as solid phase 543(1991)287

Chromatographic liquid–liquid ternary phase system with permethylated  $\beta$ -cyclodextrin as chiral additive 547(1991)59

# Chiral derivatization

Chiral organosilicon compounds. II. Comparison of gas-liquid chromatographic and NMR analyses of enantiomeric alcohols 503(1990)437

Solid-phase reagent containing the 3,5dinitrophenyl tag for the improved derivatization of chiral and achiral amines, amino alcohols and amino acids in high-performance liquid chromatography with ultraviolet detection 537(1991)123

Reversed-phase high-performance liquid chromatographic separation of the enantiomers of trimetoquinol hydrochloride by derivatization with 2,3,4.6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl isothiocyanate and application to the optical purity testing of drugs 539(1991)71

#### Chiral recognition

Characteristics of ovomucoid-conjugated columns in the direct liquid chromatographic resolution of racemic compounds 511(1990)89

Elution orders in the separation of enantiomers by high-performance liquid chromatography with some chiral stationary phases 535(1990)213

Solid-phase reagent containing the 3,5dinitrophenyl tag for the improved derivatization of chiral and achiral amines, amino alcohols and amino acids in high-performance liquid chromatography with ultraviolet detection 537(1991)123

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

Approach to direct chiral recognition of some terpenic hydrocarbon constituents of essential oils by gas chromatography systems via  $\beta$ -cyclodextrin complexation 543(1991)171

Chiral stationary phases derived from tyrosine (Review) 550(1991)357

# **Chiral selectors**

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

Elimination of the temperature-induced loss of the enantioselectivity of chemically bonded albumin 543(1991)475

Separation and estimation of small amounts of the enantiomers of carbidopa and methyldopa on a chiral stationary phase with L-phenylalanine as selector in ligand-exchange chromatography 545(1991)115

Enantiomeric resolution of amino acid derivatives by high-performance liquid chromatography on chiral stationary phases derived from L-proline 547(1991)31

Chiral stationary phases derived from tyrosine (Review) 550(1991)357

#### Chiral stationary phases, GC

Acylation effects on chiral recognition of racemic amines and alcohols by new polar and non-polar cyclodextrin derivative gas chromatographic phases 502(1990)154

Enantiomer separation of chiral barbiturates and of  $\alpha$ -lipoic acid by capillary gas chromatography with modified cyclodextrins as chiral stationary phases 503(1990)256

2,6-Di-O-pentyl-3-O-trifluoroacetyl cyclodextrin liquid stationary phases for capillary gas chromatographic separation of enantiomers 509(1990)303

Gas chromatographic separation of stereoisomeric esters of  $\alpha$ -amino acids and  $\alpha$ -alkyl- $\alpha$ -amino acids on chiral stationary phases 542(1991)161

Approach to direct chiral recognition of some terpenic hydrocarbon constituents of essential oils by gas chromatography systems via  $\beta$ -cyclodextrin complexation 543(1991)171

# Chiral stationary phases, LC

Improved chiral stationary phase based on cellulose triacetate supported on nonmacroporous silica gel diol for the highperformance liquid chromatographic separation of racemic flavanones and diastereomeric flavanone glycosides 502(1990)287 Reversed-phase high-performance liquid chromatographic separation of the enantiomers of N-[4,4-di(3-methylthien-2-yl)-but-3-enyl] nipecotic acid on a Pirkle-type phenylglycine stationary phase 503(1990)115

Direct liquid chromatographic resolution of (*R*)and (*S*)-abscisic acid using a chiral ovomucoid column 504(1990)445

Direct high-performance liquid chromatographic determination of the enantiomers of alfuzosin in plasma on a second-generation  $\alpha_1$ -acid glycoprotein chiral stationary phase 506(1990)601

Characteristics of ovomucoid-conjugated columns in the direct liquid chromatographic resolution of racemic compounds 511(1990)89

Analytical and preparative resolution of enantiomers of prostaglandin precursors and prostaglandins by liquid chromatography on derivatized cellulose chiral stationary phases 511(1990)97

(S)-2-Hydroxypropyl- $\beta$ -cyclodextrin, a new chiral stationary phase for reversed-phase liquid chromatography 513(1990)181

Coupled column chromatography in chiral separations. I. Enantiomeric separation on swollen microcrystalline cellulose triacetate columns after a preseparation on a non-chiral alkylsilica column 513(1990)195

Optical resolution of dihydropyridine enantiomers by high-performance liquid chromatography using phenylcarbamates of polysaccharides as a chiral stationary phase 513(1990)375

Optical resolution of flavanones by highperformance liquid chromatography on various chiral stationary phases 514(1990)147

Optical resolution of racemic compounds on chiral stationary phases of modified cellulose 515(1990)85

Enantiomer separation of pyrethroid insecticides by high-performance liquid chromatography with chiral stationary phases 515(1990)441

Enantiomeric resolution on molecularly imprinted polymers prepared with only non-covalent and non-ionic interactions 516(1990)313

Direct stereochemical resolution of aspartame stereoisomers and their degradation products by high-performance liquid chromatography on a chiral crown ether based stationary phase 516(1990)365

Enantiomer separation of diacid-diacylglycerol mixtures by high-performance liquid chromatography on a chiral column 519(1990)237

Influence of uncharged mobile phase additives on retention and enantioselectivity of chiral drugs using an  $\alpha_1$ -acid glycoprotein column 519(1990)271

Separation of the enantiomers of  $\beta$ -receptor blocking agents and other cationic drugs using a CHIRAL-AGP\* column. Binding properties and characterization of immobilized  $\alpha_1$ -acid glycoprotein 519(1990)285

Fluorescence detection of the enantiomers of halofantrine at picomole levels using chiral high-performance liquid chromatography 519(1990)387

High-performance liquid chromatographic method for direct resolution of the indobufen enantiomeric components 520(1990)373

Separation of hydroxylated polyenoic fatty acid enantiomers on Pirkle-type chiral phase highperformance liquid chromatographic columns 520(1990)391

Chiral stationary phase for the facile resolution of  $\beta$ -adrenoceptor blocking agents 521(1990)122

Resolution of free aromatic amino acid enantiomers by host-guest complexation using reversed-phase liquid chromatography 521(1990)134

Measurement of the heats of adsorption of chiral isomers on an enantioselective stationary phase 522(1990)23

Study of the stereochemistry of ethambutol using chiral liquid chromatography and synthesis 522(1990)195

High-performance liquid chromatographic enantioseparation of intermediates relating to the total synthesis of (-)-physostigmine 523(1990)317

Elution orders in the separation of enantiomers by high-performance liquid chromatography with some chiral stationary phases 535(1990)213

Resolution of enantiomeric lorazepam and its acyl and O-methyl derivatives and racemization kinetics of lorazepam enantiomers 535(1990)229

Resolution of enantiomeric triols, triolhydroxyethylthioethers, and methoxy-triols derived from three benzo[*a*]pyrene diol-epoxides by chiral stationary phase high-performance liquid chromatography 535(1990)239

Determination of saterinone enantiomers in plasma samples with an internal standard using a Chiralcel OD column. Fractionation and reversed-phase chromatography 535(1990)263

Chromatographic resolution of 1,2-amino alcohols on a chiral stationary phase containing N,N'-(3,5-dinitrobenzoyl)-*trans*-1,2diaminocyclohexane. Theoretical and practical aspects 539(1991)25

(*R*)- and (*S*)-Naphthylethylcarbamate-substituted  $\beta$ -cyclodextrin bonded stationary phases for the reversed-phase liquid chromatographic separation of enantiomers 539(1991)83

Chiral high-performance liquid chromatography of synthetic pyrethroid insecticides 539(1991)207

Effect of the configuration of the substituents of derivatized  $\beta$ -cyclodextrin bonded phases on enantioselectivity in normal-phase liquid chromatography 540(1991)113

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

Polymer-bound chiral polymers for use in enantiomer separations 540(1991)145

Separation of aspartame and its precursor stereoisomers by chiral chromatography 540(1991)392

Enantiomeric separation of racemic thiosulphinate esters by high-performance liquid chromatography 541(1991)464

High-performance liquid chromatographic determination of optical purity of planar chiral organometallic compounds resolved by enzymic transformations 542(1991)129 Liquid chromatographic separation of the enantiomers of dinitrophenyl amino acids using a  $\beta$ -cyclodextrin-bonded stationary phase 543(1991)105

High-performance liquid chromatographic separation of racemic and diastereomeric mixtures of 2,4-pentadienoate-iron tricarbonyl derivatives 543(1991)233

Preparation and evaluation of chiral highperformance liquid chromatographic stationary phases of mixed character ( $\pi$ -donor and  $\pi$ -acceptor) for the resolution of racemic compounds 543(1991)277

Chiral high-performance liquid chromatography of aromatic cyclic dipeptides using cyclodextrin stationary phases 543(1991)299

Chromatographic separation of the optical isomers of naproxen 543(1991)355

Comparison of a new ovomucoid and a secondgeneration  $\alpha_1$ -acid glycoprotein-based chiral column for the direct high-performance liquid chromatography resolution of drug enantiomers 545(1991)43

Separation and estimation of small amounts of the enantiomers of carbidopa and methyldopa on a chiral stationary phase with L-phenylalanine as selector in ligand-exchange chromatography 545(1991)115

Enantiomeric resolution of amino acid derivatives by high-performance liquid chromatography on chiral stationary phases derived from L-proline 547(1991)31

Applicability of new chiral stationary phases in the separation of racemic pharmaceutical compounds by high-performance liquid chromatography 547(1991)45

Chiral stationary phases derived from tyrosine (Review) 550(1991)357

Chiral separation of ibutilide enantiomers by derivatization with 1-naphthyl isocyanate and high-performance liquid chromatography on a Pirkle column 550(1991)621

#### Chroma extraction

Liquid chromatography of liquid substances characterized by limited solubility in the eluent 509(1990)157

# Chromatofocusing

Isolation of isoproteins from monoclonal antibodies and recombinant proteins by chromatofocusing 512(1990)157

Capillary zone electrophoresis for monitoring r-DNA protein purification in multi-compartment electrolysers with immobiline membranes 516(1990)133

Change of counter ion concentration and of resolving power in a chromatofocusing run 519(1990)217

Use of chromatofocusing for separation of  $\beta$ -lactamases. IX. Analytical chromatofocusing for the separation of a chromosomal cephalosporinase from *Proteus vulgaris* 1028 545(1991)189

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application 549(1991)141

Ovine luteinizing hormone. VI. Analysis of the misclassification errors in the separation of intrapituitary isohormones by chromatofocusing 549(1991)153

# Chromatographic reactors

Chromatograms of second-order reactions on chromatographic columns 520(1990)109

# Chromatographic theory

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Theoretical aspects of the chromatographic analysis of heterogeneous polymers 511(1990)49

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

Dispersion in the interstitial space of packed columns 517(1990)31

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77 Non-equilibrium analytical focusing field-flow fractionation using intrinsic hydrodynamic force and integral Doppler anemometry 520(1990)271

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57

Molecular interactions in liquid chromatography 537(1991)33

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical  $CO_2 = 545(1991)135$ 

Multivalent ion-exchange model of biopolymer chromatography for mass overload conditions 548(1991)61

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

Equilibrium elution chromatography. The column-origin boundary condition 550(1991)247

Mechanism of liquid adsorption chromatography in thin-layer chromatography with ternary mobile phases 550(1991)645

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

# Chromatophoresis

Recent developments in electrophoretic methods (Review) 516(1990)3

# Cibacron Blue F3GA-modified silica

High-performance liquid chromatography of amino acids, peptides and proteins. CIX. Investigations on the relation between the ligand density of Cibacron Blue immobilized porous and non-porous sorbents and protein-binding capacities and association constants 550(1990)383

# Cigarette smoke

Isotope dilution gas chromatography-mass spectrometry in the determination of benzene, toluene, styrene and acrylonitrile in mainstream cigarette smoke 503(1990)359

Separation and quantitation of phenolic compounds in mainstream cigarette smoke by capillary gas chromatography with mass spectrometry in the selected-ion mode 505(1990)365

#### Cigarette smoking, marker compounds

Identification of exposure markers in smokers' breath 511(1990)291

#### **Circuit boards**

Ion chromatography in the manufacture of multilayer circuit boards 546(1991)369

#### Circular dichroism spectrophotometry

Reversed-phase high-performance liquid chromatographic separation of synthetic phosphopeptide isomers 512(1990)265

Analysis of proteins by high-performance liquid chromatography with circular dichroism spectrophotometric detection 515(1990)407

Chromatographic and physical studies of tropomyosin in aqueous-organic media at low pH 543(1991)327

# **Clean-up** methods

Determination of penicillin G in milk by highperformance liquid chromatography with automated liquid chromatographic cleanup 507(1990)177

Optimization of multidimensional highperformance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection 507(1990)267

Separation and determination of lanatosides in *Digitalis lanata* leaves by high-performance liquid chromatography 508(1990)241

Determination of N-nitrosodimethylamine in fish products using gas chromatography with nitrogen-phosphorus detection 508(1990)357

Gas chromatographic and mass spectral determination of aloenin in skin-care cosmetics 509(1990)377

Simultaneous measurement of L-DOPA, its metabolites and carbidopa in plasma of Parkinsonian patients by improved sample pretreatment and high-performance liquid chromatographic determination 511(1990)167

Behaviour of 23 persistent organochlorine compounds during sulphuric acid clean-up on a solid-matrix column 513(1990)333

Direct sample injection into the high-performance liquid chromatographic column in theophylline monitoring 515(1990)321

Simple method for determination of the cephalosporin DQ-2556 in biological fluids by high-performance liquid chromatography 515(1990)547

Determination of urinary free noradrenaline by reversed-phase high-performance liquid chromatography with on-line extraction and fluorescence derivatization 515(1990)621

Small-scale method for the determination of organophosphorus insecticides in tea using sulphuric acid as clean-up reagent 516(1990)446

Rapid high-performance liquid chromatographic analysis of phytotoxins from *Phoma lingam* 519(1990)383

On-line sample clean-up of fermentation broths and substrates prior to the liquid chromatographic separation of carbohydrates 523(1990)173

Extraction and clean-up procedure for polychlorinated dibenzo-*p*-dioxins and dibenzofurans in fly ash from municipal solid waste incinerators 523(1990)265

Determination of nine acidic herbicides in water and soil by gas chromatography using an electron-capture detector 537(1991)385

Dual-column high-performance liquid chromatographic cleanup procedure for the determination of polychlorinated dibenzo-*p*dioxins and dibenzofurans in fish tissue 543(1991)49

Post-extraction solvent flush of the pressure restrictor in supercritical fluid extraction 543(1991)187

Determination of resin and fatty acids in sediments near pulp mill locations 547(1991)315

Determination of phenoxyacid herbicides in water 547(1991)478

Bioanalysis of the neuropeptide des-enkephalin- $\gamma$ endorphin by high-performance liquid chromatography with on-line sample pretreatment using gel permeation and solidphase isolation 549(1991)185

Computer-assisted sample clean-up in liquid chromatography from thin-layer chromatographic data 550(1991)657

# Coal liquids

Chemical class separation of coal liquids by high-performance liquid chromatography on a semi-preparative, phosphoric acid-modified amino-bonded-phase column 550(1991)609

# Coal tar pitch

Capillary gas chromatographic and combined gas chromatography-mass spectrometric study of the volatile fraction of a coal tar pitch using OV-1701 stationary phase 539(1991)157

# Coelution

Optimization of high-performance liquid chromatographic analysis with UV detection: light-scattering detection to establish the coelution of UV- and non-UV-absorbing constituents 513(1990)354

#### Coil planet centrifuge

Practical approach to high-speed counter-current chromatography 550(1991)677

Protein separation with aqueous–aqueous polymer systems by two types of counter-current chromatographs 550(1991)695

# Co-ion, step change

Step change of co-ion, a new option in capillary zone electrophoresis 545(1991)331

# Colloids

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

# **Column design**

Theoretical optimization of open-tubular columns for liquid chromatography with respect to mass loadability 506(1990)185

#### **Column efficiency**

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

Effect of carbon dioxide flow-rate on the separation of triacylglycerols by capillary supercritical fluid chromatography 518(1990)69

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

Efficiency in chiral high-performance ligandexchange chromatography. Influence of the complexation process, flow-rate and capacity factor 542(1991)221

Stationary phase effects in reversed-phase liquid chromatography under overload conditions 550(1991)301

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

#### Column inlet pressure

Chromatographic characteristics of capillary packed columns with increased pressure drop 520(1990)91

#### Column overloading

Peak interactions under concave isotherm conditions in preparative ion chromatography 546(1991)27

# Column packing techniques

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

# **Column parameters**

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical  $CO_2$  545(1991)135

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

#### **Column performance**

Optimization of the experimental conditions in

preparative liquid chromatography with touching bands 517(1990)229

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

Optimisation of frontal chromatography by partial loading 545(1991)27

#### **Column resistance**

Surface treatment effects in microcolumn liquid chromatography 540(1991)77

#### Columns

see also Capillary columns

Utilizing column selectivity in developing a high-performance liquid chromatographic method for ginsenoside assay 504(1990)139

Packed columns in supercritical fluid chromatography (Review) 505(1990)3

Design of liquid chromatography capillary columns 517(1990)297

Short columns for gas chromatography packed with plasma-modified silica gels 520(1990)33

Systematic approach to the isolation, correction, and prevention of liquid chromatographic column problems 544(1991)3

#### Columns, microbore

Quantitation of adenosine, inosine and hypoxanthine in biological samples by microborecolumn isocratic high-performance liquid chromatography 536(1991)265

#### Columns, series-coupled

Determination of biogenic and anthropogenic volatile halocarbons in sea water by liquid–liquid extraction and capillary gas chromatography 513(1990)39

Enhanced possibilities for identification by the use of series-coupled capillary gas chromatographic columns. I. General exposition and application of the retention index concept 520(1990)3

Multi-column preparative reversed-phase sample displacement chromatography of peptides 548(1991)267

#### Column saturation capacity

Theoretical study of the effect of a difference in column saturation capacities for the two

components of a binary mixture on their elution band profiles and separation in non-linear chromatography 511(1990)1

#### **Column stability**

Chromatographic stability of silica-based aminopropyl-bonded stationary phases 543(1991)1

#### **Column switching**

Use of column switching for the determination of niacinamide in compound feed 502(1990)79

Automated precolumn derivatization of amino acids with *ortho*-phthalaldehyde using a hollowfibre membrane reactor 502(1990)317

Separation of free amino acids by reversed-phase ion-pair chromatography with column switching and isocratic elution 507(1990)95

Optimization of multidimensional highperformance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection 507(1990)267

Reversed-phase liquid chromatographic column switching for the trace-level determination of polar compounds. Application to chloroallyl alcohol in ground water 511(1990)243

Coupled column chromatography in chiral separations. I. Enantiomeric separation on swollen microcrystalline cellulose triacetate columns after a preseparation on a non-chiral alkylsilica column 513(1990)195

Automated high-resolution two-dimensional liquid chromatographic system for the rapid and sensitive separation of complex peptide mixtures 515(1990)313

Determination of free catecholamines in human urine by direct injection of urine into a liquid chromatographic column-switching system with fluorimetric detection 515(1990)435

Determination of urinary free noradrenaline by reversed-phase high-performance liquid chromatography with on-line extraction and fluorescence derivatization 515(1990)621

Rapid determination of clenbuterol residues in urine by high-performance liquid chromatography with on-line automated sample processing using immunoaffinity chromatography 519(1990)323 Determination of residual acrylamide monomer in solution and emulsion polymers by columnswitching high-performance liquid chromatography 519(1990)363

Liquid chromatographic determination of felypressin using a column-switching technique and post-column derivatization 521(1990)141

Analysis of carbamazepine in serum by liquid chromatography with direct sample injection and surfactant-containing eluents 535(1990)293

Liquid chromatography-mass spectrometry system using column-switching techniques 541(1991)231

Improvements in automated analysis of catecholamine and related metabolites in biological samples by column-switching highperformance liquid chromatography 541(1991)273

Dual-column high-performance liquid chromatographic cleanup procedure for the determination of polychlorinated dibenzo-*p*dioxins and dibenzofurans in fish tissue 543(1991)49

Application of an anhydrotrypsin-immobilized precolumn for selective separation of peptides having arginine or lysine at their C-termini by column-switching high-performance liquid chromatography 543(1991)59

Separation and detection of group I and II cations by ion chromatography 546(1991)229

Combination of ion-pair and column switching in high-performance liquid chromatography of tropane alkaloids 547(1991)175

Simultaneous analysis of anions and cations by single-column ion chromatography 549(1991)257

#### **Column temperature**

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

#### Column test procedure

Chromatographic characterization of silica-based reversed phases (Review) 544(1991)371

# **Competition model**

Fundamental study of hydroxyapatite highperformance liquid chromatography. II. Experimental analysis on the basis of the general theory of gradient chromatography 515(1990)91

#### **Complex formation**

Changes in the enthalpy and entropy of hydroxyl aromatics in reversed-phase liquid chromatography with  $\beta$ -cyclodextrin in the mobile phase 537(1991)61

Improvement of resolution in the capillary electrophoretic separation of catecholamines by complex formation with boric acid and control of electroosmosis with a cationic surfactant 538(1991)385

#### **Compositional distribution**

Theoretical aspects of the chromatographic analysis of heterogeneous polymers 511(1990)49

#### Computer-assisted chromatography

Probability method for pyrolysis gas chromatographic data treatment and elaboration of a computer system for the identification of polymers 520(1990)121

Computer spreadsheet calculation of the optimum temperature and column lengths for serially coupled capillary gas chromatographic columns 541(1991)59

Computer spectrochromatography. Principles and practice of multi-channel chromatographic data processing 542(1991)247

Optimized isocratic separation of major carboxylic acids in wine 542(1991)277

Optimization of chromatographic selectivity of twelve sulphonamides in reversed-phase highperformance liquid chromatography using mixture designs and multi-criteria decision making 545(1991)101

Computer-assisted retention prediction system for inorganic cyclic polyphosphates and its application to optimization of gradients in anionexchange chromatography 550(1991)5

Fully automatic high-performance liquid chromatographic optimization 550(1991)27

Fast development of a robust high-performance liquid chromatographic method for *Ginkgo biloba* based on computer simulation 550(1991)39

Resolution enhancement of chromatographic data. Considerations in achieving super-resolution with the constrained iterative relaxation method 550(1991)51

Computer simulation of isocratic retentions of alkylketones using gradient data 550(1991)77

Prediction of initial high-performance liquid chromatographic conditions for selectivity optimization in pharmaceutical analysis by an expert system approach 550(1991)87

Possibilities of enhancing the sensitivity of the determination of UV-absorbing compounds in high-performance liquid chromatography 550(1991)495

Separation and detection of oxidation products in Neurolite raw material 550(1991)549

Computer-assisted sample clean-up in liquid chromatography from thin-layer chromatographic data 550(1991)657

#### Computer-assisted method development

Computer-assisted optimization of two-factor selectivity in gas chromatography using an advanced simplex method 513(1990)13

Use of chromatographic models for computerized optimization of coupling-point pressure in dual-column gas chromatography 517(1990)161

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. I. Theory and verification 535(1990)55

Computer assisted internal standard selection for reversed-phase liquid chromatography 535(1990)199

#### **Computer-graphic analysis**

High-performance liquid chromatography of amino acids, peptides and proteins. CI. Identification and characterisation of coulombic interactive regions on sperm whale myoglobin by high-performance anion-exchange chromatography and computer-graphic analysis 507(1990)33

#### **Computer programs**

Application of a computer-assisted highperformance liquid chromatographic multiwavelength ultraviolet detection system to simultaneous toxicological drug analyses 506(1990)133

Towards a chromatographic quantitator 506(1990)265

Multiple absorbance ratio correlation — a new approach for assessing peak purity in liquid chromatography 506(1990)289

Computer-assisted choice of electrolyte systems and spacing constituents for two-dimensional capillary isotachophoresis 509(1990)287

Advances in expert systems for high-performance liquid chromatography 515(1990)13

# **Computer simulation**

Computer simulation for optimization of highperformance liquid chromatography of some phenolic pollutants 523(1990)81

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. I. Theory and verification 535(1990)55

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

Computer simulation as an aid in method development for gas chromatography. I. The accurate prediction of separation as a function of experimental conditions 541(1991)1

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

Computer simulation as an aid in method development for gas chromatography. III. Examples of its application 541(1991)35

Optimisation of frontal chromatography by partial loading 545(1991)27

Computer-aided simulation of electromigration 545(1991)225

# **Concentration detection limit**

Resolution and concentration detection limit in capillary gel electrophoresis 545(1991)177

#### **Concentration effects**

Effect of sample viscosity in high-performance size-exclusion chromatography and its control 550(1991)705

# **Concentration probability profiles**

Equilibrium elution chromatography. The column-origin boundary condition 550(1991)247

# **Concentration profiles**

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

# **Concurrent solvent evaporation**

Separation of alkanes in *Citrus* essential oils by on-line coupled high-performance liquid chromatography-high-resolution gas chromatography 514(1990)317

# Conductance, limiting ionic equivalent

Measurement of limiting ionic equivalent conductance by single-column ion chromatography 535(1990)207

# Conductance, specific

Electrodialytic eluent generation and suppression. Ultralow background conductance suppressed anion chromatography 546(1991)159

# **Conductivity detector**

Simultaneous conductivity and potentiometric detector for miniaturized liquid chromatography and flow analysis 540(1991)41

Principles and applications of ion-exclusion chromatography (Review) 546(1991)111

Comparison of gradient elution separations for organic and inorganic anions with chemically suppressed conductometric detection 546(1991)125

Practical applications of solid-phase reagent conductivity detection in ion chromatography 546(1991)189

Separation and detection of group I and II cations by ion chromatography 546(1991)229

# **Conformational analysis**

Analysis of proteins by high-performance liquid chromatography with circular dichroism spectrophotometric detection 515(1990)407

Monitoring of protein conformation by highperformance size-exclusion liquid chromatography and scanning diode array second-derivative UV absorption spectroscopy 540(1991)187

# **Conformational changes**

Elimination of the temperature-induced loss of the enantioselectivity of chemically bonded albumin 543(1991)475

# **Conformational isomers**

Multiple peak formation in reversed-phase liquid chromatography of ramipril and ramiprilate 506(1990)75

# Congo Red affinity chromatography

Purification of yeast alcohol dehydrogenase by Congo red affinity chromatography 519(1990)379

# **Continuous** extraction

Gas chromatographic and mass spectrometric determination of nitroaromatics in water 518(1990)21

# Continuous-flow fast atom bombardment

Important parameters in liquid chromatographycontinuous-flow fast atom bombardment mass spectrometry 511(1990)35

# **Continuous monitoring**

Continuous automatic monitoring of volatile organic compounds in aqueous streams by a modified purge-and-trap system 549(1991)335

# Controlled pore glass

Controlled-pore glass as a stationary phase in chromatography (Review) 544(1991)137

# Controlled thermal degradation

Controlled thermal degradation for the identification and quantification of amine N-oxides in urine 514(1990)293

# **Converse displacement**

Study of the interaction between two overloaded bands injected successively in non-linear chromatography 522(1990)1

# **Convex gradients**

Computer-assisted retention prediction system for inorganic cyclic polyphosphates and its application to optimization of gradients in anionexchange chromatography 550(1991)5

# **Cooperative binding interactions**

Investigation of liquid phase cooperative binding interactions on the capacity of insoluble affinity adsorbents 539(1991)245

# **Coordination complexes**

Identification of individual diacylglycerols by adsorption thin-layer chromatography of their coordination complexes 538(1991)373

# **Correlation chromatography**

Selective determination of trace levels of phenol in river water using electrochemical concentration

modulation correlation chromatography 506(1990)201

#### Correspondence factor analysis

Factor analysis and experiment design in highperformance liquid chromatography. X. Chemometric characterization of packings, solvents and solutes with hierarchical ascending classification and correspondence factor analysis 544(1991)393

# **Corrosion products**

Application of ion chromatography to failure analysis of electronics packaging 546(1991)347

#### Cosmetics

Gas chromatographic and mass spectral determination of aloenin in skin-care cosmetics 509(1990)377

# **Coulombic interactive regions**

High-performance liquid chromatography of amino acids, peptides and proteins. CI. Identification and characterisation of coulombic interactive regions on sperm whale myoglobin by high-performance anion-exchange chromatography and computer-graphic analysis 507(1990)33

#### Counter-current chromatography

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

Counter-current chromatography of black tea infusions 505(1990)357

Recent advances in counter-current chromatography (Review) 538(1991)3

Counter-current chromatography (Review) 538(1991)27

Dual counter-current chromatography —its applications in natural products research (Review) 538(1991)37

Applications of analytical high-speed countercurrent chromatography in natural products chemistry (Review) 538(1991)45

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). I. Design of the apparatus and studies on retention of stationary phase 538(1991)59

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). II. Speculation on the hydrodynamic mechanism in stationary phase retention 538(1991)67

Improved high-speed counter-current chromatograph with three multilayer coils connected in series. IV. Evaluation of preparative capability with large multilayer coils 538(1991)81

Laser-light-scattering detection for high-speed counter-current chromatography 538(1991)87

Improvement of on-line detection in high-speed counter-current chromatography: UV absorptiometry and evaporative light-scattering detection 538(1991)91

Systematic search for suitable two-phase solvent systems for high-speed counter-current chromatography 538(1991)99

Solvent selection guide for counter-current chromatography 538(1991)109

Separation of rare earth elements by high-speed counter-current chromatography 538(1991)133

Purification of a synthetic myristylated peptide by counter-current chromatography 538(1991)141

Purification of Food Color Red No. 106 (Acid Red) using high-speed counter-current chromatography 538(1991)149

Preparative purification of tetrabromotetrachlorofluorescein and Phloxine B by centrifugal counter-current chromatography 538(1991)157

Synthesis and characterization of Nbromoacetyl-3,3',5-triiodo-L-thyronine 538(1991)165

Semi-preparative purification of an endogenous ligand for brain serotonin-2 receptors by coil planet centrifuge counter-current chromatography 538(1991)177

Recent applications of counter-current chromatography to the isolation of bioactive natural products 538(1991)187

Applications of high-speed counter-current chromatography for the separation and isolation of natural products 538(1991)193

Isolation of bacitracins A and F by high-speed counter-current chromatography 538(1991)203

Foam counter-current chromatography of bacitracin. II. Continuous removal and concentration of hydrophobic components with nitrogen gas and distilled water free of surfactants or other additives 538(1991)213

Studies on the preparative capability of the horizontal flow-through coil planet centrifuge and high-performance liquid chromatography in the separation of polar compounds from *Oxytropis ochrocephala* Bunge 538(1991)219

Separation of quassinoids from *Ailanthus altissima* by high-speed counter-current chromatography 538(1991)227

Practical approach to high-speed counter-current chromatography 550(1991)677

Protein separation with aqueous-aqueous polymer systems by two types of counter-current chromatographs 550(1991)695

# **Counter-current distribution**

Settling-time dependence of rat bone marrow cell partition and counter-current distribution in charge-sensitive aqueous two-phase systems. Relationship with the cell partitioning mechanism 504(1990)79

Aqueous two-phase systems with increased density for partition of heavy particles 522(1990)235

Forced-flow multi-phase liquid extraction, a separation method based on relative and absolute counter-current distribution. I. Description of the method and basic possibilities 523(1990)43

Subfractions of membranes from calf brain synaptosomes obtained and studied by liquid– liquid partitioning 547(1991)79

# **Counter-current fractional extraction**

Continuous separation of lanthanides by countercurrent fractional extraction 538(1991)125

# **Counter** ions

Determination of 10-camphorsulphonates in pharmaceutical formulations by high-performance liquid chromatography 511(1990)367

Change of counter ion concentration and of resolving power in a chromatofocusing run 519(1990)217

Multivalent ion-exchange model of biopolymer chromatography for mass overload conditions 548(1991)61

# **Coupling point pressure**

Use of chromatographic models for computerized optimization of coupling-point pressure in dual-column gas chromatography 517(1990)161

# **Coupling yield**

Effect of type and concentration of coupling buffer on coupling yield in the coupling of proteins to a tresyl-activated support for affinity chromatography 513(1990)367

# **Craig distribution**

Preparative high-performance liquid chromatography based on reversed-phase gradient elution. Optimum experimental conditions for heavily overloaded separation 540(1991)21

# Critical micelle concentration

Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

# Critical temperature

Retention studies in supercritical fluid chromatography 505(1990)161

# Cross-axis synchronous flow-through coil planet centrifuge

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). I. Design of the apparatus and studies on retention of stationary phase 538(1991)59

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). II. Speculation on the hydrodynamic mechanism in stationary phase retention 538(1991)67

# Cross-linking

Chromatographic and physical studies of tropomyosin in aqueous-organic media at low pH 543(1991)327

# Cryogenic trapping

Isotope dilution gas chromatography-mass spectrometry in the determination of benzene, toluene, styrene and acrylonitrile in mainstream cigarette smoke 503(1990)359

Cryogenic-focusing, ohmically heated on-column trap for capillary gas chromatography 517(1990)67

# Crystal structure

Fundamental study of hydroxyapatite highperformance liquid chromatography. III. Direct

experimental confirmation of the existence of two types of adsorbing surface on the hydroxyapatite crystal 515(1990)125

## Curie-point pyrolysis

Automatic sampler for Curie-point pyrolysis-gas chromatography with on-column introduction of pyrolysates 518(1990)9

#### Current

Determination of pI by measuring the current in the mobilization step of high-performance capillary isoelectric focusing. Analysis of transferrin forms 545(1991)403

# **Cyanidation process liquors**

Determination of free cyanide in gold cyanidation process liquors by ion-interaction chromatography with post-column derivatization 550(1991)559

#### Cyano-bonded silica

Characterization of cyano bonded silica phases from solid-phase extraction columns. Correlation of surface chemistry with chromatographic behavior 542(1991)205

#### $\beta$ -Cyclodextrin bonded phases

Effect of the configuration of the substituents of derivatized  $\beta$ -cyclodextrin bonded phases on enantioselectivity in normal-phase liquid chromatography 540(1991)113

#### Cyclohexane extraction

Gas chromatographic analysis and gas chromatographic-mass spectrometric identification of components in the cyclohexaneextractable fraction from contaminated sediment samples 508(1990)159

#### Cylindrical lens

Use of a focusing cylindrical lens for increasing sensitivity in the optical detector of a capillary flow-through cell 515(1990)357

# D

# **Dairy products**

Determination of iodide in dairy products and table salt by ion chromatography with electrochemical detection 518(1990)268

#### Darcy's law

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical CO<sub>2</sub> 545(1991)135

#### Data acquisition

Data acquisition and digital filtering in analytical isotachophoresis 545(1991)337

## Deactivated metal capillary columns

Application of a metal capillary column in gas chromatographic determination of catechol-Omethyltransferase activity 549(1991)434

#### Dead time

Temperature dependence of dead time as determined by methane retention in open-tubular capillary gas chromatography 547(1991)239

# Deconvolution

Resolution enhancement of chromatographic data. Considerations in achieving super-resolution with the constrained iterative relaxation method 550(1991)51

#### **Deflection selectivity**

Two-dimensional field-flow fractionation 504(1990)247

#### Deflocculating solvent

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

#### Dehydration

Investigation of phase transitions in the  $CaSO_4(s)-H_2O(g)$  system by chromatographic methods 520(1990)157

#### Delay volume

Compensated delay volume as an approach to improve the inter-laboratory transferability of gradient high-performance liquid chromatographic assays 540(1991)373

# Denaturation

Analysis of protein denaturation by highperformance continuous differential viscometry 536(1991)113

# **Densimeter detector**

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

# Densitometry

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

# Derivatization, electrophoresis

Free solution capillary electrophoresis and micellar electrokinetic resolution of amino acid enantiomers and peptide isomers with L- and D-Marfey's reagents 516(1990)241

Capillary electrophoretic separations of peptides using micelle-forming compounds and cyclodextrins as additives 519(1990)189

Free-solution reactor for post-column fluorescence detection in capillary zone electrophoresis 540(1991)343

# Derivatization, GC

Simultaneous gas chromatographic determination of cyanide, iodide, nitrite, sulphide and thiocyanate anions by derivatization with pentafluorobenzyl bromide and using a kryptand as phase-transfer catalyst 502(1990)257

Determination of primary and secondary aliphatic amines in the environment as sulphonamide derivatives by gas chromatography-mass spectrometry 503(1990)369

Quantitative gas chromatographic analysis of mandelic acid enantiomers 504(1990)287

Separation and quantitation of phenolic compounds in mainstream cigarette smoke by capillary gas chromatography with mass spectrometry in the selected-ion mode 505(1990)365

Separation of carboxylic acid enantiomers by gas chromatography after rapid derivatization with (*R*)- or (*S*)-1-phenylethylamine after activation by ethyl chloroformate 508(1990)333 Pentafluorophenyldiazoalkanes as novel derivatization reagents for the determination of sensitive carboxylic acids by gas chromatography-negative-ion mass spectrometry 508(1990)349

Gas chromatographic determination of sterols in fat-soluble concentrates obtained from plant materials 509(1990)79

Gas chromatographic and mass spectral determination of aloenin in skin-care cosmetics 509(1990)377

Gas chromatographic determination of 2ethylhexanol and 2-ethylhexanoic acid as derivatives suitable for electron-capture and nitrogen-phosphorus detection after single reaction with heptafluorobutyrylimidazole 509(1990)383

Determination of hydrazine in hydralazine by capillary gas chromatography with nitrogenselective detection after benzaldehyde derivatization 511(1990)303

Heptafluorobutyrylation of trichothecenes using a solid-phase catalyst 511(1990)384

Gas chromatographic method for the assay of aliphatic and aromatic sulphonates as their *tert.*-butyldimethylsilyl derivatives 513(1990)61

Simultaneous determination of neutral and amino sugars in biological materials 513(1990)71

Preparation of pyrrolidides from fatty acids via trimethylsilyl esters for gas chromatographicmass spectrometric analysis 513(1990)405

Rapid method for esterification of trace levels of carboxylic acids for analysis by gas chromatography–electron-capture detection 516(1990)427

Determination of clenbuterol in bovine plasma and tissues by gas chromatography-negative-ion chemical ionization mass spectrometry 518(1990)41

Gas chromatographic determination of phenol compounds with automatic continuous extraction and derivatization 518(1990)59

High-resolution gas chromatographic resolution of chiral primary alcohols and acids as their diastereomeric 1-phenylethyl amides 519(1990)263

Simultaneous determination of organic acids and sugars in apples by gas-liquid chromatography 520(1990)201

Gas chromatographic-mass spectrometric identification of the fatty acids in borage oil using the picolinyl ester derivatives 521(1990)89

Gas chromatographic separation of diastereomeric esters of  $\alpha$ -alkyl- $\alpha$ -amino acids on dimethylpolysiloxane 521(1990)109

Gas chromatography-mass spectrometry of conjugated dienes by derivatization with 4methyl-1,2,4-triazoline-3,5-dione 522(1990)295

Gas chromatographic determination of airborne dialkyltin dichlorides as hydride derivatives 523(1990)273

Use of radio-gas chromatography and tritium label to optimize derivatization procedures 530(1990)1

Capillary gas chromatographic behavior of stereoisomeric bile acids with a *vicinal* glycol structure by their "mixed" alkylboronate derivatives 537(1991)345

Gas chromatographic-mass spectrometric determination of oxolinic acid in fish using selected ion monitoring 538(1991)259

Determination of phosgene as its N,N,N',N'tetraethylurea derivative by gas chromatography 538(1991)435

Determination of patulin by capillary gas chromatography of the heptafluorobutyrate derivative 538(1991)441

Release of 2-aminofluorene from N-(deoxyguanosin-8-yl)-2-aminofluorene by hydrazinolysis 538(1991)447

Determination of primary and secondary amines in foodstuffs using gas chromatography and chemiluminescence detection with a modified thermal energy analyser 539(1991)141

Gas chromatographic analysis of tropic, benzoic and cinnamic acids, biosynthetic tropane alkaloid precursors 539(1991)232

Location of double bonds in polyunsaturated fatty acids by gas chromatography-mass spectrometry after 4,4-dimethyloxazoline derivatization 541(1991)89 Re-examination of the fatty acid composition of *Biota orientalis* seed oil by gas chromatographymass spectrometry of the picolinyl ester derivatives 543(1991)257

Determination of volatile aliphatic aldehydes in the headspace of heated food oils by derivatization with 2-aminoethanethiol 547(1991)291

Gas chromatographic-mass spectrometric separation and characterization of methyl trimethylsilyl monosaccharides obtained from naturally occurring glycosides and carbohydrates 547(1991)299

Derivatization and gas chromatographic determination of hydroxycarboxylic acids treated with chloroformates 547(1991)307

Determination of 19-nortestosterone, testosterone and trenbolone by gas chromatography-negativeion mass spectrometry after formation of the pentafluorobenzylcarboxymethoximetrimethylsilyl derivatives 547(1991)325

Determination of nor-nitrogen mustard hydrochloride using gas chromatography with flame ionization detection 547(1991)501

Cyclic aryleneazachalcogenenes. IV. Gas chromatographic properties of polyfluorinated 2,1,3-benzoselenadiazoles 549(1991)429

# Derivatization, LC

Phthalimidylbenzenesulphonyl chlorides as fluorescence labelling reagents for amino acids in high-performance liquid chromatography 502(1990)178

Automated precolumn derivatization of amino acids with *ortho*-phthalaldehyde using a hollow-fibre membrane reactor 502(1990)317

Improved automated precolumn derivatization reaction of fatty acids with bromomethylmethoxycoumarin as label 502(1990)423

Reversed-phase high-performance liquid chromatographic separation of the enantiomers of N-[4,4-di(3-methylthien-2-yl)-but-3-enyl] nipecotic acid on a Pirkle-type phenylglycine stationary phase 503(1990)115

High-performance liquid chromatographic determination of selected amino acids in rat brain

by precolumn derivatization with phenylisothiocyanate 503(1990)177

Determination of N-acetyl- and Nglycolylneuraminic acids in glycoconjugates by reversed-phase high-performance liquid chromatography with ultraviolet detection 503(1990)421

Automated amino acid analysis using precolumn derivatization with dansylchloride and reversedphase high-performance liquid chromatography 504(1990)129

Precolumn derivatization technique for highperformance liquid chromatographic determination of penicillins with fluorescence detection 504(1990)359

High-performance liquid chromatographic determination of guanidino compounds by automated pre-column fluorescence derivatization 506(1990)279

Indirect fluorometric detection in open-tubular capillary column chromatography 506(1990)401

Chiral chloroformates as transparent reagents for the resolution of metoprolol enantiomers by reversed-phase liquid chromatography 506(1990)593

Development and validation of a highperformance liquid chromatographic method for the determination of desmosines in tissues 507(1990)51

Fully automated amino acid analysis for protein and peptide hydrolysates by precolumn derivatization with 9-fluorenyl methylchloroformate and 1-aminoadamantane 507(1990)67

Determination of the monoamine oxidase B inhibitor Ro 19-6327 in plasma by highperformance liquid chromatography using precolumn derivatization with fluorescamine and fluorescence detection 507(1990)187

Mechanistic study on the derivatization of aliphatic carboxylic acids in aqueous non-ionic micellar systems 507(1990)351

High-performance liquid chromatographic determination of aliphatic thiols with aroylacrylic acids as fluorogenic precolumn derivatization reagents 507(1990)451 2-(2,3-Naphthalimino)ethyl

trifluoromethanesulphonate as a highly reactive ultraviolet and fluorescent labelling agent for the liquid chromatographic determination of carboxylic acids 508(1990)133

Liquid chromatographic evaluation of chiral derivatizing reagents for the resolution of amine and alcohol enantiomers 508(1990)220

Simultaneous high-performance liquid chromatographic determination of amino acids in a dried blood spot as a neonatal screening test 511(1990)131

Naphthalene- and anthracene-2,3-dialdehyde as precolumn labelling reagents for primary amines using reversed- and normal-phase liquid chromatography with peroxyoxalate chemiluminescence detection 511(1990)155

Normal-phase chromatography and post-column colorimetric detection of abamectin-8,9-oxide 511(1990)353

Analysis of amino acids by liquid chromatography after pre-column derivatization with 4-nitrophenylisothiocyanate 512(1990)283

Preparation of ethylenediaminephosphoramidates of nucleotides and derivatization with fluorescein isothiocyanate 512(1990)409

High-performance liquid chromatographic determination of malonaldehyde using *p*-nitrophenylhydrazine as a derivatizing reagent 514(1990)29

Identification of products formed during UV irradiation of tamoxifen and their use for fluorescence detection in high-performance liquid chromatography 514(1990)179

Application of micro-scale liquid chromatography with fluorescence detection to the determination of thiols 514(1990)189

Amino acid analysis by high-performance liquid chromatography with methanesulfonic acid hydrolysis and 9-fluorenylmethylchloroformate derivatization 514(1990)227

Ferroceneboronic acid as a derivatization reagent for the determination of brassinosteroids by high-performance liquid chromatography with electrochemical detection 515(1990)227

Polymeric dimethylaminopyridinium reagents for derivatization of weak nucleophiles in highperformance liquid chromatography-ultraviolet/ fluorescence detection 515(1990)337

Direct injection of blood samples into a highperformance liquid chromatographic adenine analyser to measure adenine, adenosine and the adenine nucleotides with fluorescence detection 515(1990)363

Determination of malonaldehyde in oxidized biological materials by high-performance liquid chromatography 515(1990)391

Determination of methamphetamine, amphetamine and piperidine in human urine by high-performance liquid chromatography with chemiluminescence detection 515(1990)459

Rapid determination by high-performance liquid chromatography of free fatty acids released from rat platelets after derivatization with monodansylcadaverine 515(1990)467

Separation of peptide diastereomers by reversedphase high-performance liquid chromatography and its applications. IV. New derivatization reagent for the enantiomeric analysis of  $\alpha$ - and  $\beta$ -amino acids 515(1990)475

Determination of pseudouridine in human urine and serum by high-performance liquid chromatography with post-column fluorescence derivatization 515(1990)495

*o*-Phthalaldehyde post-column derivatization for the determination of gizzerosine in fish meal by high-performance liquid chromatography 515(1990)527

Formazan derivatives as the precolumn derivatization reagents in a coupled highperformance liquid chromatographicspectrophotometric system for trace metal determination 515(1990)603

Determination of urinary free noradrenaline by reversed-phase high-performance liquid chromatography with on-line extraction and fluorescence derivatization 515(1990)621

High-performance liquid chromatographic determination of proteins by post-column fluorescence derivatization with thiamine reagent 518(1990)141 Sensitive analysis of phospholipid molecular species by high-performance liquid chromatography using fluorescent naproxen derivatives of diacylglycerols 518(1990)157

Investigation of interfering products in the highperformance liquid chromatographic determination of polyamines as benzoyl derivatives 518(1990)264

Derivatization-liquid chromatographic assay of chloroacetaldehyde in biological samples 518(1990)385

Application de la dérivation par l'isocyanate de phényle à l'analyse chromatographique de molécules phénoliques (antioxydants) 519(1990)337

High-performance liquid chromatographic method for direct resolution of the indobufen enantiomeric components 520(1990)373

Separation of hydroxylated polyenoic fatty acid enantiomers on Pirkle-type chiral phase highperformance liquid chromatographic columns 520(1990)391

Aldehyde and nucleotide separations by highperformance liquid chromatography. Application to phenylhydrazine-induced damage of erythrocytes and reticulocytes 520(1990)411

Liquid chromatographic determination of felypressin using a column-switching technique and post-column derivatization 521(1990)141

Study of the stereochemistry of ethambutol using chiral liquid chromatography and synthesis 522(1990)195

Liquid chromatographic determination of free and total fatty acids in milk and milk products as their 2-nitrophenylhydrazides 523(1990)235

Determination of sterigmatocystin in fermentation broths by reversed-phase highperformance liquid chromatography using postcolumn fluorescence enhancement 523(1990)305

Determination of collagen and protein turnover by high-performance liquid chromatography 526(1990)383

Determination of prostaglandins in human seminal fluid by solid-phase extraction, pyridinium dichromate derivatization and highperformance liquid chromatography 529(1990)21 High-performance liquid chromatography with chemiluminescence detection of serum levels of pre-column derivatized fluoropyrimidine compounds 530(1990)57

Post-column reaction detection and flow injection analysis 535(1990)41

Resolution of enantiomeric triols, triolhydroxyethylthioethers, and methoxy-triols derived from three benzo[*a*]pyrene diol-epoxides by chiral stationary phase high-performance liquid chromatography 535(1990)239

High-performance liquid chromatographic separation of the three stereoisomers of diaminopimelic acid in hydrolysed bacterial cells 536(1991)211

High-performance liquid chromatographic method for the determination of prolyl peptides in urine 536(1991)337

Solid-phase reagent containing the 3,5dinitrophenyl tag for the improved derivatization of chiral and achiral amines, amino alcohols and amino acids in high-performance liquid chromatography with ultraviolet detection 537(1991)123

Automated phenylthiocarbamyl amino acid analysis of carboxypeptidase/aminopeptidase digests and acid hydrolysates 537(1991)153

Separation of lanthanides and yttrium as anionic complexes by isocratic ion-interaction chromatography 537(1991)277

Post-column oligosaccharide dehydrogenase reactor for coulometric detection of maltooligosaccharides in a liquid chromatographic system 537(1991)443

Separation of rare earth elements by high-speed counter-current chromatography 538(1991)133

Determination of trace elements by ion chromatography. I. Beryllium 538(1991)365

Reversed-phase high-performance liquid chromatographic separation of the enantiomers of trimetoquinol hydrochloride by derivatization with 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl isothiocyanate and application to the optical purity testing of drugs 539(1991)71

Simultaneous determination of molybdenum, vanadium, gallium, copper, iron and indium as

8-quinolinolate complexes by high-performance liquid chromatography 539(1991)225

Amino acid analysis using derivatisation with 9-fluorenylmethyl chloroformate and reversedphase high-performance liquid chromatography 540(1991)177

Liquid chromatography-mass spectrometry studies of 9-fluorenylmethyl chloroformate derivatives of polyamines 540(1991)199

Optimized high-performance liquid chromatographic procedure for the separation and quantification of the main folacins and some derivatives. I. Chromatographic system 540(1991)207

Determination of glycerol in foods by highperformance liquid chromatography with fluorescence detection 541(1991)265

Resolution of 2,3,4,6-tetra-O-acetyl- $\beta$ -Dglucopyranosylisothiocyanate derivatives of  $\alpha$ -methyl amino acid enantiomers by highperformance liquid chromatography 541(1991)297

Screening method for phenoxy acid herbicides in ground water by high-performance liquid chromatography of 9-anthryldiazomethane derivatives and fluorescence detection 541(1991)359

Determination of non-ionic surfactants with ester groups by high-performance liquid chromatography with post-column derivatization 541(1991)431

High-performance liquid chromatographic assay of thiomersal (thimerosal) as the ethylmercury dithiocarbamate complex 542(1991)137

High-performance liquid chromatographic determination of biotin in pharmaceutical preparations by post-column fluorescence reaction with thiamine reagent 542(1991)365

Preparative liquid chromatographic separation of isomers of 4-amino-3-(4-chlorophenyl)butyric acid 542(1991)502

Assay for both ascorbic and dehydroascorbic acid in dairy foods by high-performance liquid chromatography using precolumn derivatization with methoxy- and ethoxy-1,2-phenylenediamine 543(1991)367

Progress in optimization of transition metal cation chromatography and its application to analysis of silicon wafer contamination 546(1991)243

Analysis and fractionation of natural source diacylglycerols as urethane derivatives by reversed-phase high-performance liquid chromatography 547(1991)89

High-performance liquid chromatographic determination of low levels of primary and secondary amines in aqueous solutions including 2-amino-2-methylpropanol by pre-column derivatisation to sulphonamides 547(1991)447

Peptide maps at picomolar levels obtained by reversed-phase high-performance liquid chromatography and pre-column derivatization with phenyl isothiocyanate. Microsequencing of phenylthiocarbamyl peptides 548(1991)303

High-performance liquid chromatographic determination of peptides in biological fluids by automated pre-column fluorescence derivatization with fluorescamine 548(1991)319

High-performance liquid chromatographic separation of modified and native melittin following transglutaminase-mediated derivatization with a dansyl fluorescent probe 548(1991)351

Determination of free cyanide in gold cyanidation process liquors by ion-interaction chromatography with post-column derivatization 550(1991)559

Use of Ce(IV) oxidizing agent for the derivatization of polycyclic aromatic hydrocarbons for liquid chromatography-electrochemical detection 550(1990)585

Confirmation of domoic acid in shellfish using butyl isothiocyanate and reversed-phase liquid chromatography 550(1991)595

Chiral separation of ibutilide enantiomers by derivatization with 1-naphthyl isocyanate and high-performance liquid chromatography on a Pirkle column 550(1991)621

## Derivatization, SFC

Separation of amphetamines by supercritical fluid chromatography 515(1990)385

Derivatization of hydroxyeicosatetraenoic acid methyl esters with pentafluorobenzoic anhydride and analysis with supercritical fluid chromatography-chemical ionization mass spectrometry 543(1991)405

# Derivatization, TLC

2,4-Dinitrophenylpyridium chloride, a novel and versatile reagent for the detection of amino acids, primary and secondary amines, thiols, thiolactones and carboxylic acids during planar chromatography 504(1990)456

#### **Desirability functions**

Multiple-criteria optimization 550(1991)15

## Desorption

Improvement of activated carbon for air sampling 503(1990)33

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

## **Desorption kinetics**

Kinetic behaviour of a novel matrix ion exchanger, carboxymethyl-HVFM operated at high flow-rate 539(1991)255

#### Detection, computer-aided

Post-column continuous-flow analysis combined with reversed-phase líquid chromatography and computer-aided detection for the characterisation of peptides 535(1990)33

#### Detection agents, TLC

Localization of amino acids on thin-layer chromatograms with acetylacetone-formaldehyde reagent 537(1991)494

# **Detection limit**

Resolution and concentration detection limit in capillary gel electrophoresis 545(1991)177

Possibilities of enhancing the sensitivity of the determination of UV-absorbing compounds in high-performance liquid chromatography 550(1991)495

#### **Detection profiles**

Computer spectrochromatography. Principles and practice of multi-channel chromatographic data processing 542(1991)247

#### Detection sensitivity

Optimization of detection sensitivity in the capillary electrophoresis of inorganic anions 546(1991)431

## Detector cell design

Responses of different UV-visible detectors in high-performance liquid chromatographic measurements when the absolute number of moles of an analyte is measured 518(1990)135

# **Detector design**

Evaluation of an alternating current plasma emission detector for high-performance liquid chromatography 513(1990)159

# Detectors

Towards a chromatographic quantitator 506(1990)265

# **Detectors**, electrophoresis

Detection and quantification of capillary electrophoresis zones by fluorescence microscopy 502(1990)247

Capillary zone electrophoretic separation of chlorophenols in industrial waste water with on-column electrochemical detection 514(1990)389

Capillary gel electrophoresis for DNA sequencing. Laser-induced fluorescence detection with the sheath flow cuvette 516(1990)61

Static and scanning array detection in capillary electrophoresis-mass spectrometry 516(1990)147

Study of isotachophoretic separation behaviour of metal cations by means of particle-induced X-ray emission. I. Separation of twenty metal cations using an acetic acid buffer system and  $\alpha$ -hydroxyisobutyric acid complex-forming system 538(1991)413

On-line multichannel Raman spectroscopic detection system for capillary zone electrophoresis 540(1991)355

Z-Shaped flow cell for UV detection in capillary electrophoresis 543(1991)439

Isotachophoresis in open-tubular fused-silica capillaries with on-column multi-wavelength detection 545(1991)299

Axial-beam absorbance detection for capillary electrophoresis 550(1991)831

# **Detectors**, FFF

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

## **Detectors**, FIA

Simultaneous conductivity and potentiometric detector for miniaturized liquid chromatography and flow analysis 540(1991)41

## Detectors, GC

Simple, direct gas chromatography-mass spectrometry interface for the ion trap detector 504(1990)429

Determination of aliphatic amines by gas and high-performance liquid chromatography 507(1990)241

Comparison of discharge tubes for deuteriumspecific gas chromatographic detection with a microwave-induced plasma 508(1990)187

Application of gas chromatography with electroncapture detection to trace analysis of halogenated compounds 509(1990)115

Determination of hydrazine in hydralazine by capillary gas chromatography with nitrogenselective detection after benzaldehyde derivatization 511(1990)303

Trace determination of lower volatile fatty acids in sediments by gas chromatography with chemically bonded FFAP columns 511(1990)317

Flame infrared emission-flame ionization detector for gas chromatography 513(1990)21

Determination of sunscreen agents in cosmetic products by gas chromatography and gas chromatography-mass spectrometry 513(1990)321

Oxygen enhancement of thermal electron capture in a non-radioactive discharge source for a quadrupole mass spectrometer 517(1990)87

Pesticide analysis by gas chromatography with a novel atomic emission detector 517(1990)131

Sheathed-flow hydrogen atmosphere flame ionization detector for gas chromatography 518(1990)297

Calcul de la composition, avec une constante de proportionnalité, de mélanges à partir du chromatogramme obtenu par détection partagée entre deux détecteurs 519(1990)159

Radiofrequency detector for gas chromatography 520(1990)97

Determination of primary and secondary amines in foodstuffs using gas chromatography and chemiluminescence detection with a modified thermal energy analyser 539(1991)141

Effect of temperature on the sensitivity of the photoionization detector 540(1991)441

Determination of dimethyl sulphate in air by gas chromatography with flame photometric detection 541(1991)459

Gas chromatographic system for the identification of halogenated pesticides by retention indices using *n*-alkanes as standards 547(1991)355

Study of large sample volume injection in a capillary gas chromatographic–Fourier transform infrared system using a retention gap column 547(1991)494

Evaluation of gas chromatography–Fourier transform infrared spectroscopy–mass spectrometry for analysis of phenolic compounds 549(1991)297

Cyclic aryleneazachalcogenenes. IV. Gas chromatographic properties of polyfluorinated 2,1,3-benzoselenadiazoles 549(1991)429

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

## **Detectors**, LC

Determination of biopolymer (protein) molecular weights by gradient elution, reversed-phase high-performance liquid chromatography with low-angle laser light scattering detection 502(1990)21

Ion chromatography with ultraviolet and amperometric detection for iodide and thiocyanate in concentrated salt solutions 502(1990)121

Determination of chlorotriazines and their photolysis products by liquid chromatography with photodiode-array and thermospray mass spectrometric detection 502(1990)275

Sensitive, indirect photometric detector for high-performance liquid chromatography using a light-emitting diode 502(1990)305

Improvements in the separation and detection of acetylcholine and choline using liquid

chromatography and electrochemical detection 502(1990)337

Identification and determination of sulphamethazine and N<sup>4</sup>-acetylsulphamethazine in meat by high-performance liquid chromatography with photodiode-array detection 502(1990)371

Evaluation of refractive index artifacts in liquid chromatographic absorbance detection. Extension to non-ideal injection and gradient elution 503(1990)127

Post-column adjustment of conditions for peroxyoxalate chemiluminescence detection for high-performance liquid chromatography 503(1990)155

Studies on the uptake of N-methylisoquinolinium ion into rat striatal slices using high-performance liquid chromatography with fluorimetric detection 503(1990)189

High-performance liquid chromatography of clindamycin and clindamycin phosphate with electrochemical detection 503(1990)217

Determination of iron(III) ion using ion chromatography with electrochemical detection and its application to the assay of the ferroxidase activity of ceruloplasmin 503(1990)237

Adduct formation identification between phenyl glycidyl ether and 2'-deoxyadenosine and thymidine by chromatography, mass spectrometry and nuclear magnetic resonance spectroscopy 504(1990)113

High-performance liquid chromatographic postcolumn reaction system for the electrochemical detection of ascorbic acid and dehydroascorbic acid 504(1990)434

Design of a photoionization detector for highperformance liquid chromatography using an automated liquid-to-vapor phase interface and application to phenobarbital in an animal feed and to amantadine 505(1990)319

Application of a computer-assisted highperformance liquid chromatographic multiwavelength ultraviolet detection system to simultaneous toxicological drug analyses 506(1990)133

Indirect fluorometric detection in open-tubular capillary column chromatography 506(1990)401

Application of low-angle laser light scattering detection in the field of biochemistry. Review of recent progress 506(1990)409

Determination of amoxicillin in plasma by highperformance liquid chromatography with fluorescence detection after on-line oxidation 506(1990)417

Selective post-column liquid chromatographic determination of sugars in spent sulphite liquor with two enzymatic electrochemical detectors in parallel 506(1990)423

Coupling of microcolumn high-performance liquid chromatography with Fourier transform infrared spectrometry 506(1990)443

Use of high-performance liquid chromatography in the pharmaceutical industry 507(1990)141

Determination of the monoamine oxidase B inhibitor Ro 19-6327 in plasma by highperformance liquid chromatography using precolumn derivatization with fluorescamine and fluorescence detection 507(1990)187

Determination of aliphatic amines by gas and high-performance liquid chromatography 507(1990)241

Direct injection high-performance liquid chromatographic assay of morphine with electrochemical detection, a polymeric column and an alkaline eluent 507(1990)253

Optimization of multidimensional highperformance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection 507(1990)267

Combination of positron emission tomography with liquid chromatography in neuropharmacologic research 507(1990)303

Optimization of electrochemical detection in the high-performance liquid chromatography of lignin phenolics from lignocellulosic by-products 507(1990)439

Solid-surface room-temperature phosphorescence detection for high-performance liquid chromatography 508(1990)37

Direct and reverse flow-through heterogeneous scintillation counting of radiolabelled amino acids

using post-column solvent segmentation 508(1990)301

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Analysis of  $\delta$ -L- $\alpha$ -aminoadipyl-L-cysteinyl-D-valine by ion chromatography and pulsed amperometric detection 509(1990)347

Separation and indirect detection of small-chain peptides using chromophoric mobile phase additives 509(1990)357

Simultaneous measurement of L-DOPA, its metabolites and carbidopa in plasma of Parkinsonian patients by improved sample pretreatment and high-performance liquid chromatographic determination 511(1990)167

Neutral, alkaline and difference ultraviolet spectra of secondary metabolites from *Penicillium* and other fungi, and comparisons to published maxima from gradient high-performance liquid chromatography with diode-array detection 511(1990)195

Binding of sodium dodecyl sulphate to an integral membrane protein and to a water-soluble enzyme. Determination by molecular-sieve chromatography with flow scintillation detection 512(1990)3

Preparation of ethylenediaminephosphoramidates of nucleotides and derivatization with fluorescein isothiocyanate 512(1990)409

Evaluation of an alternating current plasma emission detector for high-performance liquid chromatography 513(1990)159

Determination of enantiomeric purity of paclobutrazol and fluazifop-P-butyl using a diode-laser-based polarimetric high-performance liquid chromatography detector 513(1990)209

Optimization of high-performance liquid chromatographic analysis with UV detection: light-scattering detection to establish the coelution of UV- and non-UV-absorbing constituents 513(1990)354

Filled tubes as generation elements in electrokinetic detection in liquid chromatography 514(1990)161

Electrochemical detection for high-performance liquid chromatography using a Kel-F waxgraphite electrode 514(1990)171

Constant-potential amperometric detector for carbohydrates at a nickel(III) oxide electrode for micro-scale flow-injection analysis and highperformance liquid chromatography 515(1990)213

High-performance liquid chromatography of thiols with differential pulse polarographic detection of the catalytic hydrogen evolution current 515(1990)257

Detection and identification modes for the highly sensitive and simultaneous determination of various biogenic amines by coulometric highperformance liquid chromatography 515(1990)265

Use of a focusing cylindrical lens for increasing sensitivity in the optical detector of a capillary flow-through cell 515(1990)357

Analysis of proteins by high-performance liquid chromatography with circular dichroism spectrophotometric detection 515(1990)407

Determination of  $\alpha$ -tocopherol, free cholesterol, esterified cholesterols and triacylglycerols in human lipoproteins by high-performance liquid chromatography 515(1990)585

Enantiomeric resolution of amino acid derivatives on molecularly imprinted polymers as monitored by potentiometric measurements 516(1990)323

Chemiluminescence detection of free fatty acids by high-performance liquid chromatography with immobilized enzymes 516(1990)450

Responses of different UV-visible detectors in high-performance líquid chromatographic measurements when the absolute number of moles of an analyte is measured 518(1990)135

Electrochemical enhancement of highperformance liquid chromatography-UV detection for determination of phenylpropanolamine 518(1990)167

Aromatic ring-type analysis of complex hydrocarbon mixtures by high-performance liquid chromatography with photodiode-array detection and curve resolution 520(1990)383 Post-column reaction detection and flow injection analysis 535(1990)41

Analysis of protein denaturation by highperformance continuous differential viscometry 536(1991)113

Isocratic high-performance liquid chromatography-photodiode-array detection method for determination of lysine- and argininevasopressins and oxytocin in biological samples 536(1991)137

Refractive index gradient detection of biopolymers separated by high-temperature liquid chromatography 536(1991)289

Analysis of <sup>55</sup>Fe-labeled hydroxamate siderophores by high-performance liquid chromatography 537(1991)259

Laser-light-scattering detection for high-speed counter-current chromatography 538(1991)87

Improvement of on-line detection in high-speed counter-current chromatography: UV absorptiometry and evaporative light-scattering detection 538(1991)91

Determination of pituitary and recombinant human growth hormone molecular weights by modern high-performance liquid chromatography with low angle laser light scattering detection 539(1991)91

Simultaneous conductivity and potentiometric detector for miniaturized liquid chromatography and flow analysis 540(1991)41

Monitoring of protein conformation by highperformance size-exclusion liquid chromatography and scanning diode array second-derivative UV absorption spectroscopy 540(1991)187

Selective determination of altertoxins by highperformance liquid chromatography with electrochemical detection with dual "in-series" electrodes 540(1991)376

Ultrasonic nebulizer interface system for coupling liquid chromatography and electrothermal atomic absorption spectrometry 541(1991)243

Sensitivity of electrokinetic detection of acidic aromatic nitro derivatives using column as a detector 541(1991)257

Improvements in automated analysis of catecholamine and related metabolites in biological samples by column-switching highperformance liquid chromatography 541(1991)273

Electrochemical detection of oligopeptides through the precolumn formation of biuret complexes 542(1991)345

High-performance liquid chromatography of sulfur-containing amino acids and related compounds with amperometric detection at a modified electrode 543(1991)226

Twenty years of ion chromatography (Review) 546(1991)3

Comparison of gradient elution separations for organic and inorganic anions with chemically suppressed conductometric detection 546(1991)125

Detection in ion chromatography (Review) , 546(1991)175

Recent advances in the simultaneous determination of anions and silica in high-purity water 546(1991)209

Optimization of Nafion-coated electrodes for selective detection in high-performance liquid chromatography 547(1991)1

The speciation of iron, manganese, phosphorus and platinum in aqueous solutions by using ion chromatography coupled with an element selective detector 547(1991)211

Two-dimensional viscous flow analysis in a micro flow-cell of an ultraviolet absorption detector for high-performance liquid chromatography 549(1991)101

Bioanalysis of the neuropeptide des-enkephalin-γendorphin by high-performance liquid chromatography with on-line sample pretreatment using gel permeation and solidphase isolation 549(1991)185

Separation and identification of sulfurized alkylphenols in oil by high-performance liquid chromatography with evaporative light scattering and mass spectrometric detection 549(1991)247

Standardization of a multi-wavelength UV detector for liquid chromatography-based toxicological analysis 550(1991)449

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

Possibilities of enhancing the sensitivity of the determination of UV-absorbing compounds in high-performance liquid chromatography 550(1991)495

Use of Ce(IV) oxidizing agent for the derivatization of polycyclic aromatic hydrocarbons for liquid chromatography-electrochemical detection 550(1990)585

# **Detectors**, SFC

Supercritical fluid chromatography with lightscattering detection. I. Preliminary results of the analysis of polar compounds with packed columns 505(1990)191

Ion mobility detection of polydimethylsilicone oligomers following supercritical fluid chromatographic separation 505(1990)215

Analysis of sugars by supercritical fluid chromatography using polar packed columns and light-scattering detection 505(1990)299

Element-selective detection after supercritical fluid chromatography by means of a Surfatron plasma in the near-infrared spectral region 517(1990)477

Use of sulfur chemiluminescence detection after supercritical fluid chromatography 517(1990)491

Electrochemical detection system for supercritical fluid chromatography 519(1990)256

#### Detectors, TLC

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

Indirect thin-layer chromatography-fast atom bombardment and chemical ionization mass spectrometry determination of carbohydrates utilizing simple and rapid microtransfer techniques 514(1990)377

Determination of phospholipids on twodimensional thin-layer chromatographic plates by imaging densitometry 543(1991)201

Rapid and sensitive method for the quantitation of non-polar lipids by high-performance thinlayer chromatography and fluorodensitometry 549(1991)387

## Deuterium exchange

Determination of 19-nortestosterone, testosterone and trenbolone by gas chromatography-negativeion mass spectrometry after formation of the pentafluorobenzylcarboxymethoximetrimethylsilyl derivatives 547(1991)325

# Deuterium oxide chemical ionization

Speciation of polyhydroxy compounds by gas chromatography-mass spectrometry with deuterium oxide chemical ionization 520(1990)209

# Dialysis

Simple equilibrium dialysis-high-performance liquid chromatographic method for the *in vitro* assessment of 5-methoxypsoralen bound to human albumin 539(1991)443

## **Diamond dust particles**

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

## **Diastereomer separation**

Analytical gas chromatographic separations of diastereomeric *tert*.-butylmethoxyphenylsilyl ethers 514(1990)305

High-performance liquid chromatographic separation of the three stereoisomers of diaminopimelic acid in hydrolysed bacterial cells 536(1991)211

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (E)- and (Z)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

# **Diesel fuels**

Peculiarities of aromatic hydrocarbon retention in normal-phase high-performance liquid chromatography with eluents containing halide derivatives 520(1990)315

# Difference spectroscopy

Method for the characterization of stationary phases for the separation of proteins by highperformance liquid chromatography 537(1991)1

## Differential pulse polarography

High-performance liquid chromatography of thiols with differential pulse polarographic detection of the catalytic hydrogen evolution current 515(1990)257

# Differential refractometry

Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

# **Differential viscometry**

Analysis of protein denaturation by highperformance continuous differential viscometry 536(1991)113

## Diffusion

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

# **Diffusion coefficients**

Variance contributions to band spread in capillary zone electrophoresis 504(1990)1

Determination of binary diffusion coefficients of organic compounds in supercritical carbon dioxide by supercritical fluid chromatography 505(1990)169

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521

Homogeneous catalysis studied by reversed-flow gas chromatography 550(1991)181

# Diffusion coefficients, binary

Gas chromatographic methods for the assessment of binary diffusion coefficients for compounds in the gas phase 522(1990)277

# Diffusion-controlled reactions

Comparative study of reaction kinetics in membrane and agarose bead affinity systems 519(1990)53

## Diffusivity

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

# **Digital filtering**

Data acquisition and digital filtering in analytical isotachophoresis 545(1991)337

## Di(methacryloyloxymethyl)naphthalenedivinylbenzene

Comparison of the selectivity of di(methacryloyloxymethyl)naphthalene– divinylbenzene copolymers in reversed-phase high-performance liquid chromatography 549(1991)77

## Dimethylaminopropylcarbamylpentyl-Sepharose

Large-scale purification of factor VIII by affinity chromatography: optimization of process parameters 503(1990)103

## **Diode-array detector**

Determination of chlorotriazines and their photolysis products by liquid chromatography with photodiode-array and thermospray mass spectrometric detection 502(1990)275

Identification and determination of sulphamethazine and N<sup>4</sup>-acetylsulphamethazine in meat by high-performance liquid chromatography with photodiode-array detection 502(1990)371

Adduct formation identification between phenyl glycidyl ether and 2'-deoxyadenosine and thymidine by chromatography, mass spectrometry and nuclear magnetic resonance spectroscopy 504(1990)113

Optimization of multidimensional highperformance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection 507(1990)267

Determination of preservatives in cosmetic products by reversed-phase high-performance liquid chromatography. IV 508(1990)252

Neutral, alkaline and difference ultraviolet spectra of secondary metabolites from *Penicillium* and other fungi, and comparisons to published maxima from gradient high-performance liquid chromatography with diode-array detection 511(1990)195

Preparation of ethylenediaminephosphoramidates of nucleotides and derivatization with fluorescein isothiocyanate 512(1990)409

Aromatic ring-type analysis of complex hydrocarbon mixtures by high-performance liquid

chromatography with photodiode-array detection and curve resolution 520(1990)383

Computer assisted internal standard selection for reversed-phase liquid chromatography 535(1990)199

Isocratic high-performance liquid chromatography-photodiode-array detection method for determination of lysine- and argininevasopressins and oxytocin in biological samples 536(1991)137

High-performance liquid chromatography retention index and detection of nitrated polycyclic aromatic hydrocarbons 539(1991)1

Monitoring of protein conformation by highperformance size-exclusion liquid chromatography and scanning diode array second-derivative UV absorption spectroscopy 540(1991)187

Comparative study of the reversed-phase highperformance liquid chromatography of black tea liquors with special reference to the thearubigins 542(1991)115

Retention prediction for polymer additives in reversed-phase liquid chromatography 550(1991)325

## Diol bonded phase

Comparison of various stationary phases for normal-phase high-performance liquid chromatography of ethoxylated alkylphenols 504(1990)297

# Direct current plasma atomic emission spectroscopy

The speciation of iron, manganese, phosphorus and platinum in aqueous solutions by using ion chromatography coupled with an element selective detector 547(1991)211

#### **Direct liquid introduction**

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

## **Discharge tubes**

Comparison of discharge tubes for deuteriumspecific gas chromatographic detection with a microwave-induced plasma 508(1990)187

#### **Discontinuous extraction**

Gas chromatographic and mass spectrometric determination of nitroaromatics in water 518(1990)21

#### Dispersion

Dispersion in the interstitial space of packed columns 517(1990)31

Nature of the eddy dispersion in packed beds 535(1990)189

#### **Dispersive** interactions

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

#### Displacement

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

Frontal chromatographic techniques in preparative chromatography 523(1990)11

# Displacement chromatography

Displacement chromatography on packed capillary columns 502(1990)11

Displacement chromatography on cyclodextrinsilicas. III. Enantiomer separations 506(1990)481

High-performance displacement chromatography-mass spectrometry of tryptic peptides of recombinant human growth hormone 512(1990)299

Use of the sodium salt of poly(vinylsulfonic acid) as a low-molecular-weight displacer for protein separations by ion-exchange displacement chromatography 519(1990)87

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography 523(1990)63

Computer simulations of displacement chromatography of systems with speciesdependent saturation capacities 538(1991)285

Comparison of the performances of overloaded elution and displacement chromatography for a given column 540(1991)1

Effect of the intersection of the individual isotherms in displacement chromatography 541(1991)195

Evaluation of displacement chromatography for the recovery of lactate dehydrogenase from beef heart under scale-up conditions 547(1991)145

Multi-column preparative reversed-phase sample displacement chromatography of peptides 548(1991)267

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

Metal affinity displacement chromatography of proteins 549(1991)89

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin- $\beta$  by multi-dimensional displacement chromatogaphy 549(1991)175

#### Displacement effect

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography 523(1990)63

## **Displacement electrophoresis**

see Isotachophoresis

## **Displacement model**

Separation of <sup>125</sup>I-labelled derivatives of 5hydroxy-6.8,11,14-eicosatetraenoic acid 543(1991)307

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (*E*)- and (*Z*)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

Multivalent ion-exchange model of biopolymer chromatography for mass overload conditions 548(1991)61

#### Displacement thin-layer chromatography

Spacer-displacement and carrier spacerdisplacement thin-layer chromatography 520(1990)287

## **Displacement train**

Computer simulations of displacement chromatography of systems with speciesdependent saturation capacities 538(1991)285

## Displacers

Metal affinity displacement chromatography of proteins 549(1991)89

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin- $\beta$  by multi-dimensional displacement chromatogaphy 549(1991)175

## **Displacer** salts

High-performance liquid chromatography of amino acids, peptides and proteins. XCVII. The influence of the gradient elution mode and displacer salt type on the retention properties of closely related protein variants separated by high-performance anion-exchange chromatography 506(1990)17

High-performance liquid chromatography of amino acids, peptides and proteins. XCVIII. The influence of different displacer salts on the bandwidth properties of proteins separated by gradient elution anion-exchange chromatography 512(1990)41

## **Dissociation constants**

Influence of dissociation equilibria on the elution behaviour of the sample anion in anion chromatography 508(1990)51

Determination of absolute mobilities, pK values and separation numbers by capillary zone electrophoresis. Effective mobility as a parameter for screening 537(1991)407

## Distribution coefficients

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

Determination of polymer polydispersity by gel permeation chromatography 509(1990)219

Separation of simple ions by gel chromatography. I. Simple model of separation for single-salt systems 511(1990)59

Preparative chromatography of proteins. Design calculation procedure for gradient and stepwise elution 512(1990)89

Quantitative correlations between solute molecular structure and solubility in supercritical fluids 517(1990)449

## **Distribution** constant

Systematic errors with the use of internal standard calibration in gas chromatographic headspace analysis 518(1990)1

# **Distribution functions**

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical CO<sub>2</sub> 545(1991)135

## Distribution processes

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

## Disturbance peak

Reversed-phase liquid chromatographic study of excess and absolute sorption isotherms of acetonitrile-water mixtures 550(1991)285

## **DNA** sequencing

Recent developments in electrophoretic methods (Review) 516(1990)3

Separation and analysis of DNA sequence reaction products by capillary gel electrophoresis 516(1990)49

Capillary gel electrophoresis for DNA sequencing. Laser-induced fluorescence detection with the sheath flow cuvette 516(1990)61

## Double-layer tube-type passive sampler

Evaluation tests and applications of a doublelayer tube-type passive sampler 522(1990)285

## **Drinking water**

Comparison of quarter-hourly on-line dynamic headspace analysis to purge-and-trap analysis of varying volatile organic compounds in drinking water sources 513(1990)47

## **Drug delivery systems**

Quantitative determination of cholesterol in liposome drug products and raw materials by high-performance liquid chromatography 507(1990)157

Liquid chromatographic analysis of a potential polymeric-pendant drug delivery system for peptides. Application of high-performance sizeexclusion chromatography, reversed-phase highperformance liquid chromatography and ion

chromatography to the evaluation of biodegradable poly[(chloromethoxytrialanine methyl ester)phosphazenes] 536(1991)255

#### Drug-free plasma profiles

Evaluation of drug-free plasma profiles by highperformance liquid chromatography following on-line solid-phase extraction 528(1990)277

#### Drug-protein binding

Separation procedures used to reveal and follow drug-protein binding 531(1990)51

## Drylab GC

Computer simulation as an aid in method development for gas chromatography. I. The accurate prediction of separation as a function of experimental conditions 541(1991)1

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

Computer simulation as an aid in method development for gas chromatography. III. Examples of its application 541(1991)35

#### Dual counter-current chromatography

Dual counter-current chromatography —its applications in natural products research (Review) 538(1991)37

#### **Dual-label radiometry**

Quantitative comparisons of reaction products using liquid chromatography with dual-label radioactivity measurements 522(1990)117

#### Dual zone materials

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

#### **Dye-adsorbents**

Design and applications of biomimetic anthraquinone dyes. III. Anthraquinoneimmobilised C.I. Reactive Blue 2 analogues and their interaction with horse liver alcohol dehydrogenase and other adenine nucleotidebinding proteins 508(1990)109

Screening method for large numbers of dyeadsorbents for enzyme purification 510(1990)155

Immobilization of reactive dyes on several matrices that allow high and very high flow-rates

to be used. Application to the purification of a proteinase inhibitor from corn 510(1990)165

New aspects of dye-ligand affinity chromatography of lactate dehydrogenase applying spacer-mediated beaded cellulose 510(1990)189

Competitive elution of lactate dehydrogenase from Cibacron Blue-bead cellulose with Cibacron Blue-dextrans 510(1990)197

# **Dye-affinity resins**

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101

#### Dye immobilization

Immobilized Cibacron Blue —leachables, support stability and toxicity on cultured cells 539(1991)355

#### Dye-ligand chromatography

Design and applications of biomimetic anthraquinone dyes. III. Anthraquinoneimmobilised C.I. Reactive Blue 2 analogues and their interaction with horse liver alcohol dehydrogenase and other adenine nucleotidebinding proteins 508(1990)109

Competitive elution of lactate dehydrogenase from Cibacron Blue-bead cellulose with Cibacron Blue-dextrans 510(1990)197

#### **Dye-ligands**

Analysis, purification and properties of a 50 000dalton membrane-associated phosphoprotein from human platelets 521(1990)335

#### Dynamically coated phases

Application of macrocyclic ligands to ion chromatography (Review) 546(1991)73

## Dynamically modified silica

High-performance liquid chromatography on silica dynamically modified with hydrazinium derivatives 521(1990)19

Bare silica, dynamically modified with long-chain quaternary ammonium ions – the technique of choice for more reproducible selectivity in reversed-phase high-performance liquid chromatography (Review) 544(1991)53

# Dynamic exchange

Study of polystyrene–poly(ethylene oxide) block copolymer micelles in aqueous solution by sizeexclusion chromatography 547(1991)434

## **Dynamic impregnation**

Dynamic impregnation of silica stationary phases for the argentation chromatography of lipids 519(1990)349

## Dynamic ion exchangers

Equilibrium of octadecylsilica gel with sodium dodecyl sulphate 515(1990)67

Charged surface and mass transfer in dynamic ion exchangers 546(1991)17

## Dynamic solvent effect

High-precision sampling of trace gas-borne volatiles by the dynamic solvent effect with a comparative review of alternative techniques 504(1990)21

High-precision sampling of sub-nanogram, lowparts-per-billion solutes from liquids using the dynamic solvent effect 511(1990)271

# Eddy dispersion

Η'

Nature of the eddy dispersion in packed beds 535(1990)189

## Edman degradation

Peptide maps at picomolar levels obtained by reversed-phase high-performance liquid chromatography and pre-column derivatization with phenyl isothiocyanate. Microsequencing of phenylthiocarbamyl peptides 548(1991)303

## Effective mobility

Use of cyclodextrins in the isotachophoretic determination of various inorganic anions 518(1990)189

Use of crown ethers in the isotachophoretic determination of metal ions 523(1990)281

Quantitative analysis in capillary zone electrophoresis with conductivity and indirect UV detection 549(1991)345

# Egg yolk

Determination of egg yolk cholesterol content by on-column capillary gas chromatography 540(1991)323

## Eigenpeaks

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

## Electrical field, non-uniform

Non-uniform electrical field effect caused by different concentrations of electrolyte in capillary zone electrophoresis 516(1990)233

# Electrically driven open-tubular liquid chromatography

Electrically driven open-tubular liquid chromatography 517(1990)557

# Electroblotting

Strategies for internal amino acid sequence analysis of proteins separated by polyacrylamide gel electrophoresis 519(1990)199

## **Electrochemical biosensors**

Electrochemical biosensors on thin-film metals and conducting polymers 510(1990)355

# Electrochemical chromatography

Electrochemical chromatography —packings, hardware and mechanisms of interaction (Review) 544(1991)305

# Electrochemical concentration modulation

Selective determination of trace levels of phenol in river water using electrochemical concentration modulation correlation chromatography 506(1990)201

## **Electrochemical detector**

Ion chromatography with ultraviolet and amperometric detection for iodide and thiocyanate in concentrated salt solutions 502(1990)121

Improvements in the separation and detection of acetylcholine and choline using liquid chromatography and electrochemical detection 502(1990)337

High-performance liquid chromatography of clindamycin and clindamycin phosphate with electrochemical detection 503(1990)217

Determination of iron(111) ion using ion chromatography with electrochemical detection and its application to the assay of the ferroxidase activity of ceruloplasmin 503(1990)237

Analysis of nitrogen dioxide in ambient air by ion-exclusion chromatography with electrochemical detection 503(1990)466

High-performance liquid chromatographic postcolumn reaction system for the electrochemical detection of ascorbic acid and dehydroascorbic acid 504(1990)434

Determination of tyramine in cheese by reversedphase high-performance liquid chromatography with amperometric detection 504(1990)441

Determination of amoxicillin in plasma by highperformance liquid chromatography with fluorescence detection after on-line oxidation 506(1990)417

Selective post-column liquid chromatographic determination of sugars in spent sulphite liquor with two enzymatic electrochemical detectors in parallel 506(1990)423

Direct injection high-performance liquid chromatographic assay of morphine with electrochemical detection, a polymeric column and an alkaline eluent 507(1990)253

Optimization of electrochemical detection in the high-performance liquid chromatography of lignin phenolics from lignocellulosic by-products 507(1990)439

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Analysis of  $\delta$ -L- $\alpha$ -aminoadipyl-L-cysteinyl-Dvaline by ion chromatography and pulsed amperometric detection 509(1990)347

Simultaneous measurement of L-DOPA, its metabolites and carbidopa in plasma of Parkinsonian patients by improved sample pretreatment and high-performance liquid chromatographic determination 511(1990)167

Electrochemical detection for high-performance liquid chromatography using a Kel-F wax-graphite electrode 514(1990)171

Capillary zone electrophoretic separation of chlorophenols in industrial waste water with on-column electrochemical detection 514(1990)389

Constant-potential amperometric detector for carbohydrates at a nickel(III) oxide electrode for micro-scale flow-injection analysis and highperformance liquid chromatography 515(1990)213

High-performance liquid chromatography of thiols with differential pulse polarographic detection of the catalytic hydrogen evolution current 515(1990)257

Detection and identification modes for the highly sensitive and simultaneous determination of various biogenic amines by coulometric highperformance liquid chromatography 515(1990)265

Electrochemical detection of dipeptides and dipeptide amides 515(1990)451

Enantiomeric resolution of amino acid derivatives on molecularly imprinted polymers as monitored by potentiometric measurements 516(1990)323

Electrochemical detection system for supercritical fluid chromatography 519(1990)256

Study of the characteristics and analytical application of a capillary chromatograph with an electrochemical detector 520(1990)307

High-performance liquid chromatographic detection of hydroxylated benzoic acids as an indirect measure of hydroxyl radical in heart: its possible link with the myocardial reperfusion injury 536(1991)273

Selective determination of altertoxins by highperformance liquid chromatography with electrochemical detection with dual "in-series" electrodes 540(1991)376

Improvements in automated analysis of catecholamine and related metabolites in biological samples by column-switching highperformance liquid chromatography 541(1991)273

Electrochemical detection of oligopeptides through the precolumn formation of biuret complexes 542(1991)345

High-performance liquid chromatography of sulfur-containing amino acids and related compounds with amperometric detection at a modified electrode 543(1991)226

The use of pulsed amperometry combined with ion-exclusion chromatography for the simultaneous analysis of ascorbic acid and sulfite 546(1991)119

Detection in ion chromatography (Review) 546(1991)175

Determination of xylose oligomers and monosaccharides by anion-exchange chromatography with pulsed amperometric detection 546(1991)289

Determination of saccharides in biological materials by high-performance anion-exchange chromatography with pulsed amperometric detection 546(1991)297

Determination of free nitrilotriacetic acid in environmental water samples by ion chromatography with potentiometric and amperometric detection with a copper electrode 546(1991)311

Improved determination of alkanolamines by liquid chromatography with electrochemical detection 546(1991)381

Determination of total nitrogen in food, environmental and other samples by ion chromatography after Kjeldahl digestion 546(1991)405

Optimization of Nafion-coated electrodes for selective detection in high-performance liquid chromatography 547(1991)1

#### **Electrochemical oxidation**

Electrochemical enhancement of highperformance liquid chromatography–UV detection for determination of phenylpropanolamine 518(1990)167

#### Electrochromatography

Electrochromatography with continuous sample introduction 515(1990)645

#### Electrodes

Optimization of Nafion-coated electrodes for selective detection in high-performance liquid chromatography 547(1991)1

#### Electrodes, Kel-F wax/graphite

Electrochemical detection for high-performance liquid chromatography using a Kel-F waxgraphite electrode 514(1990)171

#### Electrodialysis

Electrodialysis pretreatment system for ion chromatography of strongly acidic samples and its application to the determination of magnesium and calcium 539(1991)221

Electrodialytic eluent generation and suppression. Ultralow background conductance suppressed anion chromatography 546(1991)159

#### Electroelution

Strategies for internal amino acid sequence analysis of proteins separated by polyacrylamide gel electrophoresis 519(1990)199

## Electroendosmosis

Capillary electrophoresis of proteins under alkaline conditions 516(1990)123

Capillary electrophoresis of urinary porphyrins with absorbance and fluorescence detection 516(1990)271

High-performance displacement electrophoresis in 0.025- to 0.050-mm capillaries coated with a polymer to suppress adsorption and electroendosmosis 550(1991)811

#### Electrokinetic chromatography

Effect of polymer ion concentrations on migration velocities in ion-exchange electrokinetic chromatography 515(1990)667

#### Electrokinetic chromatography, capillary

Capillary electrophoretic separations of peptides using micelle-forming compounds and cyclodextrins as additives 519(1990)189

## Electrokinetic detector

Filled tubes as generation elements in electrokinetic detection in liquid chromatography 514(1990)161

Sensitivity of electrokinetic detection of acidic aromatic nitro derivatives using column as a detector 541(1991)257

#### Electrolytes

Computer-assisted choice of electrolyte systems and spacing constituents for two-dimensional capillary isotachophoresis 509(1990)287

#### Electromigration

Computer-aided simulation of electromigration 545(1991)225

#### **Electromigration dispersion**

Selection of the background electrolyte composition with respect to electromigration dispersion and detection of weakly absorbing substances in capillary zone electrophoresis 545(1991)239

#### Electron capture detector

Oxygen enhancement of thermal electron capture in a non-radioactive discharge source for a quadrupole mass spectrometer 517(1990)87

Cyclic aryleneazachalcogenenes. IV. Gas chromatographic properties of polyfluorinated 2,1,3-benzoselenadiazoles 549(1991)429

# Electron donor-acceptor chromatography

Salt-promoted adsorption chromatography 510(1990)47

#### Electron-impact mass spectrometry

Determination of sunscreen agents in cosmetic products by gas chromatography and gas chromatography-mass spectrometry 513(1990)321

#### Electroosmotic flow

Separation and determination of lipophilic corticosteroids and benzothiazepin analogues by micellar electrokinetic chromatography using bile salts 513(1990)279

Polyethyleneimine-bonded phases in the separation of proteins by capillary electrophoresis 516(1990)69

Isotachophoresis in open-tubular fused-silica capillaries. Impact of electroosmosis on zone formation and displacement 516(1990)211

High-pressure and supercritical capillary electrophoresis 517(1990)573

Isotachophoresis with electroosmotic flow: open *versus* closed systems 537(1991)429

Simultaneous pH and ionic strength effects and buffer selection in capillary electrophoretic techniques 541(1991)483

Impact of experimental parameters on the resolution of positional isomers of aminobenzoic acid in capillary zone electrophoresis 542(1991)173

lsotachophoresis in open systems. Problems in quantitative analysis 545(1991)283

Controlled changes of selectivity in the separation of ions by capillary electrophoresis 546(1991)445

#### Electrophoresis

see also Capillary electrophoresis

Purification and characterization of hementin, a fibrinogenolytic protease from the leech *Haementeria ghilianii* 502(1990)359

Progress in affinophoresis (Review) 510(1990)251

Capillary zone electrophoresis of pyridylamino derivatives of maltooligosaccharides 514(1990)57

Determination of arbutin in uvae-ursi folium (bearberry leaves) by capillary zone electrophoresis 514(1990)383

Recent developments in electrophoretic methods (Review) 516(1990)3

Separation of DNA restriction fragments by high operformance capillary electrophoresis with low and zero crosslinked polyacrylamide using continuous and pulsed electric fields 516(1990)33

Separation and analysis of DNA sequence reaction products by capillary gel electrophoresis 516(1990)49

Capillary gel electrophoresis for DNA sequencing. Laser-induced fluorescence detection with the sheath flow cuvette 516(1990)61

Method optimization in capillary zone electrophoretic analysis of hGH tryptic digest fragments 516(1990)99

Use of high-performance capillary electrophoresis to monitor charge heterogeneity in recombinant-DNA derived proteins 516(1990)115

Thermal model of capillary electrophoresis and a method for counteracting thermal band broadening 516(1990)191

Non-uniform electrical field effect caused by different concentrations of electrolyte in capillary zone electrophoresis 516(1990)233

Separation and partial characterization of Maillard reaction products by capillary zone electrophoresis 516(1990)287 Determination of absolute mobilities, pK values and separation numbers by capillary zone electrophoresis. Effective mobility as a parameter for screening 537(1991)407

Improvement of resolution in the capillary electrophoretic separation of catecholamines by complex formation with boric acid and control of electroosmosis with a cationic surfactant 538(1991)385

Isotachophoresis as an on-line concentration pretreatment technique in capillary electrophoresis 538(1991)393

Pharmaceutical analysis by capillary zone electrophoresis and micellar electrokinetic capillary chromatography 538(1991)506

Electrophoretic study of  $\alpha$ -D-mannosidase and  $\alpha$ -D-galactosidase from dry seeds of *Pisum* sativum 540(1991)365

Capillary electrophoresis in [<sup>2</sup>H]water solution 541(1991)489

Separation of carbohydrate-mediated microheterogeneity of recombinant human erythropoietin by free solution capillary electrophoresis. Effects of pH, buffer type and organic additives 542(1991)459

Analysis of paralytic shellfish poisons by capillary electrophoresis 542(1991)483

Ionophoretic studies on mixed complexes. Metalnitrilotriacetate-penicillamine system 542(1991)537

Z-Shaped flow cell for UV detection in capillary electrophoresis 543(1991)439

Analysis of endoproteinase Arg C action on adrenocorticotrophic hormone by capillary electrophoresis and reversed-phase highperformance liquid chromatography 543(1991)451

Separation and microanalysis of growth factors by Phast system gel electrophoresis and by DNA synthesis in cell culture 543(1991)463

Resolution and concentration detection limit in capillary gel electrophoresis 545(1991)177

Computer-aided simulation of electromigration 545(1991)225

Selection of the background electrolyte composition with respect to electromigration dispersion and detection of weakly absorbing substances in capillary zone electrophoresis 545(1991)239

Determination of halofuginone in feedstuffs by the combination of capillary isotachophoresis and capillary zone electrophoresis in a columnswitching system 545(1991)307

Step change of co-ion, a new option in capillary zone electrophoresis 545(1991)331

Two-dimensional electrophoresis: agarose gel isotachophoresis followed by sodium dodecyl sulphate-polyacrylamide electrophoresis 545(1991)343

Capillary electrophoresis of peptides. Analysis of adrenocorticotropic hormone-related fragments 545(1991)379

Effect of sodium dodecyl sulphate in protein samples on separation with free capillary zone electrophoresis 545(1991)397

Use of cyclodextrins in capillary zone electrophoresis. Resolution of terbutaline and propranolol enantiomers 545(1991)437

Analysis of barbiturates in human serum and urine by high-performance capillary electrophoresis-micellar electrokinetic capillary chromatography with on-column multiwavelength detection 545(1991)445

Analysis of anion constituents of urine by inorganic capillary electrophoresis 546(1991)459

Improved capillary zone electrophoretic separation of basic proteins, using a fluorosurfactant buffer additive 547(1991)544

Capillary electrophoretic separation in both  $H_2O$ and  ${}^2H_2O$ -based electrolytes can provide more information on tryptic digests 547(1991)551

Study of chelating tendency of sulphur-containing amino acids by electrophoresis 547(1991)554

Structure-stability relationship of Immobiline chemicals for isoelectric focusing as monitored by capillary zone electrophoresis 548(1991)381

Separation of seven tricyclic antidepressants using capillary electrophoresis 549(1991)375

Capillary zone electrophoresis with a linear, non-cross-linked polyacrylamide gel: separation of proteins according to molecular mass 549(1991)446

Axial-beam absorbance detection for capillary electrophoresis 550(1991)831

#### **Electrophoretic concentration**

Analysis of dilute peptide samples by capillary zone electrophoresis 516(1990)79

#### **Electrophoretic mobility**

see Mobility, electrophoretic

#### **Electrophoretic stacking**

Analysis of dilute peptide samples by capillary zone electrophoresis 516(1990)79

## Electrospray ionization mass spectrometry

Sensitivity considerations for large molecule detection by capillary electrophoresis-electrospray ionization mass spectrometry 516(1990)157

#### **Electrostatic binding domain**

High-performance liquid chromatography of amino acids, peptides and proteins. C. Characterisation of coulombic interactive regions on hen lysozyme by high-performance liquid anion-exchange chromatography and computer graphic analysis 517(1990)317

#### **Electrostatic interaction**

Extension of the electrostatic retention model of reversed-phase ion-pair chromatography to include the simultaneous effects of the organic modifier and the pairing ion 506(1990)85

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Effect of organic modifier concentration on retention in reversed-phase ion-pair liquid chromatography 545(1991)59

## Electrostatic potential

High-performance liquid chromatography of amino acids, peptides and proteins. CI. Identification and characterisation of coulombic interactive regions on sperm whale myoglobin by high-performance anion-exchange chromatography and computer-graphic analysis 507(1990)33

#### **Electrostatic theory**

Retention prediction based on the electrostatic model of reversed-phase ion-pair highperformance liquid chromatography: effect of pairing ion concentration 535(1990)181

#### Electrothermal atomic absorption spectrometry

Ultrasonic nebulizer interface system for coupling liquid chromatography and electrothermal atomic absorption spectrometry 541(1991)243

## Elemental speciation

Evaluation of an alternating current plasma emission detector for high-performance liquid chromatography 513(1990)159

## **Element-selective detector**

Element-selective detection after supercritical fluid chromatography by means of a Surfatron plasma in the near-infrared spectral region 517(1990)477

#### Eluent suppression

Twenty years of ion chromatography (Review) 546(1991)3

#### Elution band profile

Theoretical study of the effect of a difference in column saturation capacities for the two components of a binary mixture on their elution band profiles and separation in non-linear chromatography 511(1990)1

#### **Elution behaviour**

Reversed-phase liquid chromatographic study of excess and absolute sorption isotherms of acetonitrile-water mixtures 550(1991)285

# Elution order

Product purity as a function of elution order 503(1990)403

Phenols as internal standards in reversed-phase high-performance liquid chromatography in pharmaceutical analysis 515(1990)305

## Elution overload chromatography

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

#### **Elution profile**

Resolution of unresolved peaks containing unknown components by high-performance liquid chromatography with multi-wavelength detection 506(1990)223

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Perturbation analysis of the influence of the isotherm coupling factor on the resolution between two compounds in chromatography 508(1990)27

Effect of sample viscosity in high-performance size-exclusion chromatography and its control 550(1991)705

## **Elution strength**

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

# **Elution volume**

Effects of isotherm non-linearity on the determination of the binding constant in affinity chromatography 504(1990)55

Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

High-performance vacancy gel permeation chromatography 518(1990)238

Solution properties of polyelectrolytes. VII. Non-ideal mechanisms in size-exclusion chromatography of synthetic polyions, peptides and proteins 548(1991)93

#### **Empore sheets**

Direct use of Empore sheets in overpressured thin-layer chromatography 547(1991)403

## Enantiomeric ratio

Direct liquid chromatographic resolution of (*R*)and (*S*)-abscisic acid using a chiral ovomucoid column 504(1990)445

#### **Enantiomer separation**

Enantiomer separation of chiral barbiturates and of  $\alpha$ -lipoic acid by capillary gas chromatography with modified cyclodextrins as chiral stationary phases 503(1990)256

Direct liquid chromatographic separation of enantiomeric and diastereomeric terpenic alcohols as  $\beta$ -cyclodextrin inclusion complexes 503(1990)266

Quantitative gas chromatographic analysis of mandelic acid enantiomers 504(1990)287

Direct liquid chromatographic resolution of (*R*)and (*S*)-abscisic acid using a chiral ovomucoid column 504(1990)445 Chiral thin-layer chromatographic separation of phenylalanine and tyrosine derivatives 504(1990)450

Displacement chromatography on cyclodextrinsilicas. III. Enantiomer separations 506(1990)481

Chiral chloroformates as transparent reagents for the resolution of metoprolol enantiomers by reversed-phase liquid chromatography 506(1990)593

Direct high-performance liquid chromatographic determination of the enantiomers of alfuzosin in plasma on a second-generation  $\alpha_1$ -acid glycoprotein chiral stationary phase 506(1990)601

High-performance liquid chromatographic resolution of racemic 1,4-benzodiazepin-2-ones by means of a  $\beta$ -cyclodextrin silica bonded chiral stationary phase 506(1990)617

Direct chromatographic separation of the enantiomers of oxiracetam 508(1990)208

Enantiomeric separation of racemic pterocarpans by high-performance liquid chromatography on (+)-poly(triphenylmethyl methacrylate)-coated silica gel 508(1990)212

Optical resolution of abscisic acid metabolites using an ovomucoid-conjugated high-performance liquid chromatographic column 508(1990)217

Liquid chromatographic evaluation of chiral derivatizing reagents for the resolution of amine and alcohol enantiomers 508(1990)220

Separation of carboxylic acid enantiomers by gas chromatography after rapid derivatization with (R)- or (S)-1-phenylethylamine after activation by ethyl chloroformate 508(1990)333

Use of two-dimensional gas chromatography in the direct enantiomer separation of chiral essential oil components 508(1990)341

2,6-Di-O-pentyl-3-O-trifluoroacetyl cyclodextrin liquid stationary phases for capillary gas chromatographic separation of enantiomers 509(1990)303

Characteristics of ovomucoid-conjugated columns in the direct liquid chromatographic resolution of racemic compounds 511(1990)89

Analytical and preparative resolution of enantiomers of prostaglandin precursors and prostaglandins by liquid chromatography on derivatized cellulose chiral stationary phases 511(1990)97

Direct separation and optimization of timolol enantiomers on a cellulose tris-3,5dimethylphenylcarbamate high-performance liquid chromatographic chiral stationary phase 511(1990)109

Ligand-exchange chromatography of  $\alpha$ -trifluoromethyl- $\alpha$ -amino acids on chiral sorbents 511(1990)115

Molecular recognition in synthetic polymers: preparation of chiral stationary phases by molecular imprinting of amino acid amides 513(1990)167

(S)-2-Hydroxypropyl- $\beta$ -cyclodextrin, a new chiral stationary phase for reversed-phase liquid chromatography 513(1990)181

Coupled column chromatography in chiral separations. I. Enantiomeric separation on swollen microcrystalline cellulose triacetate columns after a preseparation on a non-chiral alkylsilica column 513(1990)195

Determination of enantiomeric purity of paclobutrazol and fluazifop-P-butyl using a diode-laser-based polarimetric high-performance liquid chromatography detector 513(1990)209

Gas chromatographic separation of monoterpene hydrocarbon enantiomers on α-cyclodextrin 513(1990)315

Separation of enantiomers using polymeric copper-amine-cellulose columns 513(1990)370

Optical resolution of dihydropyridine enantiomers by high-performance liquid chromatography using phenylcarbamates of polysaccharides as a chiral stationary phase 513(1990)375

Optical resolution of flavanones by highperformance liquid chromatography on various chiral stationary phases 514(1990)147

Investigation of parameters in the separation of amino acid enantiomers by supercritical fluid chromatography 514(1990)253

Separation of enantiomeric protected dipeptides by chiral high-performance liquid chromatography 514(1990)325

Optical resolution of racemic compounds on chiral stationary phases of modified cellulose 515(1990)85

Enantiomeric resolution by micellar electrokinetic chromatography with chiral surfactants 515(1990)221

Chiral separation of diltiazem, trimetoquinol and related compounds by micellar electrokinetic chromatography with bile salts 515(1990)233

Enantiomer separation of pyrethroid insecticides by high-performance liquid chromatography with chiral stationary phases 515(1990)441

Separation of peptide diastereomers by reversedphase high-performance liquid chromatography and its applications. IV. New derivatization reagent for the enantiomeric analysis of  $\alpha$ - and  $\beta$ -amino acids 515(1990)475

Free solution capillary electrophoresis and micellar electrokinetic resolution of amino acid enantiomers and peptide isomers with L- and D-Marfey's reagents 516(1990)241

Enantiomeric resolution on molecularly imprinted polymers prepared with only non-covalent and non-ionic interactions 516(1990)313

Enantiomeric resolution of amino acid derivatives on molecularly imprinted polymers as monitored by potentiometric measurements 516(1990)323

Direct stereochemical resolution of aspartame stereoisomers and their degradation products by high-performance liquid chromatography on a chiral crown ether based stationary phase 516(1990)365

Effect of  ${}^{2}\text{H}_{2}\text{O}$  on the resolution of the optical isomers of ibuprofen on an  $\alpha_{1}$ -acid glycoprotein column 518(1990)277

Direct separation of amino acid enantiomers using a chiral crown ether stationary phase. Application to 2-amino- $\omega$ -phosphonoalkanoic acids 519(1990)69

Enantiomer separation of diacid-diacylglycerol mixtures by high-performance liquid chromatography on a chiral column 519(1990)237 High-resolution gas chromatographic resolution of chiral primary alcohols and acids as their diastereomeric 1-phenylethyl amides 519(1990)263

Separation of the enantiomers of  $\beta$ -receptor blocking agents and other cationic drugs using a CHIRAL-AGP<sup>®</sup> column. Binding properties and characterization of immobilized  $\alpha_1$ -acid glycoprotein 519(1990)285

High-performance liquid chromatographic method for direct resolution of the indobufen enantiomeric components 520(1990)373

Separation of hydroxylated polyenoic fatty acid enantiomers on Pirkle-type chiral phase highperformance liquid chromatographic columns 520(1990)391

Gas-phase synthesis, properties and some applications of acylamide stationary phases for high-performance liquid chromatography 521(1990)29

Gas chromatographic separation of diastereomeric esters of  $\alpha$ -alkyl- $\alpha$ -amino acids on dimethylpolysiloxane 521(1990)109

Chiral stationary phase for the facile resolution of  $\beta$ -adrenoceptor blocking agents 521(1990)122

Resolution of free aromatic amino acid enantiomers by host-guest complexation using reversed-phase liquid chromatography 521(1990)134

Measurement of the heats of adsorption of chiral isomers on an enantioselective stationary phase 522(1990)23

Study of the stereochemistry of ethambutol using chiral liquid chromatography and synthesis 522(1990)195

High-performance liquid chromatographic enantioseparation of intermediates relating to the total synthesis of (-)-physostigmine 523(1990)317

Liquid chromatographic analysis of propafenone enantiomers in human plasma 527(1990)79

Elution orders in the separation of enantiomers by high-performance liquid chromatography with some chiral stationary phases 535(1990)213 Resolution of enantiomeric lorazepam and its acyl and O-methyl derivatives and racemization kinetics of lorazepam enantiomers 535(1990)229

Resolution of enantiomeric triols, triolhydroxyethylthioethers, and methoxy-triols derived from three benzo[*a*]pyrene diol-epoxides by chiral stationary phase high-performance liquid chromatography 535(1990)239

Determination of saterinone enantiomers in plasma samples with an internal standard using a Chiralcel OD column. Fractionation and reversed-phase chromatography 535(1990)263

Chromatographic resolution of 1,2-amino alcohols on a chiral stationary phase containing N,N'-(3,5-dinitrobenzoyl)-*trans*-1,2diaminocyclohexane. Theoretical and practical aspects 539(1991)25

Liquid and high-pressure carbon dioxide chromatography of  $\beta$ -blockers. Resolution of the enantiomers of nadolol 539(1991)55

Reversed-phase high-performance liquid chromatographic separation of the enantiomers of trimetoquinol hydrochloride by derivatization with 2,3,4,6-tetra-O-acetyl- $\beta$ -D-glucopyranosyl isothiocyanate and application to the optical purity testing of drugs 539(1991)71

(*R*)- and (*S*)-Naphthylethylcarbamate-substituted  $\beta$ -cyclodextrin bonded stationary phases for the reversed-phase liquid chromatographic separation of enantiomers 539(1991)83

Effect of the configuration of the substituents of derivatized  $\beta$ -cyclodextrin bonded phases on enantioselectivity in normal-phase liquid chromatography 540(1991)113

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

Polymer-bound chiral polymers for use in enantiomer separations 540(1991)145

Resolution of  $(\pm)$ -2-aminoheptane enantiomers by inductive adsorption chromatography 540(1991)157

Direct enantiomeric separation of  $\beta$ -amino acids and  $\beta$ -amino alcohols by ligand-exchange chromatography 540(1991)169

Immobilization of chiral phases for enantiomer separations in supercritical fluid and gas chromatography 540(1991)217

Resolution of 2,3,4,6-tetra-O-acetyl- $\beta$ -Dglucopyranosylisothiocyanate derivatives of  $\alpha$ -methyl amino acid enantiomers by highperformance liquid chromatography 541(1991)297

Enantiomeric separation of substituted 2-aryloxy propionic esters. Application to the determination of the enantiomeric excess in herbicide formulations 541(1991)349

On-line determination and resolution of verapamil enantiomers by high-performance liquid chromatography with column switching 541(1991)411

Enantiomeric separation of racemic thiosulphinate esters by high-performance liquid chromatography 541(1991)464

High-performance liquid chromatographic determination of optical purity of planar chiral organometallic compounds resolved by enzymic transformations 542(1991)129

Gas chromatographic separation of stereoisomeric esters of  $\alpha$ -amino acids and  $\alpha$ -alkyl- $\alpha$ -amino acids on chiral stationary phases 542(1991)161

Stereochemical analysis of a leukotriene related hydroxypentadecadiene using a chiral highperformance liquid chromatography column and diode array detection 542(1991)189

Efficiency in chiral high-performance ligandexchange chromatography. Influence of the complexation process, flow-rate and capacity factor 542(1991)221

Liquid chromatographic separation of the enantiomers of dinitrophenyl amino acids using a  $\beta$ -cyclodextrin-bonded stationary phase 543(1991)105

On-line determination of the optical purity of nicotine 543(1991)129

High-performance liquid chromatographic separation of racemic and diastereomeric mixtures of 2,4-pentadienoate-iron tricarbonyl derivatives 543(1991)233 Preparation and evaluation of chiral highperformance liquid chromatographic stationary phases of mixed character ( $\pi$ -donor and  $\pi$ -acceptor) for the resolution of racemic compounds 543(1991)277

Enantiomeric separation of amines using Nbenzoxycarbonylglycyl-L-proline as chiral additive and porous graphitic carbon as solid phase 543(1991)287

Chiral high-performance liquid chromatography of aromatic cyclic dipeptides using cyclodextrin stationary phases 543(1991)299

Chromatographic separation of the optical isomers of naproxen 543(1991)355

Chromatographic analysis of some commercial samples of camphene via cyclodextrin inclusion processes 543(1991)397

Comparison of a new ovomucoid and a secondgeneration  $\alpha_1$ -acid glycoprotein-based chiral column for the direct high-performance liquid chromatography resolution of drug enantiomers 545(1991)43

Use of cyclodextrins in capillary zone electrophoresis. Resolution of terbutaline and propranolol enantiomers 545(1991)437

Enantiomeric resolution of amino acid derivatives by high-performance liquid chromatography on chiral stationary phases derived from L-proline 547(1991)31

Applicability of new chiral stationary phases in the separation of racemic pharmaceutical compounds by high-performance liquid chromatography 547(1991)45

Chromatographic liquid–liquid ternary phase system with permethylated  $\beta$ -cyclodextrin as chiral additive 547(1991)59

Stereoselectivity of  $\alpha$ -,  $\beta$ - and  $\gamma$ -cyclodextrin complexation relative to *cis-trans* acyclic alkenes and cyclooctenes under conditions of gas-liquid chromatography 547(1991)283

Chiral separation of ibutilide enantiomers by derivatization with 1-naphthyl isocyanate and high-performance liquid chromatography on a Pirkle column 550(1991)621

# Enantioselective ligands

Characteristics of ovomucoid-conjugated columns in the direct liquid chromatographic resolution of racemic compounds 511(1990)89

# Enantioselectivity

Investigation of parameters in the separation of amino acid enantiomers by supercritical fluid chromatography 514(1990)253

Influence of uncharged mobile phase additives on retention and enantioselectivity of chiral drugs using an  $\alpha_1$ -acid glycoprotein column 519(1990)271

Elution orders in the separation of enantiomers by high-performance liquid chromatography with some chiral stationary phases 535(1990)213

Polymer-bound chiral polymers for use in enantiomer separations 540(1991)145

Liquid chromatographic separation of the enantiomers of dinitrophenyl amino acids using a  $\beta$ -cyclodextrin-bonded stationary phase 543(1991)105

Enantiomeric separation of amines using Nbenzoxycarbonylglycyl-L-proline as chiral additive and porous graphitic carbon as solid phase 543(1991)287

Chromatographic analysis of some commercial samples of camphene via cyclodextrin inclusion processes 543(1991)397

Elimination of the temperature-induced loss of the enantioselectivity of chemically bonded albumin 543(1991)475

Chromatographic liquid–liquid ternary phase system with permethylated  $\beta$ -cyclodextrin as chiral additive 547(1991)59

Stereoselectivity of  $\alpha$ -,  $\beta$ - and  $\gamma$ -cyclodextrin complexation relative to *cis-trans* acyclic alkenes and cyclooctenes under conditions of gas-liquid chromatography 547(1991)283

## Endcapping

Resolution of lutein and zeaxanthin using a non-endcapped, lightly carbon-loaded  $C_{18}$  high-performance liquid chromatographic column 543(1991)137

## **Endothermic interactions**

Affinity gel interactions of alcohol and polyol dehydrogenases: anomalous behaviour and structural correlations 502(1990)69

## **Energy metabolism**

Quantification of cyclic 2,3-diphosphoglycerate from methanogenic bacteria by isotachophoresis 504(1990)421

# Enthalpy

Changes in the enthalpy and entropy of hydroxyl aromatics in reversed-phase liquid chromatography with  $\beta$ -cyclodextrin in the mobile phase 537(1991)61

# Enthalpy changes

Solubility parameter treatment for the characterization of the stationary phase in the reversed-phase chromatography of benzene derivatives 515(1990)3

# Enthalpy of interaction

Chromatographic study of the interactions of hydrocarbons with cyclodextrins and their derivatives in the gas-solid system 520(1990)105

# Enthalpy of volatilization

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225

## Entropy

Changes in the enthalpy and entropy of hydroxyl aromatics in reversed-phase liquid chromatography with  $\beta$ -cyclodextrin in the mobile phase 537(1991)61

# Entropy of transfer

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225

## Environmental analysis

Environmental applications of ion chromatography (Review) 504(1990)211

Environmental applications of ion chromatography in China 546(1991)317

## Enzyme immobilization

Highly active enzyme preparations immobilized via matrix-conjugated anti-Fc antibodies 539(1991)335

## Enzyme-linked immunosorbent assay

High-performance liquid affinity chromatography for the purification of immunoglobulin A from human serum using jacalin 514(1990)219

#### Enzyme reactors

Selective post-column liquid chromatographic determination of sugars in spent sulphite liquor with two enzymatic electrochemical detectors in parallel 506(1990)423

Chemiluminescence detection of free fatty acids by high-performance liquid chromatography with immobilized enzymes 516(1990)450

Determination of organophosphorus and carbamate pesticide standards by liquid chromatography with detection by inhibition of immobilized acetylcholinesterase 539(1991)47

Column liquid chromatographic determination of saccharides with a single calibration graph using post-column enzyme reactors and coulometric detection 549(1991)127

## **Enzymic oxidation**

Enzymic oxidation of monoclonal antibodies by soluble and immobilized bifunctional enzyme complexes 510(1990)321

#### Equations of state

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical CO<sub>2</sub> 545(1991)135

#### Equilibrium distribution

Molecular interactions in liquid chromatography 537(1991)33

#### Equilibrium kinetics

Anomalous bandspreading of ethylenediaminetetraacetato-chromium(III) ion in reversed-phase high-performance liquid chromatography. An example of slow equilibrium kinetics 545(1991)123

#### Equivalent temperature

Calculation of programmed temperature gas chromatographic characteristics from isothermal data. III. Predicted retention indices and equivalent temperatures 504(1990)269

## Erythrocytes

Immobilized mucin : an affinity matrix for the isolation of winged bean acidic and basic lectins 503(1990)272

Progress in affinophoresis (Review) 510(1990)251

Aldehyde and nucleotide separations by highperformance liquid chromatography. Application to phenylhydrazine-induced damage of erythrocytes and reticulocytes 520(1990)411

#### Essential oils

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

Gas chromatographic determination of monoterpenes in essential oil medicinal plants 542(1991)451

## Eupergit C

Rapid protein purification using phenylbutylamine-Eupergit: a novel method for large-scale procedures 510(1990)149

## **Evaporation rate**

Headspace gas chromatography with opentubular columns for determining the evaporation rate of essential oils, perfumery compositions and perfumes 520(1990)169

## **Evaporative light-scattering detector**

Improvement of on-line detection in high-speed counter-current chromatography: UV absorptiometry and evaporative light-scattering detection 538(1991)91

Separation and identification of sulfurized alkylphenols in oil by high-performance liquid chromatography with evaporative light scattering and mass spectrometric detection 549(1991)247

## **Exclusion limits**

Effect of composition of polyacrylamide gels on exclusion limits 535(1990)173

#### Experimental design

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography 549(1991)159

#### Expert systems

Optimization of chromatographic methods by a combination of optimization software and expert systems 506(1990)169

Validation of an expert system for the selection of initial high-performance liquid chromatographic conditions for the analysis of basic drugs 506(1990)211

Advances in expert systems for high-performance liquid chromatography 515(1990)13

Prediction of initial high-performance liquid chromatographic conditions for selectivity optimization in pharmaceutical analysis by an expert system approach 550(1991)87

Expert system for repeatability testing of highperformance liquid chromatographic methods 550(1991)257

#### **Exponential field programming**

Comparison of power and exponential field programming in field-flow fractionation 550(1991)787

#### Extended ideal chromatographic reactor

Chromatograms of second-order reactions on chromatographic columns 520(1990)109

#### Extraction cell

Post-extraction solvent flush of the pressure restrictor in supercritical fluid extraction 543(1991)187

Supercritical fluid extraction from a brown alga by stagewise pressure increase 543(1991)413

Progress in optimization of transition metal cation chromatography and its application to analysis of silicon wafer contamination 546(1991)243

## Extraction disks

Performance of an extraction disk in synthetic organic chemical analysis using gas chromatography-mass spectrometry 538(1991)233

#### Extraction methods

Gas chromatographic analysis and gas chromatographic-mass spectrometric identification of components in the cyclohexaneextractable fraction from contaminated sediment samples 508(1990)159

Gas chromatographic determination of sterols in fat-soluble concentrates obtained from plant materials 509(1990)79

Characterization of humified compounds by extraction and fractionation on solid polyvinylpyrrolidone 509(1990)141

Isolation and identification of urinary nucleosides. Applications of high-performance liquid chromatographic methods to the synthesis of 5'-deoxyxanthosine and the simultaneous determination of 5,6-dihydrouridine and pseudouridine 515(1990)537 Extraction and clean-up procedure for polychlorinated dibenzo-*p*-dioxins and dibenzofurans in fly ash from municipal solid waste incinerators 523(1990)265

Selective extraction of native  $\beta$ -lactoglobulin from whey 539(1991)455

Optimized high-performance liquid chromatographic procedure for the separation and determination of the main folacins and some derivatives. II. Extraction method and application to rat liver 545(1991)91



## Factorial design

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography 549(1991)159

#### Fast atom bombardment

Indirect thin-layer chromatography-fast atom bombardment and chemical ionization mass spectrometry determination of carbohydrates utilizing simple and rapid microtransfer techniques 514(1990)377

Static and scanning array detection in capillary electrophoresis-mass spectrometry 516(1990)147

#### Fast atom bombardment, continuous flow

Capillary zone electrophoresis-mass spectrometry using a coaxial continuous-flow fast atom bombardment interface 516(1990)167

## Fast atom bombardment, frit

Identification of trichothecenes by frit-fast atom bombardment liquid chromatography-highresolution mass spectrometry 538(1991)323

## Feed flow-rate

Effect of feed flow-rate, antigen concentration and antibody density on immunoaffinity purification of coagulation factor IX 522(1990)153

#### Fermentation broths

Rapid and sensitive detection of citrinin production during fungal fermentation using

high-performance liquid chromatography 535(1990)317

Cation analysis of fermentation broth by highperformance liquid chromatography utilizing ion interaction 546(1991)251

## **Field-flow fractionation**

Effects of ionic strength of eluent on size analysis of sub-micrometre particles by sedimentation field-flow fractionation 515(1990)27

Retention effects in thermal field-flow fractionation 517(1990)377

Sedimentation field-flow fractionation for pigment quality assessment 517(1990)395

Evaluation of pinched inlet channel for stopless flow injection in steric field-flow fractionation 517(1990)423

Effects of temperature, carrier composition and sample load in asymmetrical flow field-flow fractionation 548(1991)393

Comparison of power and exponential field programming in field-flow fractionation 550(1991)787

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

#### Field-flow fractionation, focusing

Non-equilibrium analytical focusing field-flow fractionation using intrinsic hydrodynamic force and integral Doppler anemometry 520(1990)271

## Field-flow fractionation, potential barrier

Potential-barrier field-flow fractionation, a versatile new separation method 517(1990)345

Field-flow fractionation, sedimentation see Sedimentation field-flow fractionation

Field-flow fractionation, thermal see Thermal field-flow fractionation

# Field-flow fractionation, two-dimensional

Two-dimensional field-flow fractionation 504(1990)247

## **Field strength**

Comparison of power and exponential field programming in field-flow fractionation 550(1991)787

#### Film thickness

Polyethyleneimine-bonded phases in the separation of proteins by capillary electrophoresis 516(1990)69

Fabrication of columns for open-tubular liquid chromatography using photopolymerization of acrylates 516(1990)301

Static coating of 5 to 50  $\mu$ m I.D. capillary columns for open tubular column chromatography 517(1990)503

#### Fingerprinting

Fingerprinting of molecular components in individual human cerebrospinal fluid samples with a new micropurification system 548(1991)311

#### Fish meals

High-performance liquid chromatographic determination of several quinolone antibacterials in medicated fish feed 514(1990)348

Gas chromatography of tryptophan together with other amino acids in hydrochloric acid hydrolysates 520(1990)193

## Fish oil

Enrichment of eicosapentaenoic acid and docosahexaenoic acid esters from esterified fish oil by programmed extraction-elution with supercritical carbon dioxide 515(1990)295

#### Fish products

Determination of N-nitrosodimethylamine in fish products using gas chromatography with nitrogen-phosphorus detection 508(1990)357

## Flame infrared emission detector

Flame infrared emission-flame ionization detector for gas chromatography 513(1990)21

# Flame ionization detector

Flame infrared emission-flame ionization detector for gas chromatography 513(1990)21

#### Flame photometric detection

Determination of dimethyl sulphate in air by gas chromatography with flame photometric detection 541(1991)459

#### Flavour analysis

Thermal desorption- and sniffing-mass spectrometric monitoring of enriched trace compounds by means of a "live total transfer system" 547(1991)516

# Flocculating solvent

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

# Flow cell

Evaluation of refractive index artifacts in liquid chromatographic absorbance detection. Extension to non-ideal injection and gradient elution 503(1990)127

Coupling of microcolumn high-performance liquid chromatography with Fourier transform infrared spectrometry 506(1990)443

Z-Shaped flow cell for UV detection in capillary electrophoresis 543(1991)439

Two-dimensional viscous flow analysis in a micro flow-cell of an ultraviolet absorption detector for high-performance liquid chromatography 549(1991)101

## Flow dialysis

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application 549(1991)141

Ovine luteinizing hormone. VI. Analysis of the misclassification errors in the separation of intrapituitary isohormones by chromatofocusing 549(1991)153

## Flow injection analysis

Rapid and sensitive determination of nucleoside H-phosphonates and inorganic H-phosphonates by high-performance liquid chromatography coupled with flow-injection analysis 507(1990)103

Constant-potential amperometric detector for carbohydrates at a nickel(III) oxide electrode for micro-scale flow-injection analysis and highperformance liquid chromatography 515(1990)213

Post-column continuous-flow analysis combined with reversed-phase liquid chromatography and computer-aided detection for the characterisation of peptides 535(1990)33

Post-column reaction detection and flow injection analysis 535(1990)41

# Flow profiles

Electrochromatography with continuous sample introduction 515(1990)645

# Flow-rate

Study of the dynamic binding capacity of two anion exchangers using bovine serum albumin as a model protein 504(1990)89

High-performance liquid chromatography of amino acids, peptides and proteins. XCVII. The influence of the gradient elution mode and displacer salt type on the retention properties of closely related protein variants separated by high-performance anion-exchange chromatography 506(1990)17

Multiple peak formation in reversed-phase liquid chromatography of ramipril and ramiprilate 506(1990)75

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

Effect of carbon dioxide flow-rate on the separation of triacylglycerols by capillary supercritical fluid chromatography 518(1990)69

Chemical, physical and chromatographic properties of Superdex 75 prep grade and Superdex 200 prep grade gel filtration media 537(1991)17

Kinetic behaviour of a novel matrix ion exchanger, carboxymethyl-HVFM operated at high flow-rate 539(1991)255

Efficiency in chiral high-performance ligandexchange chromatography. Influence of the complexation process, flow-rate and capacity factor 542(1991)221

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

## Flow scintillation detection

Binding of sodium dodecyl sulphate to an integral membrane protein and to a water-soluble enzyme. Determination by molecular-sieve chromatography with flow scintillation detection 512(1990)3

## Flow-through particles

Flow-through particles for the high-performance liquid chromatographic separation of

biomolecules: perfusion chromatography 519(1990)1

Fluid density

Retention studies in supercritical fluid chromatography 505(1990)161

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

## Fluid modifiers

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

#### Fluorescence binding assay

Non-radioactive detection of MHC class II– peptide antigen complexes in the sub-picomole range by high-performance size-exclusion chromatography with fluorescence detection 548(1991)343

#### Fluorescence detector

High-performance liquid chromatographic determination of humic acid in sodium aluminate solution 502(1990)443

Studies on the uptake of N-methylisoquinolinium ion into rat striatal slices using high-performance liquid chromatography with fluorimetric detection 503(1990)189

Precolumn derivatization technique for highperformance liquid chromatographic determination of penicillins with fluorescence detection 504(1990)359

Indirect fluorometric detection in open-tubular capillary column chromatography 506(1990)401

Determination of amoxicillin in plasma by highperformance liquid chromatography with fluorescence detection after on-line oxidation 506(1990)417

Fully automated amino acid analysis for protein and peptide hydrolysatcs by precolumn derivatization with 9-fluorenyl methylchloroformate and 1-aminoadamantane 507(1990)67

Determination of the monoamine oxidase B inhibitor Ro 19-6327 in plasma by highperformance liquid chromatography using precolumn derivatization with fluorescamine and fluorescence detection 507(1990)187

High-performance liquid chromatographic determination of aliphatic thiols with aroylacrylic

acids as fluorogenic precolumn derivatization reagents 507(1990)451

Preparation of ethylenediaminephosphoramidates of nucleotides and derivatization with fluorescein isothiocyanate 512(1990)409

Direct injection of blood samples into a highperformance liquid chromatographic adenine analyser to measure adenine, adenosine and the adenine nucleotides with fluorescence detection 515(1990)363

Determination of free catecholamines in human urine by direct injection of urine into a liquid chromatographic column-switching system with fluorimetric detection 515(1990)435

Determination of pseudouridine in human urine and serum by high-performance liquid chromatography with post-column fluorescence derivatization 515(1990)495

*o*-Phthalaldehyde post-column derivatization for the determination of gizzerosine in fish meal by high-performance liquid chromatography 515(1990)527

Determination of  $\alpha$ -tocopherol, free cholesterol, esterified cholesterols and triacylglycerols in human lipoproteins by high-performance liquid chromatography 515(1990)585

Determination of urinary free noradrenaline by reversed-phase high-performance liquid chromatography with on-line extraction and fluorescence derivatization 515(1990)621

Indirect fluorescence detection of sugars separated by capillary zone electrophoresis with visible laser excitation 515(1990)639

Capillary electrophoresis of urinary porphyrins with absorbance and fluorescence detection 516(1990)271

High-performance liquid chromatographic determination of proteins by post-column fluorescence derivatization with thiamine reagent 518(1990)141

Sensitive analysis of phospholipid molecular species by high-performance liquid chromatography using fluorescent naproxen derivatives of diacylglycerols 518(1990)157

Solid-phase extraction and fluorimetric detection of benzophenanthridine alkaloids from *Sanguinaria canadensis* cell cultures 519(1990)99 Fluorescence detection of the enantiomers of halofantrine at picomole levels using chiral high-performance liquid chromatography 519(1990)387

Liquid chromatographic determination of felypressin using a column-switching technique and post-column derivatization 521(1990)141

Rapid and sensitive detection of citrinin production during fungal fermentation using high-performance liquid chromatography 535(1990)317

High-performance liquid chromatography retention index and detection of nitrated polycyclic aromatic hydrocarbons 539(1991)1

Free-solution reactor for post-column fluorescence detection in capillary zone electrophoresis 540(1991)343

Screening method for phenoxy acid herbicides in ground water by high-performance liquid chromatography of 9-anthryldiazomethane derivatives and fluorescence detection 541(1991)359

Detection in ion chromatography (Review) 546(1991)175

High-performance liquid chromatographic determination of peptides in biological fluids by automated pre-column fluorescence derivatization with fluorescamine 548(1991)319

Detection of octopamine in an insect ganglion by high-performance liquid chromatography-native fluorescence 549(1991)400

## Fluorescence visualization

Dynamic impregnation of silica stationary phases for the argentation chromatography of lipids 519(1990)349

#### **Fluorescent probes**

High-performance liquid chromatographic separation of modified and native melittin following transglutaminase-mediated derivatization with a dansyl fluorescent probe 548(1991)351

#### Fluorinated stationary phases

Preparation and comparison of a pentafluorophenyl stationary phase for reversed-phase liquid chromatography 511(1990)79

#### Fluorocarbon bonded phases

Fluoropolymers and fluorocarbon bonded phases as column packings for liquid chromatography (Review) 544(1991)187

## Fluorodensitometry

Rapid and sensitive method for the quantitation of non-polar lipids by high-performance thinlayer chromatography and fluorodensitometry 549(1991)387

#### Fluorogenic labelling

Phthalimidylbenzenesulphonyl chlorides as fluorescence labelling reagents for amino acids in high-performance liquid chromatography 502(1990)178

Assay of methylthiolincosaminide in fermentations by high-performance liquid chromatography with fluorescence detection 502(1990)184

Application of high-performance thin-layer chromatography-fluorescence densitometry to the simultaneous determination of reduced and oxidized glutathione 502(1990)230

#### Fluoropolymers

Fluoropolymers and fluorocarbon bonded phases as column packings for liquid chromatography (Review) 544(1991)187

## Fly ash

Analyses of polychlorinated dibenzo-*p*-dioxins and dibenzofurans and precursors in fly ash samples collected at different points in postcombustion zone of Japanese machida incinerator 511(1990)281

Extraction and clean-up procedure for polychlorinated dibenzo-*p*-dioxins and dibenzofurans in fly ash from municipal solid waste incinerators 523(1990)265

#### Foam counter-current chromatography

Foam counter-current chromatography of bacitracin. II. Continuous removal and concentration of hydrophobic components with nitrogen gas and distilled water free of surfactants or other additives 538(1991)213

# Fossil fuels

Environmental applications of ion chromatography (Review) 504(1990)211

Tandem mass spectrometry —an additional dimension of chromatography for the

determination of biomarkers in fossil fuels (Review) 550(1991)193

#### Free energy

Evaluation of the effect of the cyanopropyl radical on the interaction of the methylene group with silicone stationary phases 547(1991)269

## Free energy of sorption

Relationship between retention parameters in reversed-phase high-performance liquid chromatography and antitumour activity of some pyrimidine bases and nucleosides 547(1991)161

#### Freundlich isotherms

Sorption isotherms of organic vapours on Tenax 514(1990)279

#### Frontal chromatography

Frontal chromatographic techniques in preparative chromatography 523(1990)11

Optimisation of frontal chromatography by partial loading 545(1991)27

#### Function of mutual information

Information theory of column chromatography on the basis of the information measure FUMI 513(1990)349

#### Fungi

Neutral, alkaline and difference ultraviolet spectra of secondary metabolites from *Penicillium* and other fungi, and comparisons to published maxima from gradient high-performance liquid chromatography with diode-array detection 511(1990)195

#### Fused rocket immunoelectrophoresis

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

#### Fuzzy theory

Fully automatic high-performance liquid chromatographic optimization 550(1991)27



#### Ganoderma lucidum

Liquid chromatographic characterization of the triterpenoid patterns in *Ganoderma lucidum* and related species 542(1991)327

#### **Gas** impurities

Enrichment and mass spectrometric analysis of trace impurity concentrations in gases 502(1990)265

#### Gas-liquid partition chromatography

Solubility of gasoline components in different lubricants for combustion engines determined by gas-liquid partition chromatography 538(1991)241

#### Gas-solid systems

Chromatographic study of the interactions of hydrocarbons with cyclodextrins and their derivatives in the gas-solid system 520(1990)105

#### Gaussian peaks

Resolution enhancement of chromatographic data. Considerations in achieving super-resolution with the constrained iterative relaxation method 550(1991)51

# Gel permeation chromatography, coupling to capillary electrophoresis

Apparatus for coupled high-performance liquid chromatography and capillary electrophoresis in the analysis of complex protein mixtures 515(1990)659

#### Glass beads

Interactions of the mitochondrial membrane rat liver D-3-hydroxybutyrate dehydrogenase with glass beads during adsorption chromatography. Relationships with the activation of the enzyme by phospholipids 539(1991)279

#### Glycosylation

Glycosylation of extracellular superoxide dismutase studied by high-performance liquid chromatography and mass spectrometry 548(1991)293

#### Gradient, multidevelopment

Multiple-development high-performance thinlayer chromatography of organochlorine pesticides 545(1991)214

# Gradient chromatography

Fundamental study of hydroxyapatite highperformance liquid chromatography. II. Experimental analysis on the basis of the general theory of gradient chromatography 515(1990)91

## Gradient delay time

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

#### **Gradient** elution

Determination of biopolymer (protein) molecular weights by gradient elution, reversed-phase high-performance liquid chromatography with low-angle laser light scattering detection 502(1990)21

Chromatographic purification of glucose-6phosphate dehydrogenase and lactate dehydrogenase from *Leuconostoc mesenteroides* 503(1990)197

Semi-automated method for the determination of abscisic acid in crude plant extracts 503(1990)459

Analysis of triazine and triazole herbicides by gradient-elution supercritical fluid chromatography 505(1990)293

High-performance liquid chromatography of amino acids, peptides and proteins. XCVII. The influence of the gradient elution mode and displacer salt type on the retention properties of closely related protein variants separated by high-performance anion-exchange chromatography 506(1990)17

Studies on system peaks in ion-pair adsorption chromatography. III. Regulation of system peak gradient retention for obtaining analyte peak compression 506(1990)61

Neutral, alkaline and difference ultraviolet spectra of secondary metabolites from *Penicillium* and other fungi, and comparisons to published maxima from gradient high-performance liquid chromatography with diode-array detection 511(1990)195

High-performance liquid chromatography of amino acids, peptides and proteins. XCVIII. The influence of different displacer salts on the bandwidth properties of proteins separated by gradient elution anion-exchange chromatography 512(1990)41 lon-exchange high-performance liquid chromatographic isolation of the major allergen of parietaria pollen extract 512(1990)115

High-performance liquid chromatographic separation and partial characterization of the  $\alpha$ and  $\beta$ -chains of Alaskan sockeye salmon hemogloglobin 512(1990)291

Tryptic fingerprinting on a poly(styrenedivinylbenzene) reversed-phase column 512(1990)315

Preparation of ethylenediaminephosphoramidates of nucleotides and derivatization with fluorescein isothiocyanate 512(1990)409

Convenient purification of tritylated and detritylated oligonucleotides up to 100-mer 512(1990)415

Determination of nine flavonoids and coumarins in licorice root by high-performance liquid chromatography 513(1990)247

Optimization of high-performance liquid chromatographic analysis with UV detection: light-scattering detection to establish the coelution of UV- and non-UV-absorbing constituents 513(1990)354

Reversed-phase high-performance liquid chromatographic method for the determination of soil-bound [<sup>14</sup>C]atrazine and its radiolabeled metabolites in a soil metabolism study 514(1990)209

Application of high-performance liquid chromatography in establishing an accurate index of blood glucose control 515(1990)531

Applications of semi-micro supercritical fluid chromatography with gradient elution to synthetic oligomer separation 515(1990)629

Modification of a horizontal sandwich chamber for thin-layer chromatography 516(1990)461

Gel permeation chromatography–Fourier transform infrared study of some synthetic polymers. II. Instrumentation for the characterization of polyethylenc 517(1990)209

Surfactant-mediated hydrophobic interaction chromatography of proteins: gradient elution 518(1990)99

Fractionation of basic nuclear proteins of human sperm by zinc chelate affinity chromatography 518(1990)123

Stepwise gradient in thin-layer chromatography of *Chelidonium* alkaloids 518(1990)273

Aldehyde and nucleotide separations by highperformance liquid chromatography. Application to phenylhydrazine-induced damage of erythrocytes and reticulocytes 520(1990)411

Reversed-phase chromatography of *Escherichia* coli ribosomal proteins. Correlation of retention time with chain length and hydrophobicity 522(1990)163

Computer simulation for optimization of highperformance liquid chromatography of some phenolic pollutants 523(1990)81

Hydrophobic interaction chromatography of proteins on Separon HEMA. III. Selection of suitable gradient conditions for the separation of proteins by hydrophobic interaction chromatography 523(1990)139

Studies on system peaks in ion-pair adsorption chromatography. IV. Optimization of peak compression 535(1990)93

Large-scale purification of haptenated oligonucleotides using high-performance liquid chromatography 536(1991)85

Phosphate-gradient high-performance liquid chromatographic method for the analysis of synthetic salmon calcitonin 536(1991)131

Liquid chromatographic analysis of a potential polymeric-pendant drug delivery system for peptides. Application of high-performance sizeexclusion chromatography, reversed-phase highperformance liquid chromatography and ion chromatography to the evaluation of biodcgradable poly[(chloromethoxytrialanine methyl ester)phosphazenes] 536(1991)255

Refractive index gradient detection of biopolymers separated by high-temperature liquid chromatography 536(1991)289

Alternative mobile phases for the reversed-phase high-performance liquid chromatography of peptides and proteins 537(1991)181

Reversed-phase high-performance liquid chromatographic characterization of acetic acid

extracts of the normal and the diabetic human pancreas 537(1991)201

Determination of pituitary and recombinant human growth hormone molecular weights by modern high-performance liquid chromatography with low angle laser light scattering detection 539(1991)91

Preparative high-performance liquid chromatography based on reversed-phase gradient elution. Optimum experimental conditions for heavily overloaded separation 540(1991)21

Compensated delay volume as an approach to improve the inter-laboratory transferability of gradient high-performance liquid chromatographic assays 540(1991)373

Reversed-phase gradient elution behaviour of polystyrenes in a dichloromethane-methanol solvent system 543(1991)157

Comparison of gradient elution separations for organic and inorganic anions with chemically suppressed conductometric detection 546(1991)125

Temperature programming in macrocycle-based ion chromatography 546(1991)139

Determination of analytes at extreme concentration ratios by gradient ion chromatography with solid-phase reaction detection 546(1991)151

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

Computer-assisted retention prediction system for inorganic cyclic polyphosphates and its application to optimization of gradients in anionexchange chromatography 550(1991)5

Computer simulation of isocratic retentions of alkylketones using gradient data 550(1991)77

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

Separation and detection of oxidation products in Neurolite raw material 550(1991)549

## Gradient optimization modelling

High-performance liquid chromatography retention index and detection of nitrated polycyclic aromatic hydrocarbons 539(1991)1

# **Gradient** profile

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

## Gradient steepness

Studies on system peaks in ion-pair adsorption chromatography. IV. Optimization of peak compression 535(1990)93

# Grafted polymer layers

Polymer-inorganic selective adsorbents for gas chromatography produced by graft polymerization 520(1990)21

# Grape musts

Analysis of the soluble proteins in grape must by two-dimensional electrophoresis 541(1991)453

# Graphitized carbon black

Capillary gas chromatography with graphitized carbon black 517(1990)123

Carbon adsorbents in gas adsorption chromatography 520(1990)55

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

Evaluation tests and applications of a doublelayer tube-type passive sampler 522(1990)285

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

# Group retention coefficients

High-performance liquid chromatography of amino acids, peptides and proteins. CX. Principal component analysis of four sets of group retention coefficients derived from reversed-phase high-performance liquid chromatography of peptides 548(1991)105

# Group separations

Peculiarities of aromatic hydrocarbon retention in normal-phase high-performance liquid chromatography with eluents containing halide derivatives 520(1990)315

Cascade-mode multiaffinity chromatography. Fractionation of human serum proteins 550(1991)751



# Hadamard transform spatial multiplexing

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

# Halogen lamp

Analysis of internal filling gas of small-sized halogen lamps by gas chromatography 520(1990)213

# Hamaker constant

Potential-barrier field-flow fractionation, a versatile new separation method 517(1990)345

# Hammett constants

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (E)- and (Z)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

# Hapten binding sites

Tandem immunoaffinity and reversed-phase high-performance liquid chromatography for the identification of the specific binding sites of a hapten on a proteic carrier 539(1991)363

# Headspace analysis

Qualitative analysis of a commercially available phenol-formaldehyde resin, by static and dynamic headspace analysis using a mass-selective detector 509(1990)101

Headspace analysis of polar compounds in air 509(1990)107

Simple device for the determination of volatile chlorinated hydrocarbons in water by gas chromatography 509(1990)111

Comparison of quarter-hourly on-line dynamic headspace analysis to purge-and-trap analysis of varying volatile organic compounds in drinking water sources 513(1990)47

Sorption isotherms of organic vapours on Tenax 514(1990)279

Systematic errors with the use of internal standard calibration in gas chromatographic headspace analysis 518(1990)1

Headspace gas chromatography with opentubular columns for determining the evaporation rate of essential oils, perfumery compositions and perfumes 520(1990)169

Rapid quantitative analysis of headspace components of green olive brine 521(1990)153

Detection of non-volatile organic acids by headspace gas chromatography 532(1990)374

Analysis of packaged orange juice volatiles using headspace gas chromatography 540(1991)456

Analysis of volatile organic compounds in estuarine sediments using dynamic headspace and gas chromatography-mass spectrometry 542(1991)413

Determination of volatile aliphatic aldehydes in the headspace of heated food oils by derivatization with 2-aminoethanethiol 547(1991)291

#### Heating rate

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

#### Heat of adsorption

Retention times and heats of adsorption of aromatic compounds on carbon adsorbents 506(1990)335

Sorption isotherms of organic vapours on Tenax 514(1990)279

Lead selenide as a polar adsorbent for gas chromatography 520(1990)15

Retention and heats of adsorption of *n*-alkanes, aromatic hydrocarbons, aliphatic alcohols and ketones on macroporous silicas 520(1990)47

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

Measurement of the heats of adsorption of chiral isomers on an enantioselective stationary phase 522(1990)23

## HEMA 1000 Q-L

Ion-exchange separation of inorganic anions on a HEMA 1000 Q-L column 520(1990)349

#### Henry's law

Solubility of gasoline components in different lubricants for combustion engines determined by gas-liquid partition chromatography 538(1991)241

#### Heterometallic clusters

High-performance liquid chromatographic separation of heterometallic 1,1'-bis-(diphenylphosphino)ferrocene-substituted metal carbonyls 538(1991)492

#### Heterophasic systems

Reversed-phase high-performance liquid chromatography applied to the direct analysis of untreated heterophasic systems 507(1990)403

#### Hierarchical ascending classification

Factor analysis and experiment design in highperformance liquid chromatography. X. Chemometric characterization of packings, solvents and solutes with hierarchical ascending classification and correspondence factor analysis 544(1991)393

#### Hofmeister series

Behaviour of amino acids in gel permeation chromatography. Correlation with the effect of Hofmeister solutes on the conformational stability of macromolecules 510(1990)41

#### Hollow-fibre membrane

Automated precolumn derivatization of amino acids with *ortho*-phthalaldehyde using a hollow-fibre membrane reactor 502(1990)317

Simultaneous determination of ampicillin and sulbactam by liquid chromatography: postcolumn reaction with sodium hydroxide and sodium hypochlorite using an active hollow-fibre membrane reactor 532(1990)87

Hollow-fibre membrane-based sample preparation device for the clean-up of brine samples prior to ion chromatographic analysis 538(1991)497

#### Hollow fibres

Sample preparation for ion chromatography by solid-phase extraction 546(1991)61

#### Homarus americanus

Quantification of methyl farnesoate levels in hemolymph by high-performance liquid chromatography 545(1991)71

#### Homogeneous catalysis

Homogeneous catalysis studied by reversed-flow gas chromatography 550(1991)181

# **Homologous series**

Even-odd alternation effect in the regularities of chromatographic retention 509(1990)15

Gas chromatographic identification of complex mixtures of halomethanes and haloethanes by using the correlation between their retention and vapour pressure 537(1991)305

# Homologues

Degradation and analysis of commercial polyoxyethylene glycol mono(4-alkylphenyl) ethers 511(1990)325

# Horizontal flow-through coil planet centrifuge

Studies on the preparative capability of the horizontal flow-through coil planet centrifuge and high-performance liquid chromatography in the separation of polar compounds from *Oxytropis* ochrocephala Bunge 538(1991)219

# Horizontal sandwich chamber, TLC

Modification of a horizontal sandwich chamber for thin-layer chromatography 516(1990)461

# Human immunodeficiency virus

Peptide mapping of HIV polypeptides expressed in *Escherichia coli*. Quality control of different batches and identification of tryptic fragments containing residues of aromatic amino acids or cysteine 512(1990)325

Purification of a recombinantly produced transmembrane protein (gp41) of HIV I 521(1990)267

Application of capillary DNA chromatography to detect AIDS virus (HIV-1) DNA in blood 533(1990)87

Quantitation of didanosine in human plasma and urine by high-performance liquid chromatography 533(1990)282

# Hydration

Investigation of phase transitions in the  $CaSO_4(s)-H_2O(g)$  system by chromatographic methods 520(1990)157

# Hydrazido-derivatized supports

Hydrazido-derivatized supports in affinity chromatography (Review) 510(1990)13

# Hydrazinolysis

Release of 2-aminofluorene from N-(deoxyguanosin-8-yl)-2-aminofluorene by hydrazinolysis 538(1991)447 Improved separation of lysoglycolipids from solvolysates by reversed-phase high-performance liquid chromatography 549(1991)133

# Hydrodistillation

Gas chromatographic determination of monoterpenes in essential oil medicinal plants 542(1991)451

# Hydrodynamic chromatography

Hydrodynamic chromatography of macromolecules on small spherical non-porous silica particles 506(1990)547

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

# Hydrodynamic force

Non-equilibrium analytical focusing field-flow fractionation using intrinsic hydrodynamic force and integral Doppler anemometry 520(1990)271

# Hydrodynamic mechanism, stationary phase transition

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). II. Speculation on the hydrodynamic mechanism in stationary phase retention 538(1991)67

# Hydrogen bond acidity

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

# Hydrogen bond donor acidity

Solvatochromic hydrogen bond donor acidity of aqueous binary solvent mixtures for reversed-phase liquid chromatography 513(1990)107

# Hydrogen bonding

Solvatochromic hydrogen bond donor acidity of aqueous binary solvent mixtures for reversed-phase liquid chromatography 513(1990)107

Hydrogen bonding. XV. A new characterisation of the McReynolds 77-stationary phase set 518(1990)329

# Hydrogen-deuterium exchange

Hydrogen-deuterium exchange in fused-silica capillary columns 549(1991)416

# Hydrogen storage alloys

Application of a hydrogen storage alloy to the determination of trace impurities in high-purity hydrogen by gas chromatography. Group analysis of  $C_1$ ,  $C_2$  and  $C_3$  hydrocarbons 541(1991)75

# Hydrophilic-interaction chromatography

Hydrophilic-interaction chromatography of peptides on hydrophilic and strong cationexchange columns 548(1991)13

# Hydrophilicity

Glucose-silica, an improved medium for highpressure gel filtration chromatography 511(1990)69

Reversed-phase high-performance liquid chromatographic study of the formation of complexes of nucleotides and oligonucleotides with Lu(III) 516(1990)456

Hydrophilic-interaction chromatography of peptides on hydrophilic and strong cationexchange columns 548(1991)13

#### Hydrophilic resin-based packings

Macroporous synthetic hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1991)249

Non-porous hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1989)257

#### Hydrophobic contact area

Relationship between retention parameters in reversed-phase high-performance liquid chromatography and antitumour activity of some pyrimidine bases and nucleosides 547(1991)161

#### Hydrophobic effects

Properties of supports for the partition chromatography of proteins 542(1991)55

Solution properties of polyelectrolytes. VII. Non-ideal mechanisms in size-exclusion chromatography of synthetic polyions, peptides and proteins 548(1991)93

#### Hydrophobic gels

Characteristics of  $C_{4^{-}}$  and  $C_{8^{-}}$ -bonded vinyl alcohol copolymer gels for reversed-phase highperformance liquid chromatography 515(1990)175

# Hydrophobic interaction chromatography

Study of the retention mechanism of proteins in hydrophobic interaction chromatography 507(1990)1

Salt-promoted adsorption chromatography 510(1990)47

Surfactant-mediated hydrophobic interaction chromatography of proteins: gradient elution 518(1990)99

Hydrophobic interaction chromatography of proteins on Separon HEMA. II. Influence of sorbent modification on efficiency of separation 523(1990)131

# Hydrophobic interactions

Chromatographic characteristics of nucleic acid components on vinyl alcohol copolymer gel columns 506(1990)145

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Reversed-phase liquid chromatography of polar benzene derivatives on poly(vinylbenzo-18crown-6)-immobilized silica as a stationary phase 522(1990)107

Comparison of polybutadiene-coated alumina and octadecyl-bonded silica for separations of proteins and peptides by reversed-phase highperformance liquid chromatography 541(1991)303

Separation and purification of oligonucleotides using a new bonded-phase packing material 545(1991)79

Characterization of synthetic macroporous ion-exchange resins in low-pressure cartridges and columns. Evaluation of the performance of Macro-Prep 50 S resin in the purification of anti-Klenow antibodies from goat serum 548(1991)165

#### Hydrophobicity

see also Lipophilicity

Surface affinity chromatographic separation of blood cells. VII. Relationship between capacity factors of human peripheral blood cells and the rate of penetration of liquids into xerogel column packings 504(1990)69

Correlation between chemical structure of noncongeneric solutes and their retention on polybutadiene-coated alumina 506(1990)3

Reversed-phase high-performance liquid chromatography in the investigation of the hydrophobicity of selected ketones 506(1990)109 Partition coefficients and capacity factors of some nucleoside analogues 506(1990)119

Isocratic hydrophobic interaction chromatography of dansyl amino acids. Correlation of hydrophobicity and retention parameters 511(1990)123

Separation of human apolipoproteins A-IV, A-I and E by reversed-phase high-performance liquid chromatography on a TSK Phenyl-5PW column 511(1990)147

Anomalous behavior of selected methylsubstituted polycyclic aromatic hydrocarbons in reversed-phase liquid chromatography 514(1990)111

Hydrophobicity parameters determined by reversed-phase liquid chromatography. I. Relationship between capacity factors and octanol-water partition coefficients for monosubstituted pyrazines and the related pyridines 514(1990)123

Equilibrium of octadecylsilica gel with sodium dodecyl sulphate 515(1990)67

Method for the preparation of internal-surface reversed-phase packing materials starting from alkylsilylated silica gels 515(1990)73

Capillary electrophoretic separations of peptides using micelle-forming compounds and cyclodextrins as additives 519(1990)189

Influence of uncharged mobile phase additives on retention and enantioselectivity of chiral drugs using an  $\alpha_1$ -acid glycoprotein column 519(1990)271

Synthesis and protein-binding properties of spacer-free thioalkyl agaroses 521(1990)1

High-performance liquid chromatography on silica dynamically modified with hydrazinium derivatives 521(1990)19

Purification of the subunits of pea mitochondrial  $F_1$ -ATPase by high-performance liquid chromatography 521(1990)43

Reversed-phase chromatography of *Escherichia coli* ribosomal proteins. Correlation of retention time with chain length and hydrophobicity 522(1990)163 High-performance liquid chromatography of red fruit anthocyanins 537(1991)101

Use of polymeric reversed-phase columns for the characterization of polypeptides extracted from human pancreata. II. Effect of the stationary phase 542(1991)83

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

Structure-retention correlation in liquid chromatography (Review) 550(1991)313

Retention prediction for polymer additives in reversed-phase liquid chromatography 550(1991)325

Chromatographic data for pharmacological classification of imidazol(in)e drugs 550(1991)573

# Hydrophobicity scale

Behaviour of amino acids in gel permeation chromatography. Correlation with the effect of Hofmeister solutes on the conformational stability of macromolecules 510(1990)41

#### Hydrophobic layers

High-performance liquid chromatography and ultrafiltration of whey proteins with inorganic porous materials coated with polyvinylimidazole derivatives 548(1991)215

#### Hydroxyapatite

High-performance liquid chromatographic separation of biomolecules using calcium phosphate supported on macroporous silica microparticles 504(1990)319

High-performance liquid chromatography of transfer ribonucleic acids on spherical hydroxyapatite beads 506(1990)319

Hydroxyapatite as a liquid chromatographic packing (Review) 544(1991)147

# I

#### Ideal chromatographic reactor

Chromatograms of second-order reactions on chromatographic columns 520(1990)109

#### Imaging densitometry

Determination of phospholipids on twodimensional thin-layer chromatographic plates by imaging densitometry 543(1991)201

#### **Immobiline buffers**

Structure-stability relationship of Immobiline chemicals for isoelectric focusing as monitored by capillary zone electrophoresis 548(1991)381

#### Immobiline membranes

Capillary zone electrophoresis for monitoring r-DNA protein purification in multi-compartment electrolysers with immobiline membranes 516(1990)133

#### Immobilization

Design and applications of biomimetic anthraquinone dyes. III. Anthraquinoneimmobilised C.I. Reactive Blue 2 analogues and their interaction with horse liver alcohol dehydrogenase and other adenine nucleotidebinding proteins 508(1990)109

Hydrazido-derivatized supports in affinity chromatography (Review) 510(1990)13

Immobilization of reactive dyes on several matrices that allow high and very high flow-rates to be used. Application to the purification of a proteinase inhibitor from corn 510(1990)165

Affinity chromatography on novel perfluorocarbon supports. Immobilisation of C.I. Reactive Blue 2 on a polyvinyl alcohol-coated perfluoropolymer support and its application in affinity chromatography 510(1990)177

One-step purification of trypsin and  $\alpha$ -chymotrypsin by affinity chromatography on Eupergit–aprotinin, a novel carrier for purification of serine proteases 510(1990)239

Site-directed immobilization of proteins 510(1990)293

Enhanced activity of immobilized dimethylmaleic anhydride-protected poly- and monoclonal antibodies 510(1990)303

Immobilization of  $\alpha$ -human atrial natriuretic peptide on insoluble supports and affinity purification of specific antibodies from a polyclonal goat anti- $\alpha$ -human atrial natriuretic peptide serum 510(1990)339

Evaluation of factors which affect column performance with immobilized monoclonal antibodies. Model studies with a lysozymeantilysozyme system 512(1990)23

High-performance liquid chromatography for the assessment of glucoamylase, immobilized on metallic membranes 536(1991)107

Immobilization of dermatan sulphate on a silica matrix and its possible use as an affinity chromatography support for heparin cofactor II purification 539(1991)289

Highly active enzyme preparations immobilized via matrix-conjugated anti-Fc antibodies 539(1991)335

Polymer-bound chiral polymers for use in enantiomer separations 540(1991)145

Immobilization of chiral phases for enantiomer separations in supercritical fluid and gas chromatography 540(1991)217

Comparison of site-specific coupling chemistry for antibody immobilization on different solid supports 542(1991)41

#### **Immobilized antibodies**

Automated aflatoxin analysis of foods and animal feeds using immunoaffinity column clean-up and high-performance liquid chromatographic determination 543(1991)220

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

Effect of antigen size on optimal ligand density of immobilized antibodies for a high-performance liquid chromatographic support 548(1991)243

Isolation of an interleukin 2-binding receptor from activated lymphocytes by high-performance immunoaffinity chromatography 550(1991)741

#### Immobilized enzyme reactors

Chemiluminescence detection of free fatty acids by high-performance liquid chromatography with immobilized enzymes 516(1990)450

# **Immobilized enzymes**

Sensitive assay system for bile acids and steroids having hydroxyl groups utilizing highperformance liquid chromatography with peroxyoxalate chemiluminescence detection 515(1990)577

Determination of organophosphorus and carbamate pesticide standards by liquid chromatography with detection by inhibition of immobilized acetylcholinesterase 539(1991)47

#### **Immobilized ligands**

Comparison of site-specific coupling chemistry for antibody immobilization on different solid supports 542(1991)41

New ligands for boronate affinity chromatography. Synthesis and properties 543(1991)17

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

# Immobilized metal affinity chromatography

Salt-promoted adsorption chromatography 510(1990)47

Immobilized metal ion affinity chromatography for the purification of *Fel d* I, a cat major allergen, from a house-dust extract 512(1990)177

High-performance metal chelate interaction chromatography of proteins with silica-bound ethylenediamine-N,N'-diacetic acid 512(1990)237

Immobilized Fe<sup>3+</sup> affinity chromatographic isolation of phosphopeptides 539(1991)425

# Immobilized metal ions

Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides 516(1990)333

Fractionation of basic nuclear proteins of human sperm by zinc chelate affinity chromatography 518(1990)123

Metal ligand-induced alterations in the surface structures of lactoferrin and transferrin probed by

interaction with immobilized copper(II) ions 536(1991)1

Model studies on iron(III) ion affinity chromatography. Interaction of immobilized metal ions with nucleotides 541(1991)333

Metal affinity displacement chromatography of proteins 549(1991)89

Cascade-mode multiaffinity chromatography. Fractionation of human serum proteins 550(1991)751

# Immobilized pH gradients

Recent developments in electrophoretic methods (Review) 516(1990)3

Capillary zone electrophoresis for monitoring r-DNA protein purification in multi-compartment electrolysers with immobiline membranes 516(1990)133

Structure-stability relationship of Immobiline chemicals for isoelectric focusing as monitored by capillary zone electrophoresis 548(1991)381

#### Immobilized polymer layers

Non-porous polybutadienc-coated silicas as stationary phases in reversed-phase chromatography 517(1990)269

# Immunoaffinity adsorbents

Comparison of the EASI-EXTRACT immunoaffinity concentration procedure with the AOAC CB method for the extraction and quantitation of aflatoxin  $B_1$  in raw ground unskinned peanuts 511(1990)379

Evaluation of factors which affect column performance with immobilized monoclonal antibodies. Model studies with a lysozymeantilysozyme system 512(1990)23

Rapid determination of clenbuterol residues in urine by high-performance liquid chromatography with on-line automated sample processing using immunoaffinity chromatography 519(1990)323

Purification of NAD glycohydrolase from *Neurospora crassa* conidia by a polyclonal immunoadsorbent 539(1991)517

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

# Immunoaffinity extraction

Determination of 19-nortestosterone, testosterone and trenbolone by gas chromatography-negativeion mass spectrometry after formation of the pentafluorobenzylcarboxymethoximetrimethylsilyl derivatives 547(1991)325

#### Immunoaffinity ligands

Synthetic antibody fragment as ligand in immunoaffinity chromatography 512(1990)337

A ten-residue fragment of an antibody (miniantibody) directed against lysozyme as ligand in immunoaffinity chromatography 548(1991)235

Isolation of an interleukin 2-binding receptor from activated lymphocytes by high-performance immunoaffinity chromatography 550(1991)741

#### Immunoaffinity purification

Eupergit C as a carrier for high-performance liquid chromatographic-based immunopurification of antigens and antibodies 510(1990)311

#### Immunodyne

Use of an activated nylon membrane (Immunodyne) as an affinity adsorbent for the purification of phosphofructokinase and phosphoglycerate kinase from yeast 502(1990)171

# Immunoelectrophoresis

High-performance liquid affinity chromatography for the purification of immunoglobulin A from human serum using jacalin 514(1990)219

#### Immunosensors

Biosensors (Review) 510(1990)347

#### Immunosorbent

Use of chromatography for the preparation of homologous tetanus antitoxin 520(1990)425

# **Inclusion complexes**

Determination by high-performance liquid chromatography of the binding properties of charged  $\beta$ -cyclodextrin derivatives with drugs 503(1990)453

Chromatographic behaviour of cyclodextrin complexes of NADH and NADP 508(1990)127

Reversed-phase chromatographic separation of selected hydroxyl aromatics with  $\beta$ -cyclodextrin as a mobile phase additive 514(1990)19

Chromatographic behaviour of cyclodextrin complexes of nucleotides, nucleosides and their bases 523(1990)293

Stereoselectivity of  $\alpha$ -,  $\beta$ - and  $\gamma$ -cyclodextrin complexation relative to *cis-trans* acyclic alkenes and cyclooctenes under conditions of gas-liquid chromatography 547(1991)283

# **Inclusion complex formation**

Charge-transfer chromatographic study on inclusion complex formation between two hydroxypropyl- $\beta$ -cyclodextrins and some chlorophenols 509(1990)255

#### Indirect detection

Secondary equilibria and their interaction with chromatographic transport 506(1990)45

Separation and indirect detection of small-chain peptides using chromophoric mobile phase additives 509(1990)357

Anion-cation separations on a mixed-bed ionexchange column with indirect photometric detection 546(1991)101

Optimization of detection sensitivity in the capillary electrophoresis of inorganic anions 546(1991)431

#### Inductive adsorption

Resolution of ( $\pm$ )-2-aminoheptane enantiomers by inductive adsorption chromatography 540(1991)157

#### Inductively coupled plasmas

Preseparation of uranium by reversed-phase partition chromatography. Application to the determination of trace elements in nuclear-grade uranium compounds by inductively coupled plasma atomic emission spectrometry 537(1991)287

# Industrial hygiene sampling

Application of multidimensional gas chromatography-mass spectrometry to the determination of glycol ethers in air 522(1990)303

# Information theory

Information theory of column chromatography on the basis of the information measure FUMI 513(1990)349

#### Infrared spectrometry, Fourier-transform

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Analysis of aliphatic and phenolic carboxylic acids by capillary supercritical fluid chromatography–Fourier-transform infrared microspectrometry 505(1990)179

Coupling of microcolumn high-performance liquid chromatography with Fourier transform infrared spectrometry 506(1990)443

Gel permeation chromatography–Fourier transform infrared study of some synthetic polymers. II. Instrumentation for the characterization of polyethylene 517(1990)209

Study of large sample volume injection in a capillary gas chromatographic–Fourier transform infrared system using a retention gap column 547(1991)494

Evaluation of gas chromatography–Fourier transform infrared spectroscopy–mass spectrometry for analysis of phenolic compounds 549(1991)297

# **Injection methods**

Separation and determination of aspoxicillin in human plasma by micellar electrokinetic chromatography with direct sample injection 515(1990)245

Sample introduction and elution method for preparative supercritical fluid chromatography 515(1990)285

Electrochromatography with continuous sample introduction 515(1990)645

# Injection profile

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

# **Injection techniques**

Determination of chlorpyrifos in water by largevolume direct aqueous injection capillary gas chromatography 503(1990)377

Direct injection high-performance liquid chromatographic assay of morphine with electrochemical detection, a polymeric column and an alkaline eluent 507(1990)253

Method for the preparation of internal-surface reversed-phase packing materials starting from alkylsilylated silica gels 515(1990)73

Direct sample injection into the high-performance liquid chromatographic column in theophylline monitoring 515(1990)321

Cryogenic-focusing, ohmically heated on-column trap for capillary gas chromatography 517(1990)67

Preparative high-performance liquid chromatographic columns with an intra-column injection system 520(1990)295

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

# **Injection** volume

Study of large sample volume injection in a capillary gas chromatographic–Fourier transform infrared system using a retention gap column 547(1991)494

# Inlet channel, pinched

Evaluation of pinched inlet channel for stopless flow injection in steric field-flow fractionation 517(1990)423

# Integral Doppler anemometry

Non-equilibrium analytical focusing field-flow fractionation using intrinsic hydrodynamic force and integral Doppler anemometry 520(1990)271

# Interfaces

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

# Interfaces, GC-MS

Simple, direct gas chromatography-mass spectrometry interface for the ion trap detector 504(1990)429

# Interfaces, LC-atomic absorption spectrometry

Ultrasonic nebulizer interface system for coupling liquid chromatography and electrothermal atomic absorption spectrometry 541(1991)243

# Interfaces, LC-MS

Important parameters in liquid chromatography continuous-flow fast atom bombardment mass spectrometry 511(1990)35

Identification of trichothecenes by frit-fast atom bombardment liquid chromatography-highresolution mass spectrometry 538(1991)323

High-performance liquid chromatographic determination of cephalosporin antibiotics using 0.3 mm I.D. columns 539(1991)215

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid

chromatography-particle beam-mass spectrometry 549(1991)237

# Internal standards

Phenols as internal standards in reversed-phase high-performance liquid chromatography in pharmaceutical analysis 515(1990)305

Systematic errors with the use of internal standard calibration in gas chromatographic headspace analysis 518(1990)1

Nervonic acid *versus* tricosanoic acid as internal standards in quantitative gas chromatographic analyses of fish oil longer-chain n-3 polyunsaturated fatty acid methyl esters 533(1990)1

Computer assisted internal standard selection for reversed-phase liquid chromatography 535(1990)199

# Internal-surface reversed-phase packings

Characterization of an internal-surface reversedphase silica support for liquid chromatography and its application to assays of drugs in serum 515(1990)59

Method for the preparation of internal-surface reversed-phase packing materials starting from alkylsilylated silica gels 515(1990)73

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

#### Intersecting isotherms

Effect of the intersection of the individual isotherms in displacement chromatography 541(1991)195

#### Inverse gas chromatography

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

# Ion chromatography

Environmental applications of ion chromatography (Review) 504(1990)211

Ion chromatographic determination of plasma oxalate in healthy subjects, in patients with chronic renal failure and in cases of hyperoxaluric syndromes 511(1990)223

Comparative analysis of organic acids located on the surface of natural building stones by high-

performance liquid, gas and ion chromatography 514(1990)241

Ion chromatography of nitrite, bromide and nitrate ions in brine samples using a chlorideform anion-exchange resin column 514(1990)355

Twenty years of ion chromatography (Review) 546(1991)3

Detection in ion chromatography (Review) 546(1991)175

Environmental applications of ion chromatography in China 546(1991)317

Use of ion chromatography in agricultural research (Review) 546(1991)387

#### Ion exchange, high pH

High-pH ion-exchange separation and electrochemical detection of alditols, carbohydrates and acidic sugars 503(1990)227

# Ion-exchange model

Multivalent ion-exchange model of biopolymer chromatography for mass overload conditions 548(1991)61

#### Ion exchangers

Two-component protein adsorption to the cation exchanger S Sepharose<sup>ac</sup> FF 505(1990)329

Rapid high-performance liquid chromatography of nucleic acids with polystyrene-based micropellicular anion exchangers 508(1990)61

Increasing the purity of polyuronic sorbents 509(1990)239

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

New ion exchangers for the chromatography of biopolymers 510(1990)133

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101

Ion-exchange high-performance liquid chromatographic isolation of the major allergen of parietaria pollen extract 512(1990)115 High-performance ion-exchange chromatography of peptides on a pellicular ion exchanger 513(1990)384

Ion-exchange separation of inorganic anions on a HEMA 1000 Q-L column 520(1990)349

Rapid purification of cytochrome c oxidase from *Paracoccus denitrificans* 521(1990)291

Improved methods for the purification of enzymes of the folate pathway in *Escherichia coli*. I. Chromatographic methods 523(1990)53

Kinetic behaviour of a novel matrix ion exchanger, carboxymethyl-HVFM operated at high flow-rate 539(1991)255

Anion-exchange chromatography on selected silica-based reversed-phase high-performance liquid chromatographic columns 544(1991)99

Twenty years of ion chromatography (Review) 546(1991)3

Sample preparation for ion chromatography by solid-phase extraction 546(1991)61

Azide determination in protein samples by ion chromatography 546(1991)325

High-performance liquid chromatography of amino acids, peptides and proteins. CXII. Analysis of operating parameters affecting the breakthrough curves in fixed-bed chromatography of proteins using several mathematical models 548(1991)127

Characterization of synthetic macroporous ion-exchange resins in low-pressure cartridges and columns. Evaluation of the performance of Macro-Prep 50 S resin in the purification of anti-Klenow antibodies from goat serum 548(1991)165

Ion-exchange high-performance liquid chromatography of nucleotides and polypeptides on new types of ion-exchange sorbents, based on polystyrene-coated silicas 548(1991)207

High-performance liquid chromatography of reaction mixtures from the oxidation and degradation of lactose 549(1991)113

# Ion exclusion

Principles and applications of ion-exclusion chromatography (Review) 546(1991)111

The, use of pulsed amperometry combined with ion-exclusion chromatography for the simultaneous analysis of ascorbic acid and sulfite 546(1991)119

Solution properties of polyelectrolytes. VII. Non-ideal mechanisms in size-exclusion chromatography of synthetic polyions, peptides and proteins 548(1991)93

#### Ion-exclusion chromatography

Analysis of nitrogen dioxide in ambient air by ion-exclusion chromatography with electrochemical detection 503(1990)466

Retention behaviour of mono- and dicarboxylic acids, carbohydrates and alcohols in ion-exclusion chromatography 506(1990)157

Use of ion-exclusion chromatography for monitoring fatty acids produced by bacterial anaerobic degradation of tetrachloroethene in ground water 536(1991)193

#### Ionic charge

Determination of the charge of ions by partition coefficient measurements in gel permeation chromatography 504(1990)403

# Ionic multilayers

Elimination of peak splitting in the liquid chromatography of the proline-containing drug enalapril maleate 537(1991)249

#### Ionic strength

Simultaneous pH and ionic strength effects and buffer selection in capillary electrophoretic techniques 541(1991)483

# Ionic strength gradient

Systematic optimization of protein separations on high-performance ion-exchange chromatographic media 512(1990)13

#### Ion interaction

Separation of inorganic analyte anions on dyecoated stationary phases 546(1991)199

# Ion-interaction reagents

Simultaneous determination of nitrites, nitrates and amines by ion-interaction reversed-phase high-performance liquid chromatography. Application to lagoon water 509(1990)147

Determination of aromatic amines at trace levels by ion interaction reagent reversed-phase highperformance liquid chromatography. Analysis of

hair dyes and other water-soluble dyes 518(1990)149

#### Ion mobility

Applicability of dynamic change of pH in the capillary zone electrophoresis of proteins 516(1990)219

Determination of trimetaphosphate in pyrophosphate by capillary isotachophoresis 516(1990)473

#### Ion mobility detection

Ion mobility detection of polydimethylsilicone oligomers following supercritical fluid chromatographic separation 505(1990)215

#### Ion-pair chromatography

Extension of the electrostatic retention model of reversed-phase ion-pair chromatography to include the simultaneous effects of the organic modifier and the pairing ion 506(1990)85

Contributions to the calculation of retention data in ion-pair chromatography 508(1990)309

Chiral sulphonated phosphines. IV. Highperformance liquid chromatographic separation of sulphonated phosphines 514(1990)91

Cation analysis of fermentation broth by highperformance liquid chromatography utilizing ion interaction 546(1991)251

#### Ion-pair extraction

Mechanistic study on the derivatization of aliphatic carboxylic acids in aqueous non-ionic micellar systems 507(1990)351

#### **Ion-pair formation**

Effect of polymer ion concentrations on migration velocities in ion-exchange electrokinetic chromatography 515(1990)667

# Ion-pairing

Application of sodium lauryl sulphate ion-pairing reversed-phase high-performance liquid chromatography in the separation of some isomeric and other closely related basic compounds in pharmaceutical analysis 520(1990)367

#### Ion-pairing agents

Retention of some organic electrolytes in ion-pair reversed-phase high-performance liquid and reversed-phase high-performance thin-layer chromatographic systems 520(1990)403 Retention prediction based on the electrostatic model of reversed-phase ion-pair highperformance liquid chromatography: effect of pairing ion concentration 535(1990)181

Elimination of peak splitting in the liquid chromatography of the proline-containing drug enalapril maleate 537(1991)249

Separation of inorganic analyte anions on dyecoated stationary phases 546(1991)199

# Ion trap detector

Simple, direct gas chromatography-mass spectrometry interface for the ion trap detector 504(1990)429

#### **Isocratic conditions**

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

#### **Isocratic networks**

Isocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

#### Isoelectric focusing

Isoelectric focusing studies of concanavalin A and the lentil lectin 502(1990)131

Electric properties of photoaffinity-labelled pancreatic A-subtype cholecystokinin receptor 511(1990)333

Isolation of isoproteins from monoclonal antibodies and recombinant proteins by chromatofocusing 512(1990)157

Separation of antibody-antigen complexes by capillary zone electrophoresis, isoelectric focusing and high-performance size-exclusion chromatography 539(1991)177

Determination of p*I* by measuring the current in the mobilization step of high-performance capillary isoelectric focusing. Analysis of transferrin forms 545(1991)403

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

Structure-stability relationship of Immobiline chemicals for isoelectric focusing as monitored by capillary zone electrophoresis 548(1991)381

#### Isoelectric focusing field-flow fractionation

Isoelectric focusing field-flow fractionation. Experimental study of the generation of pH gradient 539(1991)111

Isoelectric focusing field-flow fractionation. II. Experimental study of focusing of methyl red in the trapezoidal cross-section channel 545(1991)349

#### **Isoelectric point**

Determination of p*l* by measuring the current in the mobilization step of high-performance capillary isoelectric focusing. Analysis of transferrin forms 545(1991)403

#### Isoforms

Capillary zone electrophoresis for monitoring r-DNA protein purification in multi-compartment electrolysers with immobiline membranes 516(1990)133

#### Isomers, positional

Gas chromatographic-mass spectrometric identification of the fatty acids in borage oil using the picolinyl ester derivatives 521(1990)89

#### Isotachophoresis

see also Capillary isotachophoresis

Isotachophoretic separation of alkali and alkaline earth metal cations in water-polyethylene glycol mixtures 502(1990)143

Quantification of cyclic 2,3-diphosphoglycerate from methanogenic bacteria by isotachophoresis 504(1990)421

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. I. Isotachophoresis with two leading ions 508(1990)3

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. II. Migration behaviour in capillary zone electrophoresis 508(1990)19

Some possibilities of combining high-performance liquid chromatography with isotachophoresis for the trace determination of ionogenic compounds present in complex matrices 509(1990)271

Utilization of capillary isotachophoresis in the determination of organic acids in food 509(1990)283

Computer-assisted choice of electrolyte systems and spacing constituents for two-dimensional capillary isotachophoresis 509(1990)287 High-performance capillary electrophoresis of hydrophobic membrane proteins 516(1990)89

Isotachophoresis in open-tubular fused-silica capillaries. Impact of electroosmosis on zone formation and displacement 516(1990)211

Capillary tube isotachophoretic separation of niacin derivatives 521(1990)158

Use of crown ethers in the isotachophoretic determination of metal ions 523(1990)281

Isotachophoresis with electroosmotic flow: open *versus* closed systems 537(1991)429

Isotachophoresis as an on-line concentration pretreatment technique in capillary electrophoresis 538(1991)393

Study of isotachophoretic separation behaviour of metal cations by means of particle-induced X-ray emission. I. Separation of twenty metal cations using an acetic acid buffer system and  $\alpha$ -hydroxyisobutyric acid complex-forming system 538(1991)413

Capillary tube isotachophoretic separation of lanthanide complexes using polyaminocarboxylic acid as terminating ion 540(1991)475

Computer-aided simulation of electromigration 545(1991)225

Optimization of isotachophoretic analysis: use of the charge-based transient-state model 545(1991)249

Effect of sample composition on the separation efficiency of isotachophoresis 545(1991)267

Isotachophoresis in open systems. Problems in quantitative analysis 545(1991)283

Isotachophoresis in open-tubular fused-silica capillaries with on-column multi-wavelength detection 545(1991)299

Determination of halofuginone in feedstuffs by the combination of capillary isotachophoresis and capillary zone electrophoresis in a columnswitching system 545(1991)307

Recycling and screen-segmented column isotachophoresis, two free-fluid approaches for fractionation of proteins 545(1991)315

Data acquisition and digital filtering in analytical isotachophoresis 545(1991)337

Two-dimensional electrophoresis: agarose gel isotachophoresis followed by sodium dodecyl sulphate-polyacrylamide electrophoresis 545(1991)343

Analytical isotachophoresis in biological monitoring of exposure to industrial chemicals (Review) 545(1991)369

Capillary isotachophoretic determination of cysteinyl leukotrienes 545(1991)375

Use of discrete spacers for the separation of proteins by gel isotachophoresis 545(1991)391

Isotachophoretic determination of 2–5A phosphodiesterase 545(1991)407

Isotachophoresis of some synthetic colorants in foods 545(1991)413

Determination of disodium 3-amino-1hydroxypropylidene-1,1-bisphosphonate pentahydrate 545(1991)421

Determination of permethrine and tetramethrine by isotachophoretic analysis of hydrolytic products 545(1991)427

Characterization of humic substances by capillary isotachophoresis 545(1991)461

Anomalous behaviour of sodium in isotachophoresis 545(1991)471

Use of isotachophoresis as a reference method for the simultaneous determination of barium and strontium 545(1991)475

High-performance displacement electrophoresis in 0.025- to 0.050-mm capillaries coated with a polymer to suppress adsorption and electroendosmosis 550(1991)811

# **Isotope effect**

Simultaneous separation and determination (in serum) of phenytoin and carbamazepine and their deuterated analogues by high-performance liquid chromatography–ultraviolet detection for tracer studies 535(1990)271

#### **Isotope fractionation**

Fractionation of potassium isotopes in cationexchange chromatography 538(1991)355



#### **Kinetic models**

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

#### Kjeldahl digestion

Determination of total nitrogen in food, environmental and other samples by ion chromatography after Kjeldahl digestion 546(1991)405

#### Knox plot

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

#### Krypton lamps

Effect of temperature on the sensitivity of the photoionization detector 540(1991)441



# Labelling, isotopic

Simultaneous separation and determination (in serum) of phenytoin and carbamazepine and their deuterated analogues by high-performance liquid chromatography--ultraviolet detection for tracer studies 535(1990)271

#### Langmuir-Blodgett films

Purification of galactolipids by high-performance liquid chromatography for monolayer and Langmuir-Blodgett film studies 542(1991)307

#### Langmuir–Freundlich isotherm

Equilibria of biomolecules on ion-exchange adsorbents 542(1991)19

#### Langmuir isotherms

see Adsorption isotherms

# Laser-based polarimetry

Determination of enantiomeric purity of paclobutrazol and fluazifop-P-butyl using a diode-laser-based polarimetric high-performance liquid chromatography detector 513(1990)209

# Laser densitometry

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

# Laser-induced fluorescence

Bioanalysis of the neuropeptide des-enkephalin-γendorphin by high-performance liquid chromatography with on-line sample pretreatment using gel permeation and solidphase isolation 549(1991)185

# Laser-light scattering detector

Laser-light-scattering detection for high-speed counter-current chromatography 538(1991)87

# Latex-coated resins

Low-capacity latex-coated resins for anion chromatography 547(1991)11

# Leading electrolyte

Use of crown ethers in the isotachophoretic determination of metal ions 523(1990)281

# Leading ions

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. I. Isotachophoresis with two leading ions 508(1990)3

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. II. Migration behaviour in capillary zone electrophoresis 508(1990)19

# Lentinus edodes

Determination of vitamin  $D_2$  in shiitake mushroom (*Lentinus edodes*) by high-performance liquid chromatography 545(1991)201

# Leukocytes

Purification of immunomodulatory factors in human peripheral blood leukocytes 512(1990)139

# Levan-Vermeulen isotherm

Use of the LeVan–Vermeulen isotherm model for the calculation of elution band profiles in nonlinear chromatography 545(1991)1

#### Lewis acid sites

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

# Libina emarginata

Quantification of methyl farnesoate levels in hemolymph by high-performance liquid chromatography 545(1991)71

# Licorice

Determination of nine flavonoids and coumarins in licorice root by high-performance liquid chromatography 513(1990)247

Determination of three active principles in licorice extract by reversed-phase high-performance liquid chromatography 542(1991)521

# Ligand density

Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides 516(1990)333

Effect of antigen size on optimal ligand density of immobilized antibodies for a high-performance liquid chromatographic support 548(1991)243

# Ligand exchange

High-performance liquid chromatographic assay of thiomersal (thimerosal) as the ethylmercury dithiocarbamate complex 542(1991)137

Efficiency in chiral high-performance ligandexchange chromatography. Influence of the complexation process, flow-rate and capacity factor 542(1991)221

Separation and estimation of small amounts of the enantiomers of carbidopa and methyldopa on a chiral stationary phase with L-phenylalanine as selector in ligand-exchange chromatography 545(1991)115

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

# Ligand-exchange chromatography

Investigation of the reversed-phase highperformance liquid chromatographic ligandexchange retention mechanism on a triamine stationary phase 513(1990)145

# Ligand-exchange reactions

High-performance liquid chromatographic study of ligand-exchange reactions of fluorinated metal  $\beta$ -diketone chelates 517(1990)185

# Ligand-exchange thin-layer chromatography

Resolution of the neuroexcitatory Nmethylaspartic acid (2-methylaminosuccinic acid) enantiomers by ligand-exchange thin-layer chromatography 502(1990)226

#### Ligands, competitor

Fractionation of basic nuclear proteins of human sperm by zinc chelate affinity chromatography 518(1990)123

#### Ligands, mildly hydrophobic

Polymer ligands for mild hydrophobic interaction chromatography —principles, achievements and future trends (Review) 539(1991)297

#### Light-scattering detector

Supercritical fluid chromatography with lightscattering detection. I. Preliminary results of the analysis of polar compounds with packed columns 505(1990)191

Analysis of sugars by supercritical fluid chromatography using polar packed columns and light-scattering detection 505(1990)299

Optimization of high-performance liquid chromatographic analysis with UV detection: light-scattering detection to establish the coelution of UV- and non-UV-absorbing constituents 513(1990)354

#### Limiting ionic equivalent conductance

Measurement of limiting ionic equivalent conductance by single-column ion chromatography 535(1990)207

#### Linear retention models

Computer optimization in ion chromatography. II. A systematic evaluation of linear retention models for anions 546(1991)37

#### Linear solvation energy relationships

Empirical scheme for the classification of gas chromatographic stationary phases based on solvatochromic linear solvation energy relationships 517(1990)103

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

#### Lipid-vesicle-surface chromatography

Lipid-vesicle-surface chromatography 506(1990)379

Binding of lysozyme on the surface of entrapped phosphatidylserine-phosphatidylcholine vesicles and an example of high-performance lipid vesicle surface chromatography 512(1990)377

# Lipophilicity

see also Hydrophobicity

Lipophilic character of cardiac glycosides.  $R_M$  values as lipophilicity parameters 504(1990)163

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

Determination of partition coefficients of nonionic contrast agents by reversed-phase highperformance liquid chromatography 507(1990)293

Chromatographie en couche mince sur gel de silice avec double imprégnation ascendante à sens inversés à l'huile de silicone 509(1990)400

Retention characteristics of CN,  $NH_2$  and diol precoated high-performance thin-layer chromatographic plates in the adsorption and reversed-phase separation of some benzodiazepine derivatives 514(1990)45

Reversed-phase thin-layer and gas chromatographic retention behaviour of triphenylmethane derivatives 520(1990)217

Determination of the lipophilicity of some peptides. Effect of surface pH of silica 520(1990)249

Measurement of lipophilicity indices by reversedphase high-performance liquid chromatography: comparison of two stationary phases and various cluents 541(1991)221

Determination of the lipophilicity of arylsulphonylalkanoic and arylsulphonylcycloalkanecarboxylic acids by thin-layer chromatography 543(1991)195

Reversed-phase high-performance liquid chromatographic study of the lipophilicity of a series of analogues of the antibiotic "calvatic acid" 547(1991)167 Lipophilic character of cardiac glycosides: correlation between  $R_M$  values and acute toxicity data in different animal species. 547(1991)523

#### Liposome chromatography

Liposome chromatography: liposomes immobilized in gel beads as a stationary phase for aqueous column chromatography (Review) 544(1991)283

#### Liposomes

Lipid-vesicle-surface chromatography 506(1990)379

#### Liquid adsorption mechanism

Mechanism of liquid adsorption chromatography in thin-layer chromatography with ternary mobile phases 550(1991)645

# Liquid chromatography, comparison with SFC and $\ensuremath{\mathsf{CZE}}$

Comparison of high-performance liquid chromatography, supercritical fluid chromatography and capillary zone electrophoresis in drug analysis 507(1990)125

#### Liquid chromatography, history

Key moments in the evolution of liquid chromatography 535(1990)3

#### Liquid chromatography-mass spectrometry

High-performance displacement chromatography-mass spectrometry of tryptic peptides of recombinant human growth hormone 512(1990)299

Liquid chromatography-thermospray mass spectrometric study of N-acylamino dilactones and 4-butyrolactones derived from antimycin A 522(1990)179

Determination of O-ethyl S-2diisopropylaminoethyl methylphosphonothioate (VX) by thermospray liquid chromatographymass spectrometry 523(1990)151

Identification of trichothecenes by frit-fast atom bombardment liquid chromatography-highresolution mass spectrometry 538(1991)323

Determination of  $\beta$ -carbolines in foodstuffs by high-performance liquid chromatography and high-performance liquid chromatography-mass spectrometry 538(1991)331

Liquid chromatography-mass spectrometry system using column-switching techniques 541(1991)231 High-performance liquid chromatography– continuous-flow fast atom bombardment mass spectrometry of chlorophyll derivatives 542(1991)373

Determination of chlorophenoxy acids using high-performance liquid chromatography-particle beam mass spectrometry 542(1991)385

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid chromatography-particle beam-mass spectrometry 549(1991)237

#### Liquid crystals

Long-term use of liquid-crystalline stationary phase for separation and determination of polynuclear aromatic hydrocarbons in carbochemical products. Comparison of results obtained by different methods 509(1990)53

Analysis of some synthetic insect pheromones by gas-liquid chromatography 509(1990)69

High-resolution gas chromatography with liquid crystal glass capillaries. XI. Separation of isomeric  $C_8$  and  $C_9$  hydrocarbons 509(1990)93

High-resolution gas chromatography with liquid crystal glass capillaries. XII. Separation of isomeric  $C_{17}$ – $C_{18}$  *n*-alkenes 520(1990)75

Blended liquid crystalline stationary phases in capillary gas chromatography 520(1990)85

Comparison of the liquid chromatographic behaviour of selected steroid isomers using different reversed-phase materials and mobile phase compositions 537(1991)73

Liquid crystals for the gas chromatographic determination of the stereochemistry of insect sex pheromones 537(1991)482

Use of a liquid crystal stationary phase at temperatures below its melting point for the gas chromatographic study of some volatile oil constituents 547(1991)335

Application of substituted liquid crystals as stationary phases in gas–liquid chromatography for the separation of mono- and dimethyl naphthalenes 549(1991)423

#### Liquid extraction, multiphase

Forced-flow multi-phase liquid extraction, a separation method based on relative and absolute

counter-current distribution. I. Description of the method and basic possibilities 523(1990)43

# Liquid film properties

Important parameters in liquid chromatographycontinuous-flow fast atom bombardment mass spectrometry 511(1990)35

# Liquid-liquid extraction, continuous

Gas chromatographic determination of phenol compounds with automatic continuous extraction and derivatization 518(1990)59

# Liquid-liquid partition chromatography

Investigations of liquid-liquid partition chromatography of proteins 548(1991)3

# Liquid phase cooperative binding interactions

Investigation of liquid phase cooperative binding interactions on the capacity of insoluble affinity adsorbents 539(1991)245

# Liquid scintillation counting

Reversed-phase high-performance liquid chromatographic method for the determination of soil-bound [<sup>14</sup>C]atrazine and its radiolabeled metabolites in a soil metabolism study 514(1990)209

# Liquid scintillation spectrometry

Analysis of 2,4,6-trinitrotoluene and its transformation products in soils and plant tissues by high-performance liquid chromatography 518(1990)361

# Loading capacity

Sample introduction and elution method for preparative supercritical fluid chromatography 515(1990)285

# Loading factor

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57

#### Load-response curves

Silica versus polymer-based stationary phases for reversed-phase high-performance liquid chromatographic analyses of rat insulin biosynthesis. A comparison of resolution and recovery 548(1991)195

# Low-angle laser light scattering detector

Determination of biopolymer (protein) molecular weights by gradient elution, reversed-phase high-performance liquid chromatography with low-angle laser light scattering detection 502(1990)21

Application of low-angle laser light scattering detection in the field of biochemistry. Review of recent progress 506(1990)409

High-performance size-exclusion chromatography and molar mass measurement by low-angle laser light scattering of recombinant yeast-derived human hepatitis B virus surface antigen vaccine particles 507(1990)25

Determination of pituitary and recombinant human growth hormone molecular weights by modern high-performance liquid chromatography with low angle laser light scattering detection 539(1991)91



# **Macrocyclic ligands**

Application of macrocyclic ligands to ion chromatography (Review) 546(1991)73

Temperature programming in macrocycle-based ion chromatography 546(1991)139

# Macromolecular crowding effect

High-performance vacancy gel permeation chromatography 518(1990)238

#### Macroporous copolymers, rigid

Rigid macroporous copolymers as stationary phases in high-performance liquid chromatography (Review) 544(1991)201

#### Magnetic resonance imaging

Magnetic resonance imaging in reversed-phase liquid chromatography 517(1990)263

#### Make-up gas flow

Study of large sample volume injection in a capillary gas chromatographic–Fourier transform infrared system using a retention gap column 547(1991)494

# Margarine

Determination of sorbic acid in margarine and butter by high-performance liquid chromatography with fluorescence detection 543(1991)69

# Marine copepods

Gas-liquid chromatographic method for the determination of marine wax esters according to the degree of unsaturation 513(1990)327

# Marine food chain

Gas-liquid chromatographic method for the determination of marine wax esters according to the degree of unsaturation 513(1990)327

# Mass area

Calcul de la composition, avec une constante de proportionnalité, de mélanges à partir du chromatogramme obtenu par détection partagée entre deux détecteurs 519(1990)159

# Mass loadability

Theoretical optimization of open-tubular columns for liquid chromatography with respect to mass loadability 506(1990)185

# Mass spectra

Use of 1-[*p*-(2,3-dihydroxypropoxy)phenyl]-1alkanones as retention index standards in the identification of trichothecenes by liquid chromatography-thermospray and dynamic fast atom bombardment mass spectrometry 543(1991)39

# Mass spectral library

Performance of an extraction disk in synthetic organic chemical analysis using gas chromatography-mass spectrometry 538(1991)233

# Mass spectrometric tracer pulse chromatography

Sorption isotherms of mobile phase components in capillary supercritical fluid chromatography 505(1990)139

# Mass spectrometry

Use of M-series retention index standards in the identification of trichothecenes by electron impact mass spectrometry 513(1990)31

Indirect thin-layer chromatography-fast atom bombardment and chemical ionization mass spectrometry determination of carbohydrates utilizing simple and rapid microtransfer techniques 514(1990)377 Static and scanning array detection in capillary electrophoresis-mass spectrometry 516(1990)147

Identification of vitamin  $D_2$  by thermosprayinterface mass spectrometry 543(1991)241

# Mass spectrometry, fast atom bombardment

High-performance displacement chromatography-mass spectrometry of tryptic peptides of recombinant human growth hormone 512(1990)299

# Mass spectrometry, negative ion chemical ionization

Determination of clenbuterol in bovine plasma and tissues by gas chromatography-negative-ion chemical ionization mass spectrometry 518(1990)41

# Mass spectrometry, time of flight

Renaissance of gas chromatography-time-offlight mass spectrometry. Meeting the challenge of capillary columns with a beam deflection instrument and time array detection 518(1990)283

High-performance liquid chromatography-timeof-flight mass spectrometry and its application to peptide analyses 536(1991)143

# Mass spectrometry interfaces

Capillary zone electrophoresis-mass spectrometry using a coaxial continuous-flow fast atom bombardment interface 516(1990)167

Analysis of sulphonamides using supercritical fluid chromatography and supercritical fluid chromatography–mass spectrometry 540(1991)239

# Mass transfer

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Nature of the eddy dispersion in packed beds 535(1990)189

Comparison of polybutadiene-coated alumina and octadecyl-bonded silica for separations of proteins and peptides by reversed-phase highperformance liquid chromatography 541(1991)303

Charged surface and mass transfer in dynamic ion exchangers 546(1991)17

Homogeneous catalysis studied by reversed-flow gas chromatography 550(1991)181

# Mass transfer resistance

High-performance liquid chromatography of amino acids, peptides and proteins. CIII. Mass transfer resistances in ion-exchange and dyeaffinity chromatography of proteins 512(1990)101

#### Mathematical modelling

Optimization of isotachophoretic analysis: use of the charge-based transient-state mode! 545(1991)249

#### Matrix effects

Systematic errors with the use of internal standard calibration in gas chromatographic headspace analysis 518(1990)1

On-column matrix elimination of high levels of chloride and sulfate in non-suppressed ion chromatography 546(1991)221

#### Matrix interference

On-column matrix elimination of high levels of chloride and sulfate in non-suppressed ion chromatography 546(1991)221

#### McReynolds data

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

#### McReynolds phases

Hydrogen bonding. XV. A new characterisation of the McReynolds 77-stationary phase set 518(1990)329

#### Meat

Gas chromatography of tryptophan together with other amino acids in hydrochloric acid hydrolysates 520(1990)193

#### Membrane dialysis

Bioanalysis of the peptide des-enkephalin-γendorphin. On-line sample pretreatment using membrane dialysis and solid-phase isolation 511(1990)137

#### Membranes

Use of an activated nylon membrane (Immunodyne) as an affinity adsorbent for the purification of phosphofructokinase and phosphoglycerate kinase from yeast 502(1990)171

Feasibility of capillary zone electrophoresis with suppression of electroendosmotic flow in completely closed systems 503(1990)245

High-performance capillary electrophoresis of hydrophobic membrane proteins 516(1990)89

Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

Microfiltration membranes as pseudo-affinity adsorbents: modification and comparison with gel beads 539(1991)315

#### Membranes, ciliary

Chromatographic separation of four Ser/Thrprotein phosphatases from solubilized ciliary membranes of *Parameeium tetraurelia* by heparin–Sepharose 521(1990)179

#### Membrane support

Comparative study of reaction kinetics in membrane and agarose bead affinity systems 519(1990)53

#### Membrane vesicles

Application of high-performance liquid chromatography to the purification of the putative intestinal peptide transporter 521(1990)199

# Metal affinity protein partitioning

Chiral copper-chelate complexes alter selectivities in metal affinity protein partitioning 543(1991)345

#### Metal binding sites

Metal ligand-induced alterations in the surface structures of lactoferrin and transferrin probed by interaction with immobilized copper(II) ions 536(1991)1

#### Metal chelates

Fractionation of basic nuclear proteins of human sperm by zinc chelate affinity chromatography 518(1990)123

#### Metal ions

Immobilized metal ion affinity partitioning, a method combining metal-protein interaction and partitioning of proteins in aqueous two-phase systems 539(1991)267

#### Methanogenic bacteria

Quantification of cyclic 2,3-diphosphoglycerate from methanogenic bacteria by isotachophoresis 504(1990)421

#### Methanolysis

Identification of monosaccharides by highperformance liquid chromatography using methanolysis and a light-scattering detector 514(1990)70

#### Method development

Optimization of chromatographic methods by a combination of optimization software and expert systems 506(1990)169

Validation of an expert system for the selection of initial high-performance liquid chromatographic conditions for the analysis of basic drugs 506(1990)211

Use of high-performance liquid chromatography in the pharmaceutical industry 507(1990)141

Computer simulation as an aid in method development for gas chromatography. I. The accurate prediction of separation as a function of experimental conditions 541(1991)1

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

Computer simulation as an aid in method development for gas chromatography. III. Examples of its application 541(1991)35

Fast development of a robust high-performance liquid chromatographic method for *Ginkgo biloba* based on computer simulation 550(1991)39

#### Methods validation

Expert system for repeatability testing of highperformance liquid chromatographic methods 550(1991)257

#### Methyl silicone

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

#### Micellar chromatography

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

# Micellar electrokinetic chromatography

see also Capillary electrophoresis

Use of non-ionic and zwitterionic surfactants to enhance selectivity in high-performance capillary electrophoresis. An apparent micellar electrokinetic capillary chromatography mechanism 503(1990)449 Separation and determination of lipophilic corticosteroids and benzothiazepin analogues by micellar electrokinetic chromatography using bile salts 513(1990)279

Enantiomeric resolution by micellar electrokinetic chromatography with chiral surfactants 515(1990)221

Chiral separation of diltiazem, trimetoquinol and related compounds by micellar electrokinetic chromatography with bile salts 515(1990)233

Separation and determination of aspoxicillin in human plasma by micellar electrokinetic chromatography with direct sample injection 515(1990)245

Separation of highly hydrophobic compounds by cyclodextrin-modified micellar electrokinetic chromatography 516(1990)23

Free solution capillary electrophoresis and micellar electrokinetic resolution of amino acid enantiomers and peptide isomers with L- and D-Marfey's reagents 516(1990)241

Retention of eleven priority phenols using micellar electrokinetic chromatography 516(1990)263

Capillary electrophoresis of urinary porphyrins with absorbance and fluorescence detection 516(1990)271

Micellar electrokinetic chromatography employing sodium alkyl sulfates and Brij 35\* 517(1990)549

Pharmaceutical analysis by capillary zone electrophoresis and micellar electrokinetic capillary chromatography 538(1991)506

Separation of phthalates by micellar electrokinetic chromatography 542(1991)473

Effect of urea addition in micellar electrokinetic chromatography 545(1991)359

Analysis of barbiturates in human serum and urine by high-performance capillary electrophoresis-micellar electrokinetic capillary chromatography with on-column multiwavelength detection 545(1991)445

Separation of water- and fat-soluble vitamins by micellar electrokinetic chromatography 547(1991)419

Application of micellar electrokinetic capillary chromatography to the determination of flavonoid drugs 549(1991)367

# Micellar exclusion

Factors affecting selectivity in micelle exclusion chromatography of inorganic anions 538(1991)341

# Micellar liquid chromatography

Solute retention in micellar liquid chromatography 542(1991)29

#### Micellar mobile phases

Application of micellar mobile phases for the assay of drugs in biological fluids 531(1990)79

#### Micellar phases

Micellar electrokinetic chromatography employing sodium alkyl sulfates and Brij 35\*\* 517(1990)549

# Micelles

Optimization of multidimensional highperformance liquid chromatography for the determination of drugs in plasma by direct injection, micellar cleanup and photodiode array detection 507(1990)267

Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

Factors affecting selectivity in micelle exclusion chromatography of inorganic anions 538(1991)341

Study of polystyrene–poly(ethylene oxide) block copolymer micelles in aqueous solution by sizeexclusion chromatography 547(1991)434

# Micelle-solute interactions

Solute retention in micellar liquid chromatography 542(1991)29

#### **Microdialysis sampling**

*In vivo* microdialysis sampling coupled to liquid chromatography for the study of acetaminophen metabolism 506(1990)461

#### Microelectrodes

Electrochemical detection system for supercritical fluid chromatography 519(1990)256

# **Microfiltration membranes**

Microfiltration membranes as pseudo-affinity adsorbents: modification and comparison with gel beads 539(1991)315

#### Microheterogeneity

Separation of carbohydrate-mediated microheterogeneity of recombinant human erythropoietin by free solution capillary electrophoresis. Effects of pH, buffer type and organic additives 542(1991)459

#### Microporous solids

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53

# Micropurification

Fingerprinting of molecular components in individual human cerebrospinal fluid samples with a new micropurification system 548(1991)311

#### Microscopy

Microscopic characterization of high-performance liquid chromatographic packing materials (Review) 544(1991)319

#### Microsequencing methods

Peptide maps at picomolar levels obtained by reversed-phase high-performance liquid chromatography and pre-column derivatization with phenyl isothiocyanate. Microsequencing of phenylthiocarbamyl peptides 548(1991)303

# Microtransfer techniques

Indirect thin-layer chromatography-fast atom bombardment and chemical ionization mass spectrometry determination of carbohydrates utilizing simple and rapid microtransfer techniques 514(1990)377

#### Microwave extraction

Effective sample preparation method for extracting biologically active compounds from different matrices by a microwave technique 520(1990)257

# Microwave-induced atmospheric pressure helium plasma emission spectroscopy

Comparison of discharge tubes for deuteriumspecific gas chromatographic detection with a microwave-induced plasma 508(1990)187

#### Microwave-induced plasma

Element-selective detection after supercritical fluid chromatography by means of a Surfatron plasma in the near-infrared spectral region 517(1990)477

#### Mid-point pressure

Prediction of retention times in temperatureprogrammed multichromatography 540(1991)311

# Migration model

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

# **Migration rates**

Influence of buffer concentration, capillary internal diameter and forced convection on resolution in capillary zone electrophoresis 516(1990)223

Hydrodynamic and size-exclusion chromatography of polymers on porous particles 550(1991)721

# Mineral oils

Aromatic ring-type analysis of complex hydrocarbon mixtures by high-performance liquid chromatography with photodiode-array detection and curve resolution 520(1990)383

# Mitochondria

Purification of the subunits of pea mitochondrial  $F_1$ -ATPase by high-performance liquid chromatography 521(1990)43

# Mixed ion exchangers

Anion-cation separations on a mixed-bed ionexchange column with indirect photometric detection 546(1991)101

# Mobile phase additives

Reversed-phase chromatographic separation of selected hydroxyl aromatics with  $\beta$ -cyclodextrin as a mobile phase additive 514(1990)19

Reversed-phase high-performance liquid chromatographic study of the formation of complexes of nucleotides and oligonucleotides with Lu(III) 516(1990)456

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285

Influence of uncharged mobile phase additives on retention and enantioselectivity of chiral drugs using an  $\alpha_1$ -acid glycoprotein column 519(1990)271

Reversed-phase liquid chromatography of polar benzene derivatives on poly(vinylbenzo-18crown-6)-immobilized silica as a stationary phase 522(1990)107

# Mobile phase composition

Behaviour of vegetable phospholipids in thinlayer chromatography. Optimization of mobile phase, detection and direct evaluation 502(1990)385

High-performance liquid chromatography of levomepromazine (methotrimeprazine) and its main metabolites 503(1990)205

Direct liquid chromatographic separation of enantiomeric and diastereomeric terpenic alcohols as  $\beta$ -cyclodextrin inclusion complexes 503(1990)266

Analysis of anthocyanins in red wines by highperformance liquid chromatography using butylamines in the mobile phase 504(1990)207

Comparison of supercritical carbon dioxide and supercritical propane as mobile phases in supercritical fluid chromatography 505(1990)119

Multiple peak formation in reversed-phase liquid chromatography of ramipril and ramiprilate 506(1990)75

Extension of the electrostatic retention model of reversed-phase ion-pair chromatography to include the simultaneous effects of the organic modifier and the pairing ion 506(1990)85

Optimization of chromatographic methods by a combination of optimization software and expert systems 506(1990)169

Optimization of mobile phase composition for high-performance liquid chromatographic separation by means of the overlapping resolution mapping scheme 506(1990)245

Multiple absorbance ratio correlation — a new approach for assessing peak purity in liquid chromatography 506(1990)289

Chiral separations of atropine and homatropine on an  $\alpha_1$ -acid glycoprotein-bonded stationary phase 506(1990)579

Separation and determination of molecular species of phosphatidylcholine in biological samples by high-performance liquid chromatography 507(1990)339

Optimization of the high-performance liquid chromatography of coumarins in *Angelica archangelica* with reference to molecular structure 507(1990)367

Transient changes of mobile phase in the highperformance liquid chromatographic separation of priority pollutant phenols 507(1990)399

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Separation and indirect detection of small-chain peptides using chromophoric mobile phase additives 509(1990)357

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

Optimization of high-performance liquid chromatographic peptide separations with alternative mobile and stationary phases 512(1990)273

Convenient purification of tritylated and detritylated oligonucleotides up to 100-mer 512(1990)415

Solvatochromic hydrogen bond donor acidity of aqueous binary solvent mixtures for reversed-phase liquid chromatography 513(1990)107

Effect of temperature and organic modifier on the isocratic retention characteristics of nitrated polycyclic aromatic hydrocarbons on a reversed-phase octadecylsilane column 513(1990)117

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219

Retention characteristics of CN,  $NH_2$  and diol precoated high-performance thin-layer chromatographic plates in the adsorption and reversed-phase separation of some benzodiazepine derivatives 514(1990)45

Retention reproducibility of basic drugs in highperformance liquid chromatography on a silica column with a methanol-high-pH buffer eluent. Effect of operating conditions on separations using an organic buffer 514(1990)97

Chemical properties of and solute-support interactions with the gel filtration medium Superdex 75 prep grade 514(1990)137

Comparison of helium head pressure carbon dioxide and pure carbon dioxide as mobile phases in supercritical fluid chromatography 514(1990)309

Effects of ionic strength of eluent on size analysis of sub-micrometre particles by sedimentation field-flow fractionation 515(1990)27

Novel silica-based strong anion exchanger for single-column ion chromatography 515(1990)49

Evaluation of ammonium acetate as a volatile buffer for high-performance hydrophobicinteraction chromatography 515(1990)279

High-performance liquid chromatography of proteins on a ceramic hydroxyapatite with volatile buffers 515(1990)521

High-performance liquid chromatography of transfer ribonucleic acids on spherical hydroxyapatite beads. II. Effects of pH and sodium chloride on chromatography 515(1990)563

Retention of benzo[*a*]pyrene on cyclodextrinbonded phases 516(1990)355

Simultaneous ion chromatography of inorganic anions together with some organic anions and alkaline earth metal cations using chelating agents as eluents 516(1990)383

Surfactant-mediated hydrophobic interaction chromatography of proteins: gradient elution 518(1990)99

Effect of  ${}^{2}\text{H}_{2}\text{O}$  on the resolution of the optical isomers of ibuprofen on an  $\alpha_{1}$ -acid glycoprotein column 518(1990)277

Chromatography of 3-hydroxypyridin-4-ones: novel orally active iron chelators 519(1990)171

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

Peculiarities of aromatic hydrocarbon retention in normal-phase high-performance liquid chromatography with eluents containing halide derivatives 520(1990)315

Retention of some organic electrolytes in ion-pair reversed-phase high-performance liquid and reversed-phase high-performance thin-layer chromatographic systems 520(1990)403

Alkanesulphonates as eluents for the determination of nitrate and nitrite by ion chromatography with direct UV detection 521(1990)53

Effects of mobile phase composition on the reversed-phase separation of dipeptides and tripeptides with cyclodextrin-bonded-phase columns 522(1990)143

Use of  $\beta$ -diketonate anions as eluent in nonsuppressed ion chromatography. Acetylacetonate eluent for the separation of fluoride and chloride 523(1990)257

Chromatographic behaviour of cyclodextrin complexes of nucleotides, nucleosides and their bases 523(1990)293

Application of micellar mobile phases for the assay of drugs in biological fluids 531(1990)79

Comparison between ethanol and methanol for the reversed-phase high-performance liquid chromatographic analysis of leukotriene  $B_4$  and its metabolites in cell incubation supernatants 532(1990)379

Analysis of amine metabolites by highperformance liquid chromatography on silica gel with a non-aqueous ionic eluent 532(1990)405

High-performance liquid chromatography of amino acids, peptides and proteins. CVII. Analysis of group retention contributions for peptides separated with a range of mobile and stationary phases by reversed-phase highperformance liquid chromatography 536(1991)165

Reversed-phase ion-pair liquid chromatography of the angiotensins 536(1991)357

Changes in the enthalpy and entropy of hydroxyl aromatics in reversed-phase liquid chromatography with  $\beta$ -cyclodextrin in the mobile phase 537(1991)61

Comparison of the liquid chromatographic behaviour of selected steroid isomers using different reversed-phase materials and mobile phase compositions 537(1991)73

High-performance liquid chromatography of red fruit anthocyanins 537(1991)101

Alternative mobile phases for the reversed-phase high-performance liquid chromatography of peptides and proteins 537(1991)181

Reversed-phase high-performance liquid chromatographic characterization of acetic acid extracts of the normal and the diabetic human pancreas 537(1991)201

Elimination of peak splitting in the liquid chromatography of the proline-containing drug enalapril maleate 537(1991)249 Systematic search for suitable two-phase solvent systems for high-speed counter-current chromatography 538(1991)99

Column-friendly reversed-phase high-performance liquid chromatography of peptides and proteins using formic acid with sodium chloride and dynamic column coating with crown ethers 539(1991)37

Liquid and high-pressure carbon dioxide chromatography of  $\beta$ -blockers. Resolution of the enantiomers of nadolol 539(1991)55

Thin-layer chromatographic behaviour and separation of zirconium(IV) and hafnium(IV) on silica gel in mineral acid-hydrogen peroxide media 539(1991)169

Resolution of  $(\pm)$ -2-aminoheptane enantiomers by inductive adsorption chromatography 540(1991)157

Measurement of lipophilicity indices by reversedphase high-performance liquid chromatography: comparison of two stationary phases and various eluents 541(1991)221

High-performance liquid chromatographic determination of L-3-(3,4-dihydroxyphenyl)-2-methylalanine ( $\alpha$ -methyldopa) in human urine and plasma 541(1991)285

Separation and detection of styrene-alkyl methacrylate and ethyl methacrylate-butyl methacrylate copolymers by liquid adsorption chromatography using a dichloroethane mobile phase and a UV detector 541(1991)375

Use of polymeric reversed-phase columns for the characterization of polypeptides extracted from human pancreata. I. Effect of the mobile phase 542(1991)65

Use of polymeric reversed-phase columns for the characterization of polypeptides extracted from human pancreata. II. Effect of the stationary phase 542(1991)83

Naphthalenesulfonates as mobile phases for anion-exchange chromatography using indirect photometric detection 542(1991)101

Optimized isocratic separation of major carboxylic acids in wine 542(1991)277

Factors influencing the retention of rare earthtetraphenylporphine complexes in reversed-phase

high-performance liquid chromatography 542(1991)351

Liquid chromatographic separation of the enantiomers of dinitrophenyl amino acids using a  $\beta$ -cyclodextrin-bonded stationary phase 543(1991)105

Reversed-phase high-performance liquid chromatographic separation of tertiary and quaternary alkaloids from *Chelidonium majus* L. 543(1991)123

Reversed-phase gradient elution behaviour of polystyrenes in a dichloromethane-methanol solvent system 543(1991)157

Effect of organic modifier concentration on retention in reversed-phase ion-pair liquid chromatography 545(1991)59

Separation and purification of oligonucleotides using a new bonded-phase packing material 545(1991)79

Optimization of chromatographic selectivity of twelve sulphonamides in reversed-phase highperformance liquid chromatography using mixture designs and multi-criteria decision making 545(1991)101

Separation and estimation of small amounts of the enantiomers of carbidopa and methyldopa on a chiral stationary phase with L-phenylalanine as selector in ligand-exchange chromatography 545(1991)115

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (E)- and (Z)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

Anion-cation separations on a mixed-bed ionexchange column with indirect photometric detection 546(1991)101

Separation of inorganic analyte anions on dyecoated stationary phases 546(1991)199

Low-capacity latex-coated resins for anion chromatography 547(1991)11

Chromatographic liquid–liquid ternary phase system with permethylated  $\beta$ -cyclodextrin as chiral additive 547(1991)59

Two-parameter mobile phase optimization for the simultaneous high-performance liquid chromatographic determination of dopamine, serotonin and related compounds in microdissected rat brain nuclei 547(1991)113

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

Metal affinity displacement chromatography of proteins 549(1991)89

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography 549(1991)159

Mobile phase effects in the high-performance affinity purification of thermolysin 549(1991)195

The effect of  ${}^{2}H_{2}O$  and an ion-pairing agent on the liquid chromatographic separation of dansylated amino acids 549(1991)404

Prediction of initial high-performance liquid chromatographic conditions for selectivity optimization in pharmaceutical analysis by an expert system approach 550(1991)87

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

Chromatographic characterization of some dideoxyribonucleosides 550(1991)507

Mechanism of liquid adsorption chromatography in thin-layer chromatography with ternary mobile phases 550(1991)645

Effect of sample viscosity in high-performance size-exclusion chromatography and its control 550(1991)705

#### Mobile phase density

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

#### Mobile phase fluid

Enthalpy of transfer in supercritical fluid chromatography 543(1991)262

#### Mobile phase selectivity

Fully automatic high-performance liquid chromatographic optimization 550(1991)27

# Mobility, electrophoretic

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521

High-pressure and supercritical capillary electrophoresis 517(1990)573

Determination of absolute mobilities, pK values and separation numbers by capillary zone electrophoresis. Effective mobility as a parameter for screening 537(1991)407

Improvement of resolution in the capillary electrophoretic separation of catecholamines by complex formation with boric acid and control of electroosmosis with a cationic surfactant 538(1991)385

# Modifiers

Analysis of sulphonamides using supercritical fluid chromatography and supercritical fluid chromatography-mass spectrometry 540(1991)239

Packed-microbore supercritical fluid chromatography with flame ionization detection of abused vegetable oils 540(1991)271

# Molar absorptivity

Responses of different UV-visible detectors in high-performance liquid chromatographic measurements when the absolute number of moles of an analyte is measured 518(1990)135

# Molar enthalpy

Enthalpy of transfer in supercritical fluid chromatography 543(1991)262

Evaluation of the effect of the cyanopropyl radical on the interaction of the methylene group with silicone stationary phases 547(1991)269

# Molar refraction

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

# Molecular connectivity indices

Optimization of the high-performance liquid chromatography of coumarins in *Angelica archangelica* with reference to molecular structure 507(1990)367

# Molecular imprinting

Molecular recognition in synthetic polymers: preparation of chiral stationary phases by molecular imprinting of amino acid amides 513(1990)167

# Molecular imprints

Enantiomeric resolution on molecularly imprinted polymers prepared with only non-covalent and non-ionic interactions 516(1990)313

# Molecular interactions

Molecular interactions in liquid chromatography 537(1991)33

Mechanism of liquid adsorption chromatography in thin-layer chromatography with ternary mobile phases 550(1991)645

# Molecular mass

Improved method for prediction of gas chromatographic retention indices of  $C_9-C_{12}$  alkylbenzenes 549(1991)325

# Molecular mass determination

Determination of biopolymer (protein) molecular weights by gradient elution, reversed-phase high-performance liquid chromatography with low-angle laser light scattering detection 502(1990)21

Determination of pituitary and recombinant human growth hormone molecular weights by modern high-performance liquid chromatography with low angle laser light scattering detection 539(1991)91

# Molecular mass distribution

High-performance gel permeation chromatography of water-soluble  $\beta$ -1,3-glucans 509(1990)213

Gel permeation chromatography for the determination of the molecular mass distribution of some industrial proteins 509(1990)227

Theoretical aspects of the chromatographic analysis of heterogeneous polymers 511(1990)49

Gel permeation chromatography–Fourier transform infrared study of some synthetic polymers. II. Instrumentation for the characterization of polyethylene 517(1990)209

Liquid chromatographic analysis of cationic polymerized phenyl glycidyl ether 547(1991)195

# Molecular recognition

Molecular recognition in synthetic polymers: preparation of chiral stationary phases by

molecular imprinting of amino acid amides 513(1990)167

Enantiomeric resolution on molecularly imprinted polymers prepared with only non-covalent and non-ionic interactions 516(1990)313

Enantiomeric resolution of amino acid derivatives on molecularly imprinted polymers as monitored by potentiometric measurements 516(1990)323

Silicas chemically bonded with multidentate phenyl groups as stationary phases in reversedphase liquid chromatography used for nonplanarity recognition of polycyclic aromatic hydrocarbons 517(1990)193

#### Molecular sieves

Glucose-silica, an improved medium for highpressure gel filtration chromatography 511(1990)69

# Molecular size distribution

Determination of molecular size distributions of humic acids by high-performance size-exclusion chromatography 541(1991)419

#### Molecular structure-solubility relationship

Quantitative correlations between solute molecular structure and solubility in supercritical fluids 517(1990)449

#### Molten salts

Separation of cations in buffered 1-methyl-3ethylimidazolium chloride–aluminum chloride ionic liquids by ion chromatography 547(1991)484

#### Moment analysis

Theory of temperature-programmed gas chromatography. The method of moment analysis 521(1990)71

#### Monoclonal antibodies

Isolation of isoproteins from monoclonal antibodies and recombinant proteins by chromatofocusing 512(1990)157

# Montmorillonite

Gas chromatographic properties of organoammonium exchanged montmorillonites. I. Tetraalkylammonium cations 549(1991)273

Gas chromatographic retention properties of organoammonium exchanged montmorillonites. II.  $CH_3N^+H_3$ ,  $(CH_3)_4N^+$ ,  $(CH_3)_3N^+CH_2C_6H_5$ and 1,4-diazabicyclo[2.2.2]octane  $\cdot 2H^+$ 549(1991)283

#### Multi-channel data processing

Computer spectrochromatography. Principles and practice of multi-channel chromatographic data processing 542(1991)247

#### Multicomponent adsorption

Dependence of retention on the organic modifier concentration and multicomponent adsorption behavior in reversed-phase chromatography 550(1991)411

#### Multicomponent isotherms

Dependence of retention on the organic modifier concentration and multicomponent adsorption behavior in reversed-phase chromatography 550(1991)411

#### Multidimensional chromatography

Coupled column chromatography in chiral separations. I. Enantiomeric separation on swollen microcrystalline cellulose triacetate columns after a preseparation on a non-chiral alkylsilica column 513(1990)195

Packed column gas chromatography-capillary column gas chromatography-mass spectrometry coupling for the qualitative characterization of technical products 520(1990)175

Application of multidimensional gas chromatography-mass spectrometry to the determination of glycol ethers in air 522(1990)303

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin- $\beta$  by multi-dimensional displacement chromatogaphy 549(1991)175

# Multiparameter mapping

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. I. Theory and verification 535(1990)55

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

#### Multiple absorbance ratio correlation

Multiple absorbance ratio correlation — a new approach for assessing peak purity in liquid chromatography 506(1990)289

#### Multiple-criteria optimization

Multiple-criteria optimization 550(1991)15

# Multiple development

Automated multiple development highperformance thin-layer chromatographic analysis of natural phenolic compounds 511(1990)396

# Multiplex gas chromatography

Continuous monitoring of a changing sample by multiplex gas chromatography 518(1990)199

# Multivariate analysis

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

Multivariate characterization of solvent strength and solvent selectivity in reversed-phase highperformance liquid chromatography 550(1991)397

# Multiwavelength detector

Isotachophoresis in open-tubular fused-silica capillaries with on-column multi-wavelength detection 545(1991)299

Standardization of a multi-wavelength UV detector for liquid chromatography-based toxicological analysis 550(1991)449

# Mycobacterium avium

Analysis of cellular fatty acids and proteins by capillary gas chromatography and sodium dodecyl sulphate polyacrylamide gel electrophoresis to differentiate *Mycobacterium avium*, *Mycobacterium intracellulare* and *Mycobacterium scrofulaceum* (MAIS) complex species 532(1990)209

# Mycobacterium intracellulare

Analysis of cellular fatty acids and proteins by capillary gas chromatography and sodium dodecyl sulphate polyacrylamide gel electrophoresis to differentiate *Mycobacterium avium*, *Mycobacterium intracellulare* and *Mycobacterium scrofulaceum* (MAIS) complex species 532(1990)209

# Mycobacterium scrofulaceum

Analysis of cellular fatty acids and proteins by capillary gas chromatography and sodium dodecyl sulphate polyacrylamide gel electrophoresis to differentiate *Mycobacterium avium*, *Mycobacterium intracellulare* and *Mycobacterium scrofulaceum* (MAIS) complex species 532(1990)209



# Nafion-coated electrodes

Optimization of Nafion-coated electrodes for selective detection in high-performance liquid chromatography 547(1991)1

# 1-(1-Naphthyl)ethylcarbamate-derivatized $\beta$ -cyclodextrin

(*R*)- and (*S*)-Naphthylethylcarbamate-substituted  $\beta$ -cyclodextrin bonded stationary phases for the reversed-phase liquid chromatographic separation of enantiomers 539(1991)83

Effect of the configuration of the substituents of derivatized  $\beta$ -cyclodextrin bonded phases on enantioselectivity in normal-phase liquid chromatography 540(1991)113

# Natural building stones

Comparative analysis of organic acids located on the surface of natural building stones by highperformance liquid, gas and ion chromatography 514(1990)241

# Natural products chemistry

Dual counter-current chromatography —its applications in natural products research (Review) 538(1991)37

Applications of analytical high-speed countercurrent chromatography in natural products chemistry (Review) 538(1991)45

# Near-infrared absorption spectrometry

Confirmation and application of transmission near infrared absorption technique for absolute quantitation of functional groups on silica gel 503(1990)69

# Neonatal screening

Simultaneous high-performance liquid chromatographic determination of amino acids in a dried blood spot as a neonatal screening test 511(1990)131

# Network plots

Isocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

Three-dimensional network plots using colours for a fourth variable with binary mixtures of pentane and 1,4-dioxane under sub- and supercritical conditions 505(1990)109

#### Nitrile bonded phase

Comparison of various stationary phases for normal-phase high-performance liquid chromatography of ethoxylated alkylphenols 504(1990)297

#### Nitrogen BET isotherms

Tracer pulse chromatographic method for the determination of nitrogen BET isotherms and surface areas 518(1990)319

#### Non-exclusion effects

Problems in the size-exclusion chromatography of cellulose nitrates: non-exclusion effects and universal calibration 522(1990)67

#### Non-linear chromatography

Theoretical study of the effect of a difference in column saturation capacities for the two components of a binary mixture on their elution band profiles and separation in non-linear chromatography 511(1990)1

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

Dependence of retention on the organic modifier concentration and multicomponent adsorption behavior in reversed-phase chromatography 550(1991)411

#### Non-linear effects

Effects of isotherm non-linearity on the determination of the binding constant in affinity chromatography 504(1990)55

# Non-porous microparticulate silicas

Non-porous polybutadiene-coated silicas as stationary phases in reversed-phase chromatography 517(1990)269

# Non-porous particles

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

# Non-uniform flow

Effect of sample viscosity in high-performance size-exclusion chromatography and its control 550(1991)705

#### Nuclear fuel reprocessing

Simultaneous determination of tributyl phosphate and dibutyl phosphate in spent fuel reprocessing streams by gas chromatography 537(1991)489

# Nuclear magnetic resonance spectroscopy

Chiral organosilicon compounds. II. Comparison of gas-liquid chromatographic and NMR analyses of enantiomeric alcohols 503(1990)437

Investigations by <sup>29</sup>Si cross-polarization magic angle spinning NMR spectroscopy of reaction pathways of silica gel polyfunctional modification 506(1990)343

High-performance liquid chromatographic resolution of racemic 1,4-benzodiazepin-2-ones by means of a  $\beta$ -cyclodextrin silica bonded chiral stationary phase 506(1990)617

Silicas chemically bonded with multidentate phenyl groups as stationary phases in reversedphase liquid chromatography used for nonplanarity recognition of polycyclic aromatic hydrocarbons 517(1990)193

Gel permeation chromatography–Fourier transform infrared study of some synthetic polymers. II. Instrumentation for the characterization of polyethylene 517(1990)209

Purification of cloned trypanosomal calmodulin and preliminary NMR studies 539(1991)501

Characterization and stability of silanized and polymer-coated octadecyl reversed phases 540(1991)53

Characterization of bonded phases by solid-state NMR spectroscopy (Review) 544(1991)345

#### Numerical resolution enhancement

Resolution enhancement of chromatographic data. Considerations in achieving super-resolution with the constrained iterative relaxation method 550(1991)51

# 0

256

# **Occupational** exposure

Controlled thermal degradation for the identification and quantification of amine N-oxides in urine 514(1990)293

# Octadecylalumina

Comparison of octadecyl-bonded alumina and silica for reversed-phase high-performance liquid chromatography 505(1990)307

# Octadecylsilica

Comparison of octadecyl-bonded alumina and silica for reversed-phase high-performance liquid chromatography 505(1990)307

# **Oligopeptide affinity adsorbents**

Affinity purification of tissue plasminogen activator using transition-state analogues 510(1990)83

# **On-column detection**

Detection and quantification of capillary electrophoresis zones by fluorescence microscopy 502(1990)247

Continuous sample collection in capillary zone electrophoresis by coupling the outlet of a capillary to a moving surface 516(1990)185

# **On-column matrix elimination**

On-column matrix elimination of high levels of chloride and sulfate in non-suppressed ion chromatography 546(1991)221

# **On-line analyzer**

On-line chromatographic analyser for determining the composition and octane number of reforming process effluents 509(1990)47

# Open capillaries, isotachophoresis

Isotachophoresis in open systems. Problems in quantitative analysis 545(1991)283

# **Open-tubular** columns

see also Capillary columns

Theoretical optimization of open-tubular columns for liquid chromatography with respect to mass loadability 506(1990)185

Fabrication of columns for open-tubular liquid chromatography using photopolymerization of acrylates 516(1990)301 Design of liquid chromatography capillary columns 517(1990)297

Electrically driven open-tubular liquid chromatography 517(1990)557

# **Open-tubular fused-silica capillaries**

Isotachophoresis in open-tubular fused-silica capillaries with on-column multi-wavelength detection 545(1991)299

# Open-tubular liquid chromatography, electrically driven

Electrically driven open-tubular liquid chromatography 517(1990)557

# **Operating variables**

Predicting the performance of gel-filtration chromatography of proteins 512(1990)77

# **Optical purity**

High-performance liquid chromatographic determination of optical purity of planar chiral organometallic compounds resolved by enzymic transformations 542(1991)129

# **Optical rotation**

Separation and detection of oxidation products in Neurolite raw material 550(1991)549

# **Optical rotation detection**

Determination of enantiomeric purity of paclobutrazol and fluazifop-P-butyl using a diode-laser-based polarimetric high-performance liquid chromatography detector 513(1990)209

# Optimization

Multivariate optimization of a gas-liquid chromatographic analysis of fatty acid methyl esters of blackcurrant seed oil 505(1990)385

Optimization of chromatographic methods by a combination of optimization software and expert systems 506(1990)169

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

Optimization of high-performance liquid chromatographic peptide separations with alternative mobile and stationary phases 512(1990)273

Computer-assisted optimization of two-factor selectivity in gas chromatography using an advanced simplex method 513(1990)13

Optimization of the isocratic high-performance liquid chromatographic separation of selected phthalates using the overlapping resolution mapping technique 513(1990)360

Method optimization in capillary zone electrophoretic analysis of hGH tryptic digest fragments 516(1990)99

Use of chromatographic models for computerized optimization of coupling-point pressure in dual-column gas chromatography 517(1990)161

Optimization study of octane-in-water emulsions by sedimentation field-flow fractionation 517(1990)333

Computer simulation for optimization of highperformance liquid chromatography of some phenolic pollutants 523(1990)81

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57

Computer simulation as an aid in method development for gas chromatography. I. The accurate prediction of separation as a function of experimental conditions 541(1991)1

Computer simulation as an aid in method development for gas chromatography. II. Changes in band spacing as a function of temperature 541(1991)21

Computer simulation as an aid in method development for gas chromatography. III. Examples of its application 541(1991)35

Optimisation of frontal chromatography by partial loading 545(1991)27

Optimization of isotachophoretic analysis: use of the charge-based transient-state model 545(1991)249

Computer optimization in ion chromatography. II. A systematic evaluation of linear retention models for anions 546(1991)37

Optimization of the procedure for the determination of alkali and alkaline-earth elements in sea water by suppressed ion chromatography 546(1991)259

Two-parameter mobile phase optimization for the simultaneous high-performance liquid

chromatographic determination of dopamine, serotonin and related compounds in microdissected rat brain nuclei 547(1991)113

Experimental design for the optimization of the separation of aliphatic amines by ion chromatography 549(1991)159

Multiple-criteria optimization 550(1991)15

Computer-aided optimization of highperformance liquid chromatographic analysis of flavonoids from some species of the genus *Althaea* 550(1991)71

Expert system for repeatability testing of highperformance liquid chromatographic methods 550(1991)257

#### Orange juice

Analysis of packaged orange juice volatiles using headspace gas chromatography 540(1991)456

# **Organic modifiers**

Effect of temperature and organic modifier on the isocratic retention characteristics of nitrated polycyclic aromatic hydrocarbons on a reversed-phase octadecylsilane column 513(1990)117

Peculiarities of aromatic hydrocarbon retention in normal-phase high-performance liquid chromatography with eluents containing halide derivatives 520(1990)315

Quantitative extraction of linear alkylbenzenesulfonates using supercritical carbon dioxide and a simple device for adding modifiers 541(1991)185

Measurement of lipophilicity indices by reversedphase high-performance liquid chromatography: comparison of two stationary phases and various eluents 541(1991)221

Optimized isocratic separation of major carboxylic acids in wine 542(1991)277

Separation of <sup>125</sup>I-labelled derivatives of 5hydroxy-6,8,11,14-eicosatetraenoic acid 543(1991)307

Effect of organic modifier concentration on retention in reversed-phase ion-pair liquid chromatography 545(1991)59

Dependence of retention on the organic modifier concentration and multicomponent adsorption

behavior in reversed-phase chromatography 550(1991)411

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

# Organic vapours

Sorption isotherms of organic vapours on Tenax 514(1990)279

#### Orthosiphon

High-performance liquid chromatography with diode-array ultraviolet detection of methoxylated flavones in *Orthosiphon* leaves 547(1991)439

# Overlapping resolution mapping

Optimization of mobile phase composition for high-performance liquid chromatographic separation by means of the overlapping resolution mapping scheme 506(1990)245

Optimization of the isocratic high-performance liquid chromatographic separation of selected phthalates using the overlapping resolution mapping technique 513(1990)360

# **Overload concentrations**

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285

#### **Overload conditions**

Stationary phase effects in reversed-phase liquid chromatography under overload conditions 550(1991)301

# **Overloaded elution**

Use of the LeVan-Vermeulen isotherm model for the calculation of elution band profiles in nonlinear chromatography 545(1991)1

#### Overloaded elution chromatography

Comparison of the performances of overloaded elution and displacement chromatography for a given column 540(1991)1

#### Overpressured thin-layer chromatography

Direct use of Empore sheets in overpressured thin-layer chromatography 547(1991)403

#### Ovomucoid column

Comparison of a new ovomucoid and a secondgeneration  $\alpha_1$ -acid glycoprotein-based chiral column for the direct high-performance liquid chromatography resolution of drug enantiomers 545(1991)43

# Oxygen enhancement

Oxygen enhancement of thermal electron capture in a non-radioactive discharge source for a quadrupole mass spectrometer 517(1990)87

#### Oxytropis ochrocephala Bunge

Studies on the preparative capability of the horizontal flow-through coil planet centrifuge and high-performance liquid chromatography in the separation of polar compounds from *Oxytropis* ochrocephala Bunge 538(1991)219



#### Packed columns

Packed columns in supercritical fluid chromatography (Review) 505(1990)3

Comparison of stationary phases for packedcolumn supercritical fluid chromatography 506(1990)563

#### Parietaria judaica

Allergenic fragments in *Parietaria judaica* pollen extract 542(1991)337

#### Parietaria pollen extract

Ion-exchange high-performance liquid chromatographic isolation of the major allergen of parietaria pollen extract 512(1990)115

#### Partial least squares in latent variables

Multi-component principal component regression and partial least-squares analyses of overlapped chromatographic peaks 539(1991)123

#### **Partial** loading

Optimisation of frontal chromatography by partial loading 545(1991)27

# Particle beam mass spectrometry

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid chromatography-particle beam-mass spectrometry 549(1991)237

#### Particle-induced X-ray emission

Study of isotachophoretic separation behaviour of metal cations by means of particle-induced

X-ray emission. I. Separation of twenty metal cations using an acetic acid buffer system and  $\alpha$ -hydroxyisobutyric acid complex-forming system 538(1991)413

#### Particle size

Effects of ionic strength of eluent on size analysis of sub-micrometre particles by sedimentation field-flow fractionation 515(1990)27

Non-porous polybutadiene-coated silicas as stationary phases in reversed-phase chromatography 517(1990)269

Potential-barrier field-flow fractionation, a versatile new separation method 517(1990)345

#### Particle size distribution

Monosized stationary phases for chromatography 535(1990)147

Quantitative particle-size distributions by sedimentation field-flow fractionation with densimeter detector 550(1991)799

#### Partition chromatography

Toroidal coil centrifugal partition chromatography, a method for measuring partition coefficients 538(1991)119

#### **Partition coefficients**

Determination of the charge of ions by partition coefficient measurements in gel permeation chromatography 504(1990)403

Centrifugal counter-current chromatography, a promising means of measuring partition coefficients 504(1990)411

Partition coefficients and capacity factors of some nucleoside analogues 506(1990)119

Novel, highly deactivated reversed-phase for basic compounds 506(1990)357

Determination of partition coefficients of nonionic contrast agents by reversed-phase highperformance liquid chromatography 507(1990)293

Correlation of protein partitioning in aqueous polymer two-phase systems 513(1990)137

Hydrophobicity parameters determined by reversed-phase liquid chromatography. I. Relationship between capacity factors and octanol-water partition coefficients for monosubstituted pyrazines and the related pyridines 514(1990)123

Size-exclusion chromatography dimension for rod-like macromolecules 515(1990)37

Investigation of affinity partition chromatography using formate dehydrogenase as a model 523(1990)103

Chromatographic behaviour of aromatic acids in reversed-phase high-performance liquid chromatography 523(1990)227

Mild hydrophobic interaction chromatography: prediction of chromatographic behaviour by preliminary analysis by "partition between aqueous two-phase systems" 538(1991)456

Immobilized metal ion affinity partitioning, a method combining metal-protein interaction and partitioning of proteins in aqueous two-phase systems 539(1991)267

Properties of supports for the partition chromatography of proteins 542(1991)55

Application of the UNIFAC method for assessment of retention in reversed-phase liquid chromatography 543(1991)267

Development of a phase system for intermediate polarity compounds in centrifugal partition chromatography 547(1991)69

Reversed-phase high-performance liquid chromatographic study of the lipophilicity of a series of analogues of the antibiotic "calvatic acid" 547(1991)167

Reversed-phase liquid chromatographic retention of geometrical isomers of tris( $\beta$ -diketonato)– chromium(III) and tris( $\beta$ -diketonato)–cobalt(III). Comparison with liquid–liquid partition in a dodecane–(methanol–water) system 547(1991)225

Gas chromatographic study of interaction between vinyl chloride and poly(vinyl chloride) 550(1991)171

Structure-retention correlation in liquid chromatography (Review) 550(1991)313

#### Partitioning

Aqueous two-phase systems with increased density for partition of heavy particles 522(1990)235

Combination of polymer-bound charged groups and affinity ligands for extraction of enzymes by partitioning in aqueous two-phase systems 523(1990)119

Affinity partitioning of restriction endonucleases. Application to the purification of EcoR I and EcoR V 538(1991)311

Partitioning of cells in dextran-poly(ethylene glycol) aqueous phase systems. A study of settling time, vessel geometry and sedimentation effects on the efficiency of separation 542(1991)397

Chiral copper-chelate complexes alter selectivities in metal affinity protein partitioning 543(1991)345

#### Partition mechanism

Chromatographic liquid–liquid ternary phase system with permethylated  $\beta$ -cyclodextrin as chiral additive 547(1991)59

#### Pattern recognition

Application of pyrolysis-high-resolution gas chromatography-pattern recognition to the identification of the Chinese traditional medicine Mai Dong 514(1990)287

Comparison of cuticular hydrocarbon profiles of fire ants *Solenopsis richteri* from the same colony, using capillary column gas chromatography with pattern recognition 517(1990)95

#### Patulin pathway metabolites

Applications of high-performance liquid chromatography to quantitation of metabolites and enzymes of the patulin pathway from *Penicillium patulum* 513(1990)237

#### Peak area

Responses of different UV-visible detectors in high-performance liquid chromatographic measurements when the absolute number of moles of an analyte is measured 518(1990)135

Influence of the choice of the boundary conditions on the results of the dynamic chromatography model 542(1991)1

Analysis and purification of DNA restriction fragments by high-performance liquid chromatography 548(1991)281

Quantitative analysis in capillary zone electrophoresis with conductivity and indirect UV detection 549(1991)345

#### Peak area ratios

Fast development of a robust high-performance liquid chromatographic method for *Ginkgo biloba* based on computer simulation 550(1991)39

#### Peak capacity

Comparison of polybutadiene-coated alumina and octadecyl-bonded silica for separations of proteins and peptides by reversed-phase highperformance liquid chromatography 541(1991)303

#### Peak compression

Studies on system peaks in ion-pair adsorption chromatography. III. Regulation of system peak gradient retention for obtaining analyte peak compression 506(1990)61

Regulation of peak compression effects for substituted benzamides in reversed-phase liquid chromatography 506(1990)253

Coupled column chromatography in chiral separations. I. Enantiomeric separation on swollen microcrystalline cellulose triacetate columns after a preseparation on a non-chiral alkylsilica column 513(1990)195

Studies on system peaks in ion-pair adsorption chromatography. IV. Optimization of peak compression 535(1990)93

# Peak height

Effect of noise on peak heights calculated using an exponentially modified gaussian peak shape model 539(1991)133

#### Peak identification

Retention prediction for polymer additives in reversed-phase liquid chromatography 550(1991)325

# Peak identification methods

Advances in expert systems for high-performance liquid chromatography 515(1990)13

#### Peak overlap

Resolution of unresolved peaks containing unknown components by high-performance liquid chromatography with multi-wavelength detection 506(1990)223

Aromatic ring-type analysis of complex hydrocarbon mixtures by high-performance liquid chromatography with photodiode-array detection and curve resolution 520(1990)383 Multi-component principal component regression and partial least-squares analyses of overlapped chromatographic peaks 539(1991)123

# Peak purity

Multiple absorbance ratio correlation — a new approach for assessing peak purity in liquid chromatography 506(1990)289

Computer spectrochromatography. Principles and practice of multi-channel chromatographic data processing 542(1991)247

# Peak pyrolysis

Separation of opium alkaloids by thin-layer chromatography combined with flame ionization detection using the peak pyrolysis method 547(1991)538

# Peak shape

see also Band profiles

Multiple peak formation in reversed-phase liquid chromatography of ramipril and ramiprilate 506(1990)75

Silanol effects in reversed-phase liquid chromatography 506(1990)97

Comparison of stationary phases for packedcolumn supercritical fluid chromatography 506(1990)563

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

Nature of the eddy dispersion in packed beds 535(1990)189

Effect of noise on peak heights calculated using an exponentially modified gaussian peak shape model 539(1991)133

Computer spectrochromatography. Principles and practice of multi-channel chromatographic data processing 542(1991)247

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

# **Peak splitting**

Elimination of peak splitting in the liquid chromatography of the proline-containing drug enalapril malcate 537(1991)249 Application of the split-peak effect to study the adsorption kinetics of human serum albumin on a reversed-phase support 548(1991)81

# Peak symmetry

Capillary supercritical fluid chromatography of aliphatic amines. Studies on the selectivity and symmetry with three different columns using carbon dioxide or nitrous oxide as mobile phase 516(1990)415

# Peak tailing

Controlling the retention of clopenthixol and other basic drug substances by reversed-phase ion-pair chromatography on bonded-phase materials using two counter-ions of opposite charge 523(1990)217

# Peak tracking

Fully automatic high-performance liquid chromatographic optimization 550(1991)27

Fast development of a robust high-performance liquid chromatographic method for *Ginkgo biloba* based on computer simulation 550(1991)39

# Pentafluorophenyl phase

Preparation and comparison of a pentafluorophenyl stationary phase for reversed-phase liquid chromatography 511(1990)79

# Peptide fingerprints

Tryptic fingerprinting on a poly(styrenedivinylbenzene) reversed-phase column 512(1990)315

# Peptide ligands, synthetic

Synthetic antibody fragment as ligand in immunoaffinity chromatography 512(1990)337

# Peptide mapping

Sensitive blotting assay for the detection of glycopeptides in peptide maps 510(1990)225

Optimization of high-performance liquid chromatographic peptide separations with alternative mobile and stationary phases 512(1990)273

Peptide mapping of HIV polypeptides expressed in *Escherichia coli*. Quality control of different batches and identification of tryptic fragments containing residues of aromatic amino acids or cysteine 512(1990)325

Strategies for internal amino acid sequence analysis of proteins separated by polyacrylamide gel electrophoresis 519(1990)199 High-performance liquid chromatography of casein hydrolysates phosphorylated and dephosphorylated. I. Peptide mapping 519(1990)299

Peptide maps at picomolar levels obtained by reversed-phase high-performance liquid chromatography and pre-column derivatization with phenyl isothiocyanate. Microsequencing of phenylthiocarbamyl peptides 548(1991)303

# Peptide purification

Purification of histone H1 polypeptides by highperformance cation-exchange chromatography 502(1990)47

#### Perfluorocarbon support

Affinity chromatography on novel perfluorocarbon supports. Immobilisation of C.I. Reactive Blue 2 on a polyvinyl alcohol-coated perfluoropolymer support and its application in affinity chromatography 510(1990)177

#### Perfusion chromatography

Flow-through particles for the high-performance liquid chromatographic separation of biomolecules: perfusion chromatography 519(1990)1

#### Periplaneta americana

High-performance liquid chromatography of biogenic amines in the corpus cardiacum of the American cockroach, *Periplaneta americana* 539(1991)193

#### Perturbation analysis

Perturbation analysis of the influence of the isotherm coupling factor on the resolution between two compounds in chromatography 508(1990)27

#### Pertussis vaccine

Simultaneous determination of *Bordetella pertussis* toxin and filamentous haemagglutinin concentrations by hydroxyapatite highperformance liquid chromatography 512(1990)227

# Pharmaceutical formulations

Determination of 10-camphorsulphonates in pharmaceutical formulations by high-performance liquid chromatography 511(1990)367

#### Pharmaceutical industry, use of HPLC

Use of high-performance liquid chromatography in the pharmaceutical industry 507(1990)141

# **Pharmacokinetics**

Preparation and evaluation of octadecyl-treated porous glasses. Application to the determination of methotrexate in serum 515(1990)43

Analysis of drugs and other toxic substances in biological samples for pharmacokinetic studies 531(1990)3

#### Pharmacological classification

Chromatographic data for pharmacological classification of imidazol(in)e drugs 550(1991)573

#### Phase separation

Settling-time dependence of rat bone marrow cell partition and counter-current distribution in charge-sensitive aqueous two-phase systems. Relationship with the cell partitioning mechanism 504(1990)79

#### Phase systems

Development of a phase system for intermediate polarity compounds in centrifugal partition chromatography 547(1991)69

# Phase transitions

Investigation of phase transitions in the  $CaSO_4(s)$ -H<sub>2</sub>O(g) system by chromatographic methods 520(1990)157

Crown ethers as stationary phases in gas chromatography. Comparison between dibenzo-18-crown-6, dibenzo-24-crown-8 and dicyclohexano-24-crown-8 with respect to polarity, selectivity and stability 543(1991)179

#### pH effects

Determination of the lipophilicity of some peptides. Effect of surface pH of silica 520(1990)249

# Phenolic resins

High-performance liquid chromatography separation media based on functional polymers containing phenolic hydroxyls 504(1990)97

#### pH gradients

Applicability of dynamic change of pH in the capillary zone electrophoresis of proteins 516(1990)219

On-line precolumn photochemical generation of pH gradient: micro-high-performance liquid chromatography of methotrexate and its impurities 522(1990)205

Isoelectric focusing field-flow fractionation. Experimental study of the generation of pH gradient 539(1991)111

# Phosphate group recognition

Recognition of phosphate groups by immobilized aluminium(III) ions 539(1991)327

# Phosphorescence, solid-surface room-temperature

Solid-surface room-temperature phosphorescence detection for high-performance liquid chromatography 508(1990)37

#### Photoaffinity labelling

Purification of  $D_2$  dopamine receptor by photoaffinity labelling, high-performance liquid chromatography and preparative sodium dodecyl sulphate polyacrylamide gel electrophoresis 515(1990)375

Application of high-performance liquid chromatography to the purification of the putative intestinal peptide transporter 521(1990)199

# Photochemical reactor

On-line precolumn photochemical generation of pH gradient: micro-high-performance liquid chromatography of methotrexate and its impurities 522(1990)205

Photochemical reaction coupled to solid-state peroxyoxalate chemiluminescence for the highperformance liquid chromatographic detection of compounds having weak chromophores 523(1990)163

#### **Photoionization detector**

Design of a photoionization detector for highperformance liquid chromatography using an automated liquid-to-vapor phase interface and application to phenobarbital in an animal feed and to amantadine 505(1990)319

Effect of temperature on the sensitivity of the photoionization detector 540(1991)441

#### Photoionization electron capture detector

Oxygen enhancement of thermal electron capture in a non-radioactive discharge source for a quadrupole mass spectrometer 517(1990)87

#### Photolysis

High-performance liquid chromatographic method for studies on the photodecomposition kinetics of chlorothiazide 507(1990)151

# **Photometric detection**

Naphthalenesulfonates as mobile phases for anion-exchange chromatography using indirect photometric detection 542(1991)101

Detection in ion chromatography (Review) 546(1991)175

#### Photooxidation

Identification of products formed during UV irradiation of tamoxifen and their use for fluorescence detection in high-performance liquid chromatography 514(1990)179

# Photopolymerization

Fabrication of columns for open-tubular liquid chromatography using photopolymerization of acrylates 516(1990)301

#### Photosystems

Purification of membrane protein complexes isolated from a cyanobacterial thylakoid membrane by high-performance liquid chromatography 512(1990)219

# Photothermal deflection spectroscopy

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

# Physico-chemical parameters

Solubility parameter treatment for the characterization of the stationary phase in the reversed-phase chromatography of benzene derivatives 515(1990)3

# Pinched inlet channel

Evaluation of pinched inlet channel for stopless flow injection in steric field-flow fractionation 517(1990)423

#### $\pi$ - $\pi$ Interactions

Role of  $\pi$ - $\pi$  interactions in reversed-phase liquid chromatography 550(1991)267

#### Pituitary extracts

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application 549(1991)141

Ovine luteinizing hormone. VI. Analysis of the misclassification errors in the separation of intrapituitary isohormones by chromatofocusing 549(1991)153

# Placenta

Purification of human placental prostaglandin 15-hydroxydehydrogenase 521(1990)231

# Planarity

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

# Plant analysis

Environmental applications of ion chromatography (Review) 504(1990)211

# **Plant cuticles**

Determination of monocyclic aromatic hydrocarbons in plant cuticles by gas chromatography-mass spectrometry 541(1991)83

# **Plant** oils

Determination of plant triacylglycerols using capillary gas chromatography, high-performance liquid chromatography and mass spectrometry 542(1991)145

# Plasma desorption mass spectrometry

Identification of aprotinin degradation products by the use of high-performance capillary electrophoresis, high-pressure liquid chromatography and mass spectrometry 516(1990)175

# Plasma discharge

Gas chromatographic determination of traces of light hydrocarbons and sulphur compounds in gases at low pressure by the simultaneous use of flame ionization and flame photometric detectors 521(1990)99

# Plasma profiles, drug-free

Evaluation of drug-free plasma profiles by highperformance liquid chromatography following on-line solid-phase extraction 528(1990)277

# Plate height

Electrochromatography with continuous sample introduction 515(1990)645

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

Influence of thermal variation of diffusion coefficient on non-equilibrium plate height in capillary zone electrophoresis 517(1990)521

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53 Blended liquid crystalline stationary phases in capillary gas chromatography 520(1990)85

# Plate height equation

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

# Platelets

Analysis, purification and properties of a 50 000dalton membrane-associated phosphoprotein from human platelets 521(1990)335

# Plate theory

High-performance liquid chromatography of amino acids, peptides and proteins. XCVIII. The influence of different displacer salts on the bandwidth properties of proteins separated by gradient elution anion-exchange chromatography 512(1990)41

# **Polar interactions**

Separation and purification of oligonucleotides using a new bonded-phase packing material 545(1991)79

# Polarity

Comparison of methods for the determination of the polarity and selectivity of stationary phases in gas chromatography from a thermodynamic point of view 517(1990)51

Effect of stationary phase on predictions of the statistical model of overlap from gas chromatograms 550(1991)135

# Polarity index

Development of a phase system for intermediate polarity compounds in centrifugal partition chromatography 547(1991)69

# Polarizability

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

# **Pollen** extract

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

# Polyacrylamide gel, linear

Separation of DNA restriction fragments by high operformance capillary electrophoresis with low and zero crosslinked polyacrylamide using continuous and pulsed electric fields 516(1990)33

Capillary zone electrophoresis with a linear, non-cross-linked polyacrylamide gel: separation of proteins according to molecular mass 549(1991)446

# Polyacrylamide gels

Method for long-term preservation of thin-layer polyacrylamide gels by producing a gelatine coating 538(1991)504

# Polyamide media, grafted

Comparative affinity chromatographic studies using novel grafted polyamide and poly(vinyl alcohol) media 539(1991)307

# Polydispersity

Determination of polymer polydispersity by gel permeation chromatography 509(1990)219

#### Poly(hydroxystyrene) resins

High-performance liquid chromatography separation media based on functional polymers containing phenolic hydroxyls 504(1990)97

#### Polymer adsorption

Chromatographic investigations of macromolecules in the "critical range" of liquid chromatography. I. Functionality type and composition distribution in polyethylene oxide and polypropylene oxide copolymers 523(1990)91

# Polymerase chain reaction

Rapid separation, quantitation and purification of products of polymerase chain reaction by liquid chromatography 512(1990)433

# Polymer beads, porous

Preliminary results on the gas chromatographic evaluation of interpenetrating polymer networks prepared from porous polymer beads 502(1990)393

#### **Polymer-coated silicas**

Evaluation of the stability of polymer-coated silica-based packing materials for highperformance liquid chromatography 517(1990)257

# **Polymer fractionation**

Sample remaining in an ODS column after compositional fractionation of copolymers by high-performance liquid chromatography 547(1991)429

#### **Polymer particles**

Monosized polymer particles in size-exclusion chromatography. I. Toluene as solvent 514(1990)1 Monosized stationary phases for chromatography 535(1990)147

#### Poly(y-methyl L-glutamate) beads

Removal of endotoxins using macroporous spherical poly( $\gamma$ -methyl L-glutamate) beads and their derivatives 530(1990)148

# Polysiloxanes

Preparation and gas chromatographic characterization of some immobilized crown ether–polysiloxane stationary phases 504(1990)279

New polar polysiloxane stationary phases containing cyano, nitrophenyl and 8-quinolinyl units attached to diethylene oxide side groups 540(1991)279

# Polysiloxanes, cross-linked

Sorbents with cross-linked polysiloxane phases for gas-liquid chromatography with packed columns 509(1990)85

# Poly(styrene-divinylbenzene)

Rigid macroporous copolymers as stationary phases in high-performance liquid chromatography (Review) 544(1991)201

Coated hydrophilic polystyrene-based packing materials 544(1991)233

# Poly(vinyl alcohol) media, grafted

Comparative affinity chromatographic studies using novel grafted polyamide and poly(vinyl alcohol) media 539(1991)307

#### Polyzonal step gradient

Stepwise gradient in thin-layer chromatography of *Chelidonium* alkaloids 518(1990)273

#### Pore diameter

Porous glass sheets for use in thin-layer chromatography 515(1990)205

# Pore diffusivity

Evaluation of kinetic models for biospecific adsorption and its implications for finite bath and column performance 548(1991)25

#### Pore size

Preparative affinity chromatography of proteins. Influence of the physical properties of the base matrix 503(1990)93

Effect of polystyrene coating on pore, structural and chromatographic properties of silica packings 506(1990)391

Effect of pore size on the surface excess isotherm of silica packings 515(1990)159

Studies on texture and properties of porous glass and silica gel used as supports for chemically bonded amino phases for high-performance liquid chromatography 520(1990)237

Performance of wide-pore silica- and polymerbased packing materials in polypeptide separation: effect of pore size and alkyl chain length 535(1990)13

Monosized stationary phases for chromatography 535(1990)147

Reversed-phase gradient elution behaviour of polystyrenes in a dichloromethane-methanol solvent system 543(1991)157

Stationary phase effects in reversed-phase liquid chromatography under overload conditions 550(1991)301

# Pore size distribution

Performance of wide-pore silica- and polymerbased packing materials in polypeptide separation: effect of pore size and alkyl chain length 535(1990)13

Properties of supports for the partition chromatography of proteins 542(1991)55

Characterization of synthetic macroporous ion-exchange resins in low-pressure cartridges and columns. Evaluation of the performance of Macro-Prep 50 S resin in the purification of anti-Klenow antibodies from goat serum 548(1991)165

# Pore structure

Characterization of synthetic macroporous ion-exchange resins in low-pressure cartridges and columns. Evaluation of the performance of Macro-Prep 50 S resin in the purification of anti-Klenow antibodies from goat serum 548(1991)165

# Porous glass

Preparation and evaluation of octadecyl-treated porous glasses. Application to the determination of methotrexate in serum 515(1990)43

Porous glass sheets for use in thin-layer chromatography 515(1990)205

Studies on texture and properties of porous glass and silica gel used as supports for chemically bonded amino phases for high-performance liquid chromatography 520(1990)237

#### **Porous polymers**

Studies on the selectivity of porous polymers based on polyaromatic esters 503(1990)41

# Porous silica fibers

Aligned fiber columns for size-exclusion chromatography 506(1990)303

# **Positional isomers**

Impact of experimental parameters on the resolution of positional isomers of aminobenzoic acid in capillary zone electrophoresis 542(1991)173

Application of substituted liquid crystals as stationary phases in gas-liquid chromatography for the separation of mono- and dimethyl naphthalenes 549(1991)423

#### Positron emission tomography

Combination of positron emission tomography with liquid chromatography in neuropharmacologic research 507(1990)303

# Post-column reactors

Improvements in the separation and detection of acetylcholine and choline using liquid chromatography and electrochemical detection 502(1990)337

Post-column adjustment of conditions for peroxyoxalate chemiluminescence detection for high-performance liquid chromatography 503(1990)155

High-performance liquid chromatographic postcolumn reaction system for the electrochemical detection of ascorbic acid and dehydroascorbic acid 504(1990)434

Determination of amoxicillin in plasma by highperformance liquid chromatography with fluorescence detection after on-line oxidation 506(1990)417

High-performance liquid chromatographic determination of an arginine-containing octapeptide antagonist of vasopressin in human plasma by means of a selective post-column reaction with fluorescence detection 507(1990)79

Optimization of the postcolumn hydrolysis reaction on solid phases for the routine highperformance liquid chromatographic

determination of N-methylcarbamate pesticides in food products 507(1990)459

High-performance liquid chromatographic investigations on the cleavage kinetics of sidechain-protected arginine derivatives with a sophisticated post-column reaction detector 512(1990)249

Identification of products formed during UV irradiation of tamoxifen and their use for fluorescence detection in high-performance liquid chromatography 514(1990)179

High-performance liquid chromatography with a  $3\alpha$ -hydroxysteroid dehydrogenase postcolumn reactor and isoluminol-microperoxidase chemiluminescence detection 515(1990)329

Direct injection of blood samples into a highperformance liquid chromatographic adenine analyser to measure adenine, adenosine and the adenine nucleotides with fluorescence detection 515(1990)363

Determination of free catecholamines in human urine by direct injection of urine into a liquid chromatographic column-switching system with fluorimetric detection 515(1990)435

High-performance liquid chromatographic determination of proteins by post-column fluorescence derivatization with thiamine reagent 518(1990)141

Electrochemical enhancement of highperformance liquid chromatography-UV detection for determination of phenylpropanolamine 518(1990)167

Liquid chromatographic determination of felypressin using a column-switching technique and post-column derivatization 521(1990)141

Photochemical reaction coupled to solid-state peroxyoxalate chemiluminescence for the highperformance liquid chromatographic detection of compounds having weak chromophores 523(1990)163

Post-column reaction detection and flow injection analysis 535(1990)41

Post-column oligosaccharide dehydrogenase reactor for coulometric detection of maltooligosaccharides in a liquid chromatographic system 537(1991)443 Determination of trace elements by ion chromatography. I. Beryllium 538(1991)365

Determination of organophosphorus and carbamate pesticide standards by liquid chromatography with detection by inhibition of immobilized acetylcholinesterase 539(1991)47

Free-solution reactor for post-column fluorescence detection in capillary zone electrophoresis 540(1991)343

Determination of non-ionic surfactants with ester groups by high-performance liquid chromatography with post-column derivatization 541(1991)431

Luminarin 4 as a labelling reagent for carboxylic acids in liquid chromatography with peroxyoxalate chemiluminescence detection 542(1991)295

High-performance liquid chromatographic determination of biotin in pharmaceutical preparations by post-column fluorescence reaction with thiamine reagent 542(1991)365

Determination of analytes at extreme concentration ratios by gradient ion chromatography with solid-phase reaction detection 546(1991)151

Separation and detection of non-chromophoric, anionic surfactants 546(1991)395

Column liquid chromatographic determination of saccharides with a single calibration graph using post-column enzyme reactors and coulometric detection 549(1991)127

# Potential gradient detector

Use of cyclodextrins in the isotachophoretic determination of various inorganic anions 518(1990)189

# Potentiometric detector

Simultaneous conductivity and potentiometric detector for miniaturized liquid chromatography and flow analysis 540(1991)41

# Precipitation

Analysis of poly(styrene–co-methyl acrylate) and poly(styrene–co-butyl acrylate) by highperformance liquid chromatography 508(1990)319

# Precolumns

Automated precolumn derivatization of amino acids with *ortho*-phthalaldehyde using a hollowfibre membrane reactor 502(1990)317

Improved automated precolumn derivatization reaction of fatty acids with bromomethylmethoxycoumarin as label 502(1990)423

Simultaneous measurement of L-DOPA, its metabolites and carbidopa in plasma of Parkinsonian patients by improved sample pretreatment and high-performance liquid chromatographic determination 511(1990)167

Direct determination of the antihypertensive agent Cromakalim and its major metabolites in human urine by high-performance liquid chromatography 515(1990)597

Formazan derivatives as the precolumn derivatization reagents in a coupled highperformance liquid chromatographicspectrophotometric system for trace metal determination 515(1990)603

Effects of the pre-column in automated oncolumn injection capillary gas chromatography 518(1990)307

On-line sample clean-up of fermentation broths and substrates prior to the liquid chromatographic separation of carbohydrates 523(1990)173

Application of an anhydrotrypsin-immobilized precolumn for selective separation of peptides having arginine or lysine at their C-termini by column-switching high-performance liquid chromatography 543(1991)59

#### **Preconcentration methods**

Development of an automated high-performance liquid chromatographic method for the on-line pre-concentration and determination of trace concentrations of pesticides in drinking water 503(1990)167

Headspace analysis of polar compounds in air 509(1990)107

Comparison of sorbents for solid-phase extraction of polar compounds from water 509(1990)123

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219 Analysis of dilute peptide samples by capillary zone electrophoresis 516(1990)79

Simultaneous determination of trace concentrations of benomyl, carbendazim (MBC) and nine other pesticides in water using an automated on-line pre-concentration highperformance liquid chromatographic method 518(1990)242

Isotachophoresis as an on-line concentration pretreatment technique in capillary electrophoresis 538(1991)393

Preconcentration of divalent trace metals on chelating silicas followed by on-line ion chromatography 541(1991)443

#### Pregnancy testing kits

High-performance liquid chromatographic method for the comparison of tanning capacity of tannic acid batches used in the manufacture of pregnancy testing kits 513(1990)263

# Preparative chromatography

Preparative affinity chromatography of proteins. Influence of the physical properties of the base matrix 503(1990)93

Large-scale purification of factor VIII by affinity chromatography: optimization of process parameters 503(1990)103

Chromatographic purification of glucose-6phosphate dehydrogenase and lactate dehydrogenase from *Leuconostoc mesenteroides* 503(1990)197

Purification of mammalian tyrosyl-tRNA synthetase by high-performance liquid chromatography 503(1990)277

Aluminum ion mediated stabilization of silicabased anion-exchange packings to caustic regenerants 503(1990)385

Product purity as a function of elution order 503(1990)403

Adduct formation identification between phenyl glycidyl ether and 2'-deoxyadenosine and thymidine by chromatography, mass spectrometry and nuclear magnetic resonance spectroscopy 504(1990)113

Preparative supercritical fluid chromatography (Review) 505(1990)37

Solutions of the equilibrium and semi-equilibrium models of chromatography 506(1990)495

Quantitative structure-type analysis of hetero compounds-hydrocarbon mixtures. Analysis of S-heterocyclics and ketones from brown coal tars 509(1990)27

Preparative separation of sphingolipids and of individual molecular species by high-performance liquid chromatography and their identification by gas chromatography-mass spectrometry 509(1990)333

Analytical and preparative resolution of enantiomers of prostaglandin precursors and prostaglandins by liquid chromatography on derivatized cellulose chiral stationary phases 511(1990)97

Influence of pressure on the maximum production rate in preparative liquid chromatography 511(1990)402

Influence of pressure on the maximum production rate in preparative liquid chromatography. Reply to the letter of S. Golshan-Shirazi and G. Guiochon 511(1990)404

Predicting the performance of gel-filtration chromatography of proteins 512(1990)77

Ion-exchange high-performance liquid chromatographic isolation of the major allergen of parietaria pollen extract 512(1990)115

Isolation of isoproteins from monoclonal antibodies and recombinant proteins by chromatofocusing 512(1990)157

Reversed-phase high-performance liquid chromatographic separation of synthetic phosphopeptide isomers 512(1990)265

Preparative high-performance liquid chromatography on a unique high-speed macroporous resin 512(1990)365

Applications of high-performance liquid chromatography to quantitation of metabolites and enzymes of the patulin pathway from *Penicillium patulum* 513(1990)237

Simple method for the isolation of azadirachtin by preparative high-performance liquid chromatography 513(1990)389 Chemical properties of and solute-support interactions with the gel filtration medium Superdex 75 prep grade 514(1990)137

Sample introduction and elution method for preparative supercritical fluid chromatography 515(1990)285

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

Magnetic resonance imaging in reversed-phase liquid chromatography 517(1990)263

Multi-component elution overload chromatography of compounds with S-shaped isotherms. A theoretical study 518(1990)77

Analytical and preparative high-performance liquid chromatographic systems for the separation of an anomeric mixture of 4-O-(Dglucopyranosyl)gallic acid 518(1990)254

Preparative high-performance liquid chromatographic columns with an intra-column injection system 520(1990)295

Procedure for the purification of streptavidin by hydrophobic interaction chromatography 520(1990)325

Study of the interaction between two overloaded bands injected successively in non-linear chromatography 522(1990)1

Use of a short analytical column for the isolation and identification of degradation products of ICI 200 880, a peptidic elastase inhibitor 522(1990)213

Dependence of the production rate on the relative retention of two components in preparative chromatography 523(1990)1

Frontal chromatographic techniques in preparative chromatography 523(1990)11

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

Forced-flow multi-phase liquid extraction, a separation method based on relative and absolute counter-current distribution. I. Description of the method and basic possibilities 523(1990)43

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography 523(1990)63

New family of high-resolution ion exchangers for protein and nucleic acid purifications from laboratory to process scales 535(1990)127

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57

Applications of preparative high-performance liquid chromatography in oleochemical research 536(1991)75

Chemical, physical and chromatographic properties of Superdex 75 prep grade and Superdex 200 prep grade gel filtration media 537(1991)17

Large-scale isolation and purification of human apolipoproteins A-I and A-II 537(1991)464

Preparative high-performance liquid chromatography on chemically modified porous glass. Isolation of acidic saponins from ginseng 537(1991)469

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography 537(1991)497

Pitfalls in the choice of isotherms for the calculation of band profiles in preparative chromatography. A reply 537(1991)507

Studies on the preparative capability of the horizontal flow-through coil planet centrifuge and high-performance liquid chromatography in the separation of polar compounds from *Oxytropis* ochrocephala Bunge 538(1991)219

Comparison of the performances of overloaded elution and displacement chromatography for a given column 540(1991)1

Preparative high-performance liquid chromatography based on reversed-phase gradient elution. Optimum experimental conditions for heavily overloaded separation 540(1991)21

Analytical- and preparative-scale chromatographic separation of phenylalanine from aspartame using a new polymeric sorbent 540(1991)85 Use of the LeVan-Vermeulen isotherm model for the calculation of elution band profiles in nonlinear chromatography 545(1991)1

Peak interactions under concave isotherm conditions in preparative ion chromatography 546(1991)27

Multi-column preparative reversed-phase sample displacement chromatography of peptides 548(1991)267

Large-scale purification of the synthetic peptide fragment 163–171 of human interleukin- $\beta$  by multi-dimensional displacement chromatogaphy 549(1991)175

# Preparative displacement thin-layer chromatography

Spacer-displacement and carrier spacerdisplacement thin-layer chromatography 520(1990)287

# Preparative isotachophoretic analyser

Preparative isotachophoretic analyser equipped with a dropwise fractionating device 513(1990)297

# Press-fit connectors

Effects of the pre-column in automated oncolumn injection capillary gas chromatography 518(1990)307

# Pressure

Influence of pressure on the maximum production rate in preparative liquid chromatography 511(1990)402

Influence of pressure on the maximum production rate in preparative liquid chromatography. Reply to the letter of S. Golshan-Shirazi and G. Guiochon 511(1990)404

Capillary supercritical fluid chromatography of explosives. Investigations on the interactions between the analytes, the mobile phase and the stationary phase 521(1990)63

#### **Pressure drop**

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Chromatographic characteristics of capillary packed columns with increased pressure drop 520(1990)91

#### **Pressure restrictor**

Post-extraction solvent flush of the pressure

restrictor in supercritical fluid extraction 543(1991)187

#### Principal component analysis

Multi-component principal component regression and partial least-squares analyses of overlapped chromatographic peaks 539(1991)123

High-performance liquid chromatography of amino acids, peptides and proteins. CX. Principal component analysis of four sets of group retention coefficients derived from reversed-phase high-performance liquid chromatography of peptides 548(1991)105

Multivariate characterization of solvent strength and solvent selectivity in reversed-phase highperformance liquid chromatography 550(1991)397

Comparative investigation of the retention behaviour of nucleoside derivatives on alumina stationary phases in thin-layer chromatography and high-performance liquid chromatography 550(1991)667

#### **Process analysis**

Determination of 2-methylpyrazine and pyrazinamide in reaction mixtures by gas and high-performance liquid chromatography 513(1990)83

#### Process control

Non-porous polybutadiene-coated silicas as stationary phases in reversed-phase chromatography 517(1990)269

Progress in optimization of transition metal cation chromatography and its application to analysis of silicon wafer contamination 546(1991)243

# Process liquid chromatography

High-performance liquid chromatographic procedures in monitoring the production and quality control of chlortetracycline 509(1990)189

#### **Process monitoring**

Computer simulation of isocratic retentions of alkylketones using gradient data 550(1991)77

# Production rate

Influence of pressure on the maximum production rate in preparative liquid chromatography 511(1990)402

Influence of pressure on the maximum production rate in preparative liquid chromatography. Reply

to the letter of S. Golshan-Shirazi and G. Guiochon 511(1990)404

Dependence of the production rate on the relative retention of two components in preparative chromatography 523(1990)1

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57

Comparison of the performances of overloaded elution and displacement chromatography for a given column 540(1991)1

#### Productivity

Optimisation of frontal chromatography by partial loading 545(1991)27

# **Product purity**

Product purity as a function of elution order 503(1990)403

#### Programmable temperature vaporizer

Determination of heroin and some common adulterants by capillary gas chromatography 538(1991)269

#### Protective groups

Enantiomeric resolution of amino acid derivatives by high-performance liquid chromatography on chiral stationary phases derived from L-proline 547(1991)31

High-performance liquid chromatography of synthetic oligonucleotides. A new affinity protecting group 549(1991)207

#### **Protein-binding constants**

High-performance liquid chromatography of amino acids, peptides and proteins. CIX. Investigations on the relation between the ligand density of Cibacron Blue immobilized porous and non-porous sorbents and protein-binding capacities and association constants 550(1990)383

# Protein-coated octadecylsilane

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

# Protein conformation

High-performance liquid chromatography of amino acids, peptides and proteins. CI. Identification and characterisation of coulombic interactive regions on sperm whale myoglobin by high-performance anion-exchange chromatography and computer-graphic analysis 507(1990)33

#### Protein-dye interactions

Protein-ligand interactions studied on bovine serum albumin with free and polymer-bound Cibacron Blue F3G-A as ligand with reference to affinity partitioning 537(1991)219

#### **Protein folding**

High-performance liquid chromatography of amino acids, peptides and proteins. XCIX. Comparative study of the equilibrium refolding of bovine, porcine and human growth hormone by size-exclusion chromatography 512(1990)57

Characterization of an adamantyl-modified silica used as a stationary phase in high-performance liquid chromatography 514(1990)11

Unfolding of truncated and wild type aspartate aminotransferase studied by size-exclusion chromatography 539(1991)383

# Protein-gel interactions

Affinity gel interactions of alcohol and polyol dehydrogenases: anomalous behaviour and structural correlations 502(1990)69

#### **Protein mapping**

Recent developments in electrophoretic methods (Review) 516(1990)3

#### Proteolysis

Strategies for internal amino acid sequence analysis of proteins separated by polyacrylamide gel electrophoresis 519(1990)199

#### Psophocarpus tetragonolobus LDC

Immobilized mucin : an affinity matrix for the isolation of winged bean acidic and basic lectins 503(1990)272

#### **Pulsed amperometric detector**

Analysis of  $\delta$ -L- $\alpha$ -aminoadipyl-L-cysteinyl-D-valine by ion chromatography and pulsed amperometric detection 509(1990)347

#### Purge-and-trap analysis

Qualitative analysis of a commercially available phenol-formaldehyde resin, by static and dynamic headspace analysis using a mass-selective detector 509(1990)101

Comparison of quarter-hourly on-line dynamic headspace analysis to purge-and-trap analysis of

varying volatile organic compounds in drinking water sources 513(1990)47

Characterization of volatile components in apricot purées by gas chromatography-mass spectrometry 518(1990)221

Analysis of volatile organic compounds in estuarine sediments using dynamic headspace and gas chromatography-mass spectrometry 542(1991)413

Continuous automatic monitoring of volatile organic compounds in aqueous streams by a modified purge-and-trap system 549(1991)335

#### **Purity ratio**

Predicting the performance of gel-filtration chromatography of proteins 512(1990)77

#### Pyrograms

Automatic sampler for Curie-point pyrolysis-gas chromatography with on-column introduction of pyrolysates 518(1990)9

#### Pyrolysis

Pyrolytic analysis of complex stabilizers in polypropylene 505(1990)375

#### Pyrolysis-gas chromatography

Application of pyrolysis-high-resolution gas chromatography-pattern recognition to the identification of the Chinese traditional medicine Mai Dong 514(1990)287

Automatic sampler for Curie-point pyrolysis-gas chromatography with on-column introduction of pyrolysates 518(1990)9

Probability method for pyrolysis gas chromatographic data treatment and elaboration of a computer system for the identification of polymers 520(1990)121



# Quality control

Phenols as internal standards in reversed-phase high-performance liquid chromatography in pharmaceutical analysis 515(1990)305

# Quantitator, chromatographic

Towards a chromatographic quantitator 506(1990)265



# **Racemization kinetics**

Resolution of enantiomeric lorazepam and its acyl and O-methyl derivatives and racemization` kinetics of lorazepam enantiomers 535(1990)229

#### Radial-flow affinity chromatography

Affinity purification of plasminogen by radialflow affinity chromatography 539(1991)531

#### **Radiation grafting**

Novel media for chromatography and immobilization using a radiation grafting technique 510(1990)115

# **Radioactivity detector**

Direct and reverse flow-through heterogeneous scintillation counting of radiolabelled amino acids using post-column solvent segmentation 508(1990)301

Analysis of <sup>55</sup>Fe-labeled hydroxamate siderophores by high-performance liquid chromatography 537(1991)259

#### Radiochromatography

Analysis of 2,4,6-trinitrotolucne and its transformation products in soils and plant tissues by high-performance liquid chromatography 518(1990)361 Radiochromatography in pharmaceutical and biomedical analysis 531(1990)101

**Radiofrequency detector** Radiofrequency detector for gas chromatography 520(1990)97

# Radio-gas chromatography

Use of radio-gas chromatography and tritium label to optimize derivatization procedures 530(1990)1

#### Radioimmunoassay

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application 549(1991)141

Ovine luteinizing hormone. VI. Analysis of the misclassification errors in the separation of intrapituitary isohormones by chromatofocusing 549(1991)153

#### **Radioisotope detector**

Reversed-phase high-performance liquid chromatographic method for the determination of soil-bound [<sup>14</sup>C]atrazine and its radiolabeled metabolites in a soil metabolism study 514(1990)209

#### Radiolabelling

Direct and reverse flow-through heterogeneous scintillation counting of radiolabelled amino acids using post-column solvent segmentation 508(1990)301

Analysis of <sup>55</sup>Fe-labeled hydroxamate siderophores by high-performance liquid chromatography 537(1991)259

# **Radiosensitizing agents**

Determination of N-(3-nitro-4-quinoline)morpholino-4-carboxamidine in plasma by highperformance liquid chromatography 520(1990)379

#### Raman spectroscopy

On-line multichannel Raman spectroscopic detection system for capillary zone electrophoresis 540(1991)355

#### **RAST** test

Purification of *Phleum pratense* pollen extract by immunoaffinity chromatography and highperformance ion-exchange chromatography 548(1991)229

# **Rate constants**

Chromatograms of second-order reactions on chromatographic columns 520(1990)109

Anomalous bandspreading of ethylenediaminetetraacetato-chromium(III) ion in reversed-phase high-performance liquid chromatography. An example of slow equilibrium kinetics 545(1991)123

Homogeneous catalysis studied by reversed-flow gas chromatography 550(1991)181

# Rate equation model

Computer simulations of displacement chromatography of systems with speciesdependent saturation capacities 538(1991)285

#### **Rate model**

Equilibrium elution chromatography. The column-origin boundary condition 550(1991)247

# **Reaction detection**

Determination of analytes at extreme concentration ratios by gradient ion chromatography with solid-phase reaction detection 546(1991)151

Practical applications of solid-phase reagent conductivity detection in ion chromatography 546(1991)189

Separation and detection of non-chromophoric, anionic surfactants 546(1991)395

# **Reaction kinetics**

Study of rapid reaction kinetics by computerized gas chromatography with stroboscopic sampling 517(1990)175

# Receptor affinity chromatography

Application of receptor-affinity chromatography to bioaffinity purification 510(1990)59

#### Recovery

Predicting the performance of gel-filtration chromatography of proteins 512(1990)77

Utility of the displacement effect in the routine optimization of separations by preparative liquid chromatography 523(1990)63

Optimization of experimental conditions in preparative liquid chromatography. Trade-offs between recovery yield and production rate 536(1991)57 Silica versus polymer-based stationary phases for reversed-phase high-performance liquid chromatographic analyses of rat insulin biosynthesis. A comparison of resolution and recovery 548(1991)195

#### **Recycling electrophoresis**

Recycling and screen-segmented column isotachophoresis, two free-fluid approaches for fractionation of proteins 545(1991)315

# **Refractive index**

Determination of pituitary and recombinant human growth hormone molecular weights by modern high-performance liquid chromatography with low angle laser light scattering detection 539(1991)91

# **Refractive index detector**

Detection in ion chromatography (Review) 546(1991)175

#### **Refractive index gradient detector**

Refractive index gradient detection of biopolymers separated by high-temperature liquid chromatography 536(1991)289

#### **Regression models**

Optimization of chromatographic selectivity of twelve sulphonamides in reversed-phase highperformance liquid chromatography using mixture designs and multi-criteria decision making 545(1991)101

#### **Relative retention times**

Gas chromatographic separations of all 136 tetrato octa-polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans on nine different stationary phases 541(1991)131

# Resins

Reversed-phase high-performance liquid chromatography of proteins and peptides on a pellicular support based on hydrophilic resin 502(1990)416

#### Resolution

Isocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

Perturbation analysis of the influence of the isotherm coupling factor on the resolution between two compounds in chromatography 508(1990)27

# 274

Preparative high-performance liquid chromatography on a unique high-speed macroporous resin 512(1990)365

Computer-assisted optimization of two-factor selectivity in gas chromatography using an advanced simplex method 513(1990)13

Efficient determination of phytoecdysteroids from *Ajuga* species and *Polypodium vulgare* by highperformance liquid chromatography 514(1990)199

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. I. Theory and verification 535(1990)55

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225

Gas chromatographic separation of stereoisomeric esters of  $\alpha$ -amino acids and  $\alpha$ -alkyl- $\alpha$ -amino acids on chiral stationary phases 542(1991)161

Impact of experimental parameters on the resolution of positional isomers of aminobenzoic acid in capillary zone electrophoresis 542(1991)173

Resolution and concentration detection limit in capillary gel electrophoresis 545(1991)177

Silica versus polymer-based stationary phases for reversed-phase high-performance liquid chromatographic analyses of rat insulin biosynthesis. A comparison of resolution and recovery 548(1991)195

Resolution enhancement of chromatographic data. Considerations in achieving super-resolution with the constrained iterative relaxation method 550(1991)51

#### **Resolution mapping**

Computer simulation as an aid in method development for gas chromatography. III. Examples of its application 541(1991)35

Optimized isocratic separation of major carboxylic acids in wine 542(1991)277

#### **Response value**

Isotachophoresis with two leading ions and migration behaviour in capillary zone

electrophoresis. I. Isotachophoresis with two leading ions 508(1990)3

#### **Retention behaviour**

Regression against temperature of gas chromatographic retention data 504(1990)45

Retention and selectivity in supercritical fluid chromatography on an octadecylsilyl-silica column 505(1990)147

Retention studies in supercritical fluid chromatography 505(1990)161

Comparison of octadecyl-bonded alumina and silica for reversed-phase high-performance liquid chromatography 505(1990)307

Retention behaviour of mono- and dicarboxylic acids, carbohydrates and alcohols in ion-exclusion chromatography 506(1990)157

Optimization of mobile phase composition for high-performance liquid chromatographic separation by means of the overlapping resolution mapping scheme 506(1990)245

Novel, highly deactivated reversed-phase for basic compounds 506(1990)357

Isolation of toxic polychlorinated biphenyls by electron donor-acceptor high-performance liquid chromatography on a 2-(1-pyrenyl) ethyldimethylsilylated silica column 507(1990)389

Influence of dissociation equilibria on the elution behaviour of the sample anion in anion chromatography 508(1990)51

Contributions to the calculation of retention data in ion-pair chromatography 508(1990)309

Even-odd alternation effect in the regularities of chromatographic retention 509(1990)15

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

Effect of temperature and organic modifier on the isocratic retention characteristics of nitrated polycyclic aromatic hydrocarbons on a reversed-phase octadecylsilane column 513(1990)117

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219 Retention characteristics of CN,  $NH_2$  and diol precoated high-performance thin-layer chromatographic plates in the adsorption and reversed-phase separation of some benzodiazepine derivatives 514(1990)45

Retention reproducibility of basic drugs in highperformance liquid chromatography on a silica column with a methanol-high-pH buffer eluent. Effect of operating conditions on separations using an organic buffer 514(1990)97

Anomalous behavior of selected methylsubstituted polycyclic aromatic hydrocarbons in reversed-phase liquid chromatography 514(1990)111

Application of supercritical fluid chromatography and supercritical fluid extraction to the measurement of hydroperoxides in foods 515(1990)555

Retention of eleven priority phenols using micellar electrokinetic chromatography 516(1990)263

Retention of benzo[a]pyrene on cyclodextrinbonded phases 516(1990)355

Characterization of polymers by thermal field-flow fractionation 517(1990)405

Use of chromatographic retention measurements to obtain solubilities in a liquid or supercritical fluid mobile phase 517(1990)459

Ion-exchange high-performance liquid chromatographic analysis of the products of the enzymatic degradation of oxytocin 519(1990)244

Reversed-phase thin-layer and gas chromatographic retention behaviour of triphenylmethane derivatives 520(1990)217

Poly(crown ether) stationary phase for opentubular capillary column chromatography 521(1990)128

Reversed-phase liquid chromatography of polar benzene derivatives on poly(vinylbenzo-18crown-6)-immobilized silica as a stationary phase 522(1990)107

Reversed-phase chromatography of *Escherichia coli* ribosomal proteins. Correlation of retention time with chain length and hydrophobicity 522(1990)163

Supercritical fluid chromatography of polychlorinated biphenyls on packed columns 522(1990)267

Dependence of the production rate on the relative retention of two components in preparative chromatography 523(1990)1

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. I. Theory and verification 535(1990)55

Retention prediction based on the electrostatic model of reversed-phase ion-pair highperformance liquid chromatography: effect of pairing ion concentration 535(1990)181

High-performance liquid chromatography of amino acids, peptides and proteins. CVII. Analysis of group retention contributions for peptides separated with a range of mobile and stationary phases by reversed-phase highperformance liquid chromatography 536(1991)165

High-performance liquid chromatography of red fruit anthocyanins 537(1991)101

Gas chromatographic identification of complex mixtures of halomethanes and haloethanes by using the correlation between their retention and vapour pressure 537(1991)305

Factors affecting selectivity in micelle exclusion chromatography of inorganic anions 538(1991)341

Prediction of retention times in temperatureprogrammed multichromatography 540(1991)311

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (E)- and (Z)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

High-performance liquid chromatography of amino acids, peptides and proteins. CXI. Retention behaviour of proteins with macroporous tentacle-type anion exchangers 548(1991)117

Gas chromatography of homologous esters. XXXIV. Alkyl borate and boronate esters 550(1991)155

Chromatographic data for pharmacological classification of imidazol(in)e drugs 550(1991)573

Comparative investigation of the retention behaviour of nucleoside derivatives on alumina stationary phases in thin-layer chromatography and high-performance liquid chromatography 550(1991)667

#### **Retention** gap

Determination of chlorpyrifos in water by largevolume direct aqueous injection capillary gas chromatography 503(1990)377

Determination of biogenic and anthropogenic volatile halocarbons in sea water by liquid–liquid extraction and capillary gas chromatography 513(1990)39

Separation of alkanes in *Citrus* essential oils by on-line coupled high-performance liquid chromatography-high-resolution gas chromatography 514(1990)317

Study of large sample volume injection in a capillary gas chromatographic–Fourier transform infrared system using a retention gap column 547(1991)494

# **Retention indices**

Influence of adsorption at the gas-liquid interface on the determination of gas chromatographic retention indices on open-tubular columns coated with cyanosilicones 502(1990)1

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

Gas chromatographic analyses of hydroxyoxime extractants of metals and their intermediates. I. Alkylsalicylaldehyde oximes 503(1990)442

Calculation of programmed temperature gas chromatographic characteristics from isothermal data. III. Predicted retention indices and equivalent temperatures 504(1990)269

Retention and selectivity in supercritical fluid chromatography on an octadecylsilyl-silica column 505(1990)147

Chromatographic study of methylcyclopentadiene dimers and iso-dimers and determination of their boiling points 508(1990)363 Analysis of some synthetic insect pheromones by gas-liquid chromatography 509(1990)69

Degradation and analysis of commercial polyoxyethylene glycol mono(4-alkylphenyl) ethers 511(1990)325

Use of M-series retention index standards in the identification of trichothecenes by electron impact mass spectrometry 513(1990)31

Enhanced possibilities for identification using series-coupled capillary gas chromatographic columns. II. Retention indices as an identification tool in selectivity tuning 517(1990)77

Hydrogen bonding. XV. A new characterisation of the McReynolds 77-stationary phase set 518(1990)329

Enhanced possibilities for identification by the use of series-coupled capillary gas chromatographic columns. I. General exposition and application of the retention index concept 520(1990)3

Lead selenide as a polar adsorbent for gas chromatography 520(1990)15

Relationship between the structure and retention of *n*-alkenes and *n*-alkynes on silicone phases 520(1990)137

Gas chromatographic-mass spectrometric identification of impurities in 1,2diethoxybenzene 520(1990)149

Reversed-phase thin-layer and gas chromatographic retention behaviour of triphenylmethane derivatives 520(1990)217

Analysis of haloalkanes on wide-bore capillary columns of different polarity connected in series 522(1990)329

Comparison of retention index scales based on alkyl aryl ketones, alkan-2-ones and 1nitroalkanes for polar drugs on reversed-phase high-performance liquid chromatography 537(1991)51

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. I. Methyl substitution of pyridopyrimidine derivatives 537(1991)365 Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. II. Alkyl substitution of quinazolone derivatives 537(1991)371

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. III. Variation of ring size 537(1991)377

Retention index monitoring of compounds of chemical defence interest using thermal desorption gas chromatography 538(1991)249

Collection of analytical data for benzodiazepines and benzophenones. Appendix 538(1991)277

High-performance liquid chromatography retention index and detection of nitrated polycyclic aromatic hydrocarbons 539(1991)1

Capillary gas chromatographic and combined gas chromatography-mass spectrometric study of the volatile fraction of a coal tar pitch using OV-1701 stationary phase 539(1991)157

Correlation of structure with linear retention index for bromo- and bromochlorodibenzo-*p*dioxins and bromodibenzofurans 540(1991)293

Application of topographic indices to chromatographic data: calculation of the retention indices of alkanes 540(1991)430

Use of 1-[p-(2,3-dihydroxypropoxy)phenyl]-1alkanones as retention index standards in the identification of trichothecenes by liquid chromatography-thermospray and dynamic fast atom bombardment mass spectrometry 543(1991)39

Crown ethers as stationary phases in gas chromatography. Comparison between dibenzo-18-crown-6, dibenzo-24-crown-8 and dicyclohexano-24-crown-8 with respect to polarity, selectivity and stability 543(1991)179

Gas chromatographic system for the identification of halogenated pesticides by retention indices using *n*-alkanes as standards 547(1991)355

Comparison of the selectivity of di (methacryloyloxymethyl)naphthalenedivinylbenzene copolymers in reversed-phase high-performance liquid chromatography 549(1991)77 Improved method for prediction of gas chromatographic retention indices of  $C_9-C_{12}$  alkylbenzenes 549(1991)325

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

# Retention mechanisms

Study of the retention mechanism of proteins in hydrophobic interaction chromatography 507(1990)1

Investigation of the reversed-phase highperformance liquid chromatographic ligandexchange retention mechanism on a triamine stationary phase 513(1990)145

(S)-2-Hydroxypropyl- $\beta$ -cyclodextrin, a new chiral stationary phase for reversed-phase liquid chromatography 513(1990)181

Retention effects in thermal field-flow fractionation 517(1990)377

Peculiarities of aromatic hydrocarbon retention in normal-phase high-performance liquid chromatography with eluents containing halide derivatives 520(1990)315

Controlling the retention of clopenthixol and other basic drug substances by reversed-phase ion-pair chromatography on bonded-phase materials using two counter-ions of opposite charge 523(1990)217

Molecular interactions in liquid chromatography 537(1991)33

Comparison of polybutadiene-coated alumina and octadecyl-bonded silica for separations of proteins and peptides by reversed-phase highperformance liquid chromatography 541(1991)303

Liquid chromatographic separation of the enantiomers of dinitrophenyl amino acids using a  $\beta$ -cyclodextrin-bonded stationary phase 543(1991)105

Anomalous retention behaviour of some synthetic nucleosides on aluminium oxide layers 543(1991)425

Separation and purification of oligonucleotides using a new bonded-phase packing material 545(1991)79 Charged surface and mass transfer in dynamic ion exchangers 546(1991)17

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

#### **Retention models**

Physicochemical model of retention for capillary supercritical fluid chromatography 505(1990)79

Extension of the electrostatic retention model of reversed-phase ion-pair chromatography to include the simultaneous effects of the organic modifier and the pairing ion 506(1990)85

Separation of simple ions by gel chromatography. I. Simple model of separation for single-salt systems 511(1990)59

Retention prediction based on the electrostatic model of reversed-phase ion-pair highperformance liquid chromatography: effect of pairing ion concentration 535(1990)181

Isomer identification and gas chromatographic retention studies of monomeric cyclic fatty acid methyl esters 537(1991)329

Computer optimization in ion chromatography. II. A systematic evaluation of linear retention models for anions 546(1991)37

Gas chromatographic properties of organoammonium exchanged montmorillonites. I. Tetraalkylammonium cations 549(1991)273

#### **Retention parameters**

Effects of molecular structure on parameters a, b and c in the fundamental retention equation 509(1990)171

#### **Retention prediction**

Effects of molecular structure on parameters a, b and c in the fundamental retention equation 509(1990)171

Isomer identification and gas chromatographic retention studies of monomeric cyclic fatty acid methyl esters 537(1991)329

Computer simulation as an aid in method development for gas chromatography. I. The accurate prediction of separation as a function of experimental conditions 541(1991)1

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

Improved method for prediction of gas chromatographic retention indices of  $C_9-C_{12}$  alkylbenzenes 549(1991)325

Computer-assisted retention prediction system for inorganic cyclic polyphosphates and its application to optimization of gradients in anionexchange chromatography 550(1991)5

Structure-retention correlation in liquid chromatography (Review) 550(1991)313

Retention prediction for polymer additives in reversed-phase liquid chromatography 550(1991)325

Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. VI. Disubstituted aromatic compounds 550(1991)335

#### **Retention surfaces**

Chromatographic characterization of some dideoxyribonucleosides 550(1991)507

#### **Retention times**

Enhanced possibilities for identification by the use of series-coupled capillary gas chromatographic columns. I. General exposition and application of the retention index concept 520(1990)3

Computer spreadsheet calculation of the optimum temperature and column lengths for serially coupled capillary gas chromatographic columns 541(1991)59

Computer simulation of isocratic retentions of alkylketones using gradient data 550(1991)77

# **Retention volume**

Adsorption effect on the retention volume of hydrocarbons and dialkyl ethers in gas-liquid chromatography using a polar stationary phase and silica gel support 503(1990)25

Regression against temperature of gas chromatographic retention data 504(1990)45

Use of a gamma energy distribution to model the gas chromatographic temperature dependence of solute retention on aryl-siloxane chemically modified porous carbon 513(1990)1

Hydrogen bonding. XV. A new characterisation of the McReynolds 77-stationary phase set 518(1990)329 Lead selenide as a polar adsorbent for gas chromatography 520(1990)15

Retention and heats of adsorption of n-alkanes, aromatic hydrocarbons, aliphatic alcohols and ketones on macroporous silicas 520(1990)47

Evaluation of the effect of the cyanopropyl radical on the interaction of the methylene group with silicone stationary phases 547(1991)269

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

Reversed-phase liquid chromatographic study of excess and absolute sorption isotherms of acetonitrile-water mixtures 550(1991)285

#### Reticulocytes

Aldehyde and nucleotide separations by highperformance liquid chromatography. Application to phenylhydrazine-induced damage of erythrocytes and reticulocytes 520(1990)411

#### Reversed-flow gas chromatography

Homogeneous catalysis studied by reversed-flow gas chromatography 550(1991)181

#### **Reversed-phase materials**

Apparent simplicity of reversed stationary phases for high-performance liquid chromatography (Review) 544(1991)77

#### Reviews

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

Chromatographic analysis of chemical warfare agents (Review) 503(1990)293

Environmental applications of ion chromatography (Review) 504(1990)211

Packed columns in supercritical fluid chromatography (Review) 505(1990)3

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Preparative supercritical fluid chromatography (Review) 505(1990)37

Coupling of supercritical fluid extraction with chromatographic techniques (Review) 505(1990)45 Application of avidin-biotin technology to affinity-based separations (Review) 510(1990)3

Hydrazido-derivatized supports in affinity chromatography (Review) 510(1990)13

Progress in affinophoresis (Review) 510(1990)251

Biosensors (Review) 510(1990)347

Applications of high-performance liquid chromatography in bacteriology. I. Determination of metabolites (Review) 515(1990)415

Recent developments in electrophoretic methods (Review) 516(1990)3

Chromatographic and non-chromatographic assay of L-carnitine family components (Review) 527(1990)247

Recent advances in counter-current chromatography (Review) 538(1991)3

Counter-current chromatography (Review) 538(1991)27

Dual counter-current chromatography —its applications in natural products research (Review) 538(1991)37

Applications of analytical high-speed countercurrent chromatography in natural products chemistry (Review) 538(1991)45

Polymer ligands for mild hydrophobic interaction chromatography —principles, achievements and future trends (Review) 539(1991)297

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

Hydrophilic shielding of hydrophobic, cationand anion-exchange phases for separation of small analytes: direct injection of biological fluids onto high-performance liquid chromatographic columns (Review) 544(1991)41

Bare silica, dynamically modified with long-chain quaternary ammonium ions – the technique of choice for more reproducible selectivity in reversed-phase high-performance liquid chromatography (Review) 544(1991)53

Apparent simplicity of reversed stationary phases for high-performance liquid chromatography (Review) 544(1991)77

Silica-based supports for high-performance liquid chromatography of biopolymers using nondenaturing conditions (Review) 544(1991)125

Controlled-pore glass as a stationary phase in chromatography (Review) 544(1991)137

Hydroxyapatite as a liquid chromatographic packing (Review) 544(1991)147

Fluoropolymers and fluorocarbon bonded phases as column packings for liquid chromatography (Review) 544(1991)187

Rigid macroporous copolymers as stationary phases in high-performance liquid chromatography (Review) 544(1991)201

Evaluation of vinylpyridine and vinylpyridinium polymers as column packings for highperformance liquid chromatography (Review) 544(1991)219

Macroporous synthetic hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1991)249

Non-porous hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1989)257

Liposome chromatography: liposomes immobilized in gel beads as a stationary phase for aqueous column chromatography (Review) 544(1991)283

Electrochemical chromatography —packings, hardware and mechanisms of interaction (Review) 544(1991)305

Microscopic characterization of high-performance liquid chromatographic packing materials (Review) 544(1991)319

Characterization of bonded phases by solid-state NMR spectroscopy (Review) 544(1991)345

Chromatographic characterization of silica-based reversed phases (Review) 544(1991)371

Design requirements of silica-based matrices for biopolymer chromatography (Review) 544(1991)413 Analytical isotachophoresis in biological monitoring of exposure to industrial chemicals (Review) 545(1991)369

Twenty years of ion chromatography (Review) 546(1991)3

Application of macrocyclic ligands to ion chromatography (Review) 546(1991)73

Principles and applications of ion-exclusion chromatography (Review) 546(1991)111

Detection in ion chromatography (Review) 546(1991)175

Use of ion chromatography in agricultural research (Review) 546(1991)387

Silica: backbone material of liquid chromatographic column packings (Review) 549(1991)1

Tandem mass spectrometry —an additional dimension of chromatography for the determination of biomarkers in fossil fuels (Review) 550(1991)193

Structure-retention correlation in liquid chromatography (Review) 550(1991)313

Chiral stationary phases derived from tyrosine (Review) 550(1991)357

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

# **Ring size effects**

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. III. Variation of ring size 537(1991)377

# Ruggedness

High-performance liquid chromatographic computer simulation based on a restricted multiparameter approach. II. Applications 535(1990)75

# R<sub>M</sub> values

Lipophilic character of cardiac glycosides: correlation between  $R_M$  values and acute toxicity data in different animal species. 547(1991)523

# S

#### Salt extraction

Analysis, purification and properties of a 50 000dalton membrane-associated phosphoprotein from human platelets 521(1990)335

# Salvia miltiorrhiza

High-performance liquid chromatography of abietane-type compounds 542(1991)317

# Sample collection, continuous

Continuous sample collection in capillary zone electrophoresis by coupling the outlet of a capillary to a moving surface 516(1990)185

# Sample composition

Effect of sample composition on the separation efficiency of isotachophoresis 545(1991)267

#### Sample displacement mode chromatography

Sample displacement mode chromatography: purification of proteins by use of a highperformance anion-exchange column 541(1991)207

# Sample introduction

Feasibility of capillary zone electrophoresis with suppression of electroendosmotic flow in completely closed systems 503(1990)245

Automatic sampler for Curie-point pyrolysis-gas chromatography with on-column introduction of pyrolysates 518(1990)9

Sample introduction in gas chromatography: simple method for the solventless introduction of crude samples of biological origin 518(1990)207

# Sample load

Chemical, physical and chromatographic properties of Superdex 75 prep grade and Superdex 200 prep grade gel filtration media 537(1991)17

Effects of temperature, carrier composition and sample load in asymmetrical flow field-flow fractionation 548(1991)393

# Sample loading

Preparative chromatography of proteins. Design calculation procedure for gradient and stepwise elution 512(1990)89

# Sample preparation

Determination of ascorbic acid, dehydroascorbic acid and ascorbic acid-2-phosphate in infiltrated apple and potato tissue by high-performance liquid chromatography 503(1990)431

Improved sample preparation method for highperformance liquid chromatography of deoxyribonucleoside triphosphates from cell culture extracts 508(1990)75

Some possibilities of combining high-performance liquid chromatography with isotachophoresis for the trace determination of ionogenic compounds present in complex matrices 509(1990)271

Bioanalysis of the peptide des-enkephalin- $\gamma$ endorphin. On-line sample pretreatment using membrane dialysis and solid-phase isolation 511(1990)137

Preparative isotachophoretic analyser equipped with a dropwise fractionating device 513(1990)297

Analysis of the pesticide flufenoxuron in apples and kiwifruit by high-performance liquid chromatography 516(1990)442

Rapid determination of clenbuterol residues in urine by high-performance liquid chromatography with on-line automated sample processing using immunoaffinity chromatography 519(1990)323

Effective sample preparation method for extracting biologically active compounds from different matrices by a microwave technique 520(1990)257

On-line sample clean-up of fermentation broths and substrates prior to the liquid chromatographic separation of carbohydrates 523(1990)173

Two systems for the automated analysis of drugs in biological fluids using high-performance liquid chromatography 527(1990)67

High-performance liquid chromatography of deoxyribonucleoside di- and triphosphates in tomato roots 536(1991)237

Hollow-fibre membrane-based sample preparation device for the clean-up of brine samples prior to ion chromatographic analysis 538(1991)497

Determination of primary and secondary amines in foodstuffs using gas chromatography and chemiluminescence detection with a modified thermal energy analyser 539(1991)141

Determination of egg yolk cholesterol content by on-column capillary gas chromatography 540(1991)323

Sample preparation for ion chromatography by solid-phase extraction 546(1991)61

Ovine luteinizing hormone. V. Significance of flow-through peaks observed during chromatofocusing as revealed by various methods of sample preparation and application 549(1991)141

# Sampler, double-layer tube-type passive

Evaluation tests and applications of a doublelayer tube-type passive sampler 522(1990)285

#### Sample storage

Investigation of the chemical stability of (D-Phe<sup>6</sup>, Gln<sup>8</sup>) GnRH (1–9)-ethylamide (Folligen) by high-performance liquid chromatography 547(1991)121

#### Sample throughput

Use of a short analytical column for the isolation and identification of degradation products of ICI 200 880, a peptidic elastase inhibitor 522(1990)213

# Sampling techniques

Analysis of nitrogen dioxide in ambient air by ion-exclusion chromatography with electrochemical detection 503(1990)466

High-precision sampling of sub-nanogram, lowparts-per-billion solutes from liquids using the dynamic solvent effect 511(1990)271

Generation of standard gaseous mixtures by thermal decomposition of surface compounds. Standard mixtures of thiols 540(1991)449

# Sandwich chamber, horizontal

Modification of a horizontal sandwich chamber for thin-layer chromatography 516(1990)461

# Saturation capacity

Computer simulations of displacement chromatography of systems with speciesdependent saturation capacities 538(1991)285

#### Scanning UV photometric detector

Isotachophoretic analyser equipped with a scanning ultraviolet photometric detection system 538(1991)403

#### Scintillation counting

Direct and reverse flow-through heterogeneous scintillation counting of radiolabelled amino acids using post-column solvent segmentation 508(1990)301

# Screen-segmented column isotachophoresis

Recycling and screen-segmented column isotachophoresis, two free-fluid approaches for fractionation of proteins 545(1991)315

#### Sea water

Determination of biogenic and anthropogenic volatile halocarbons in sea water by liquid–liquid extraction and capillary gas chromatography 513(1990)39

Ion chromatography of nitrite, bromide and nitrate ions in brine samples using a chlorideform anion-exchange resin column 514(1990)355

Optimization of the procedure for the determination of alkali and alkaline-earth elements in sea water by suppressed ion chromatography 546(1991)259

#### Second derivative UV absorption spectroscopy

Monitoring of protein conformation by highperformance size-exclusion liquid chromatography and scanning diode array second-derivative UV absorption spectroscopy 540(1991)187

#### Second order reactions

Chromatograms of second-order reactions on chromatographic columns 520(1990)109

#### Sediment analysis

Environmental applications of ion chromatography (Review) 504(1990)211

# Sedimentation effects

Partitioning of cells in dextran-poly(ethylene glycol) aqueous phase systems. A study of settling time, vessel geometry and sedimentation effects on the efficiency of separation 542(1991)397

# Sedimentation field-flow fractionation

Effects of ionic strength of eluent on size analysis of sub-micrometre particles by sedimentation field-flow fractionation 515(1990)27 Optimization study of octane-in-water emulsions by sedimentation field-flow fractionation 517(1990)333

Particle characterization in centrifugal fields. Comparison between ultracentrifugation and sedimentation field-flow fractionation 517(1990)361

Sedimentation field-flow fractionation for pigment quality assessment 517(1990)395

Use of field-flow fractionation to study pollutantcolloid interactions 517(1990)435

# Sedimentation rate

Packing of preparative high-performance liquid chromatography columns by sedimentation 523(1990)23

#### Sediment pore waters

Trace determination of lower volatile fatty acids in sediments by gas chromatography with chemically bonded FFAP columns 511(1990)317

# Sediments

Gas chromatographic analysis and gas chromatographic–mass spectrometric identification of components in the cyclohexaneextractable fraction from contaminated sediment samples 508(1990)159

Analysis of volatile organic compounds in estuarine sediments using dynamic headspace and gas chromatography-mass spectrometry 542(1991)413

Determination of resin and fatty acids in sediments near pulp mill locations 547(1991)315

#### Seeds

Analysis of lipids in aging seed using capillary supercritical fluid chromatography 547(1991)393

#### Selective sorbents

Polymer-inorganic selective adsorbents for gas chromatography produced by graft polymerization 520(1990)21

# Selectivity

Studies on the selectivity of porous polymers based on polyaromatic esters 503(1990)41

Utilizing column selectivity in developing a high-performance liquid chromatographic method for ginsenoside assay 504(1990)139

Implications of solvent selectivity triangles in assessing stationary phases for gas chromatography 504(1990)186

lsocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

Three-dimensional network plots using colours for a fourth variable with binary mixtures of pentane and 1,4-dioxane under sub- and supercritical conditions 505(1990)109

Retention and selectivity in supercritical fluid chromatography on an octadecylsilyl-silica column 505(1990)147

Silanol effects in reversed-phase liquid chromatography 506(1990)97

Optimization of chromatographic methods by a combination of optimization software and expert systems 506(1990)169

Regulation of peak compression effects for substituted benzamides in reversed-phase liquid chromatography 506(1990)253

Systematic optimization of protein separations on high-performance ion-exchange chromatographic media 512(1990)13

Reversed-phase chromatographic separation of selected hydroxyl aromatics with  $\beta$ -cyclodextrin as a mobile phase additive 514(1990)19

Efficient determination of phytoecdysteroids from *Ajuga* species and *Polypodium vulgare* by high-performance liquid chromatography 514(1990)199

Capillary supercritical fluid chromatography of aliphatic amines. Studies on the selectivity and symmetry with three different columns using carbon dioxide or nitrous oxide as mobile phase 516(1990)415

Comparison of methods for the determination of the polarity and selectivity of stationary phases in gas chromatography from a thermodynamic point of view 517(1990)51

Comparison of the liquid chromatographic behaviour of selected steroid isomers using different reversed-phase materials and mobile phase compositions 537(1991)73

Factors affecting selectivity in micelle exclusion chromatography of inorganic anions 538(1991)341

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225

Solute retention in micellar liquid chromatography 542(1991)29

Bare silica, dynamically modified with long-chain quaternary ammonium ions – the technique of choice for more reproducible selectivity in reversed-phase high-performance liquid chromatography (Review) 544(1991)53

Factor analysis and experiment design in highperformance liquid chromatography. X. Chemometric characterization of packings, solvents and solutes with hierarchical ascending classification and correspondence factor analysis 544(1991)393

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

Comparison of the selectivity of di(methacryloyloxymethyl)naphthalene– divinylbenzene copolymers in reversed-phase high-performance liquid chromatography 549(1991)77

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

#### Selectivity optimization

Computer spreadsheet calculation of the optimum temperature and column lengths for serially coupled capillary gas chromatographic columns 541(1991)59

Prediction of initial high-performance liquid chromatographic conditions for selectivity optimization in pharmaceutical analysis by an expert system approach 550(1991)87

#### Selectivity parameters

Chemically modified polymeric resins for highperformance liquid chromatography 522(1990)95

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

#### Selectivity surfaces

Chromatographic characterization of some dideoxyribonucleosides 550(1991)507

# Selectivity triangle

Optimization of mobile phase composition for high-performance liquid chromatographic separation by means of the overlapping resolution mapping scheme 506(1990)245

#### Selectivity tuning

Enhanced possibilities for identification using series-coupled capillary gas chromatographic columns. II. Retention indices as an identification tool in selectivity tuning 517(1990)77

# Semipermeable-surface columns

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

Semipermeable-surface reversed-phase media for high-performance liquid chromatography 544(1991)25

#### Sensitivity enhancement

Possibilities of enhancing the sensitivity of the determination of UV-absorbing compounds in high-performance liquid chromatography 550(1991)495

#### Sensors

Biosensors (Review) 510(1990)347

Electrochemical biosensors on thin-film metals and conducting polymers 510(1990)355

# Separation efficiency

Capillary zone electrophoretic separation of chlorophenols in industrial waste water with on-column electrochemical detection 514(1990)389

Effect of sample composition on the separation efficiency of isotachophoresis 545(1991)267

# Separation number

Determination of absolute mobilities, pK values and separation numbers by capillary zone electrophoresis. Effective mobility as a parameter for screening 537(1991)407

# Sequencing methods

High-performance liquid chromatographic separation and partial characterization of the  $\alpha$ and  $\beta$ -chains of Alaskan sockeye salmon hemogloglobin 512(1990)291

Peptide mapping of HIV polypeptides expressed in *Escherichia coli*. Quality control of different batches and identification of tryptic fragments containing residues of aromatic amino acids or cysteine 512(1990)325

Strategies for internal amino acid sequence analysis of proteins separated by polyacrylamide gel electrophoresis 519(1990)199

# Series-coupled columns

Enhanced possibilities for identification using series-coupled capillary gas chromatographic columns. II. Retention indices as an identification tool in selectivity tuning 517(1990)77

# Settling time

Partitioning of cells in dextran-poly(ethylene glycol) aqueous phase systems. A study of settling time, vessel geometry and sedimentation effects on the efficiency of separation 542(1991)397

# Sheathed flow

Sheathed-flow hydrogen atmosphere flame ionization detector for gas chromatography 518(1990)297

# Sheath flow cuvette

Capillary gel electrophoresis for DNA sequencing. Laser-induced fluorescence detection with the sheath flow cuvette 516(1990)61

# Shellfish

Confirmation of domoic acid in shellfish using butyl isothiocyanate and reversed-phase liquid chromatography 550(1991)595

# Shielded hydrophobic phases

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

Hydrophilic shielding of hydrophobic, cationand anion-exchange phases for separation of small analytes: direct injection of biological fluids onto high-performance liquid chromatographic columns (Review) 544(1991)41

# Shielding effects, stationary phases

Characterization and stability of silanized and polymer-coated octadecyl reversed phases 540(1991)53

# Shiitake mushroom

Determination of vitamin  $D_2$  in shiitake mushroom (*Lentinus edodes*) by high-performance liquid chromatography 545(1991)201

# Short chain branching

Gel permeation chromatography–Fourier transform infrared study of some synthetic polymers. II. Instrumentation for the characterization of polyethylene 517(1990)209

# Side-chain protecting groups

High-performance liquid chromatographic investigations on the cleavage kinetics of sidechain-protected arginine derivatives with a sophisticated post-column reaction detector 512(1990)249

# Signal sharing

Calcul de la composition, avec une constante de proportionnalité, de mélanges à partir du chromatogramme obtenu par détection partagée entre deux détecteurs 519(1990)159

# Silanization

Aligned fiber columns for size-exclusion chromatography 506(1990)303

# Silanol groups

Confirmation and application of transmission near infrared absorption technique for absolute quantitation of functional groups on silica gel 503(1990)69

Silanol effects in reversed-phase liquid chromatography 506(1990)97

Controlling the retention of clopenthixol and other basic drug substances by reversed-phase ion-pair chromatography on bonded-phase materials using two counter-ions of opposite charge 523(1990)217

Apparent simplicity of reversed stationary phases for high-performance liquid chromatography (Review) 544(1991)77

# Silica-based matrices

Silica-based supports for high-performance liquid chromatography of biopolymers using nondenaturing conditions (Review) 544(1991)125

Chromatographic characterization of silica-based reversed phases (Review) 544(1991)371

Design requirements of silica-based matrices for biopolymer chromatography 544(1991)413

# Silica, colloidal

Effects of ionic strength of eluent on size analysis of sub-micrometre particles by sedimentation field-flow fractionation 515(1990)27

#### Silica gel

Comparison of various stationary phases for normal-phase high-performance liquid chromatography of ethoxylated alkylphenols 504(1990)297

Investigations by <sup>29</sup>Si cross-polarization magic angle spinning NMR spectroscopy of reaction pathways of silica gel polyfunctional modification 506(1990)343

Equilibrium of octadecylsilica gel with sodium dodecyl sulphate 515(1990)67

Studies on texture and properties of porous glass and silica gel used as supports for chemically bonded amino phases for high-performance liquid chromatography 520(1990)237

Characterization of bonded phases by solid-state NMR spectroscopy (Review) 544(1991)345

Silica: backbone material of liquid chromatographic column packings (Review) 549(1991)1

Hydrogen-deuterium exchange in fused-silica capillary columns 549(1991)416

# Silica gel, cyanopropyl-derivatized

Liquid chromatography of organotin compounds on cyanopropyl silica gel 507(1990)427

# Silica gel, phosphinated

Chemically bonded chelates as selective complexing sorbents for gas chromatography. I. Alkenes 547(1991)259

#### Silica gel, plasma-modified

Short columns for gas chromatography packed with plasma-modified silica gels 520(1990)33

#### Silica gel, polystyrene-coated

Effect of polystyrene coating on pore, structural and chromatographic properties of silica packings 506(1990)391

# Silica gel, spherical non-porous

Hydrodynamic chromatography of macromolecules on small spherical non-porous silica particles 506(1990)547

# Silica gel, surface pH

Determination of the lipophilicity of some peptides. Effect of surface pH of silica 520(1990)249

# Silica gel, wide-pore

Performance of wide-pore silica- and polymerbased packing materials in polypeptide separation: effect of pore size and alkyl chain length 535(1990)13

Microscopic characterization of high-performance liquid chromatographic packing materials (Review) 544(1991)319

#### Silicone oil

Chromatographie en couche mince sur gel de silice avec double imprégnation ascendante à sens inversés à l'huile de silicone 509(1990)400

Blended liquid crystalline stationary phases in capillary gas chromatography 520(1990)85

#### Silicon wafers

Progress in optimization of transition metal cation chromatography and its application to analysis of silicon wafer contamination 546(1991)243

#### Simplex method

Computer-assisted optimization of two-factor selectivity in gas chromatography using an advanced simplex method 513(1990)13

# Size exclusion

Properties of supports for the partition chromatography of proteins 542(1991)55

# Size-exclusion chromatography

Size-exclusion chromatography dimension for rod-like macromolecules 515(1990)37

#### Size fractionation

Determination of size limits of membrane separation in vesicle chromatography by fractionation of polydisperse dextran 542(1991)239

# Sludge analysis

Environmental applications of ion chromatography (Review) 504(1990)211

# Smokers' breath

Identification of exposure markers in smokers' breath 511(1990)291

#### Snake venoms

Isolation of a fibrinogen-converting enzyme ficozyme from the venom of *Bothrops asper* by one-step affinity chromatography on Blue Sepharose 523(1990)312

# Sniffing

Thermal desorption- and sniffing-mass spectrometric monitoring of enriched trace compounds by means of a "live total transfer system" 547(1991)516

#### Sodium hydroxide treatment

Silica-dextran sorbent composites and their cleaning in place 523(1990)35

#### Soil analysis

Environmental applications of ion chromatography (Review) 504(1990)211

Characterization of humified compounds by extraction and fractionation on solid polyvinylpyrrolidone 509(1990)141

Analysis of 2,4,6-trinitrotoluene and its transformation products in soils and plant tissues by high-performance liquid chromatography 518(1990)361

High-performance liquid chromatographic determination of atrazine, deisopropylatrazine and deethylatrazine in soils from corn fields 549(1991)229

#### Solid-phase catalysis

Heptafluorobutyrylation of trichothecenes using a solid-phase catalyst 511(1990)384

#### Solid-phase extraction

Development of an automated high-performance liquid chromatographic method for the on-line pre-concentration and determination of trace concentrations of pesticides in drinking water 503(1990)167

Argentation chromatography of fatty acid methyl esters using silver-loaded solid-phase extraction columns 504(1990)202

High-performance liquid chromatographic determination of an arginine-containing octapeptide antagonist of vasopressin in human plasma by means of a selective post-column reaction with fluorescence detection 507(1990)79

High-performance liquid chromatographic determination of the mucoregulatory drug CO/1408 in rat plasma and urine 507(1990)227

Use of polymeric sorbents for the off-line preconcentration of priority pollutant phenols from water for high-performance liquid chromatographic analysis 509(1990)135

Behaviour of 23 persistent organochlorine compounds during sulphuric acid clean-up on a solid-matrix column 513(1990)333

Gas chromatographic and mass spectrometric determination of nitroaromatics in water 518(1990)21

High-performance liquid chromatographic analysis of Romet-30<sup>®</sup> in salmon following administration of medicated feed 518(1990)179

Identification using solid phase extraction and gas chromatography-mass spectrometry of timolol in equine urine after intravenous administration 518(1990)215

Derivatization-liquid chromatographic assay of chloroacetaldehyde in biological samples 518(1990)385

Solid-phase extraction and fluorimetric detection of benzophenanthridine alkaloids from Sanguinaria canadensis cell cultures 519(1990)99

Solid-phase extraction of sulfamethazine in milk with quantitation at low ppb levels using thinlayer chromatography 519(1990)179

Solid-phase extraction for the screening of acidic, neutral and basic drugs in plasma using a singlecolumn procedure on Bond Elut Certify 529(1990)161

Determination of nine acidic herbicides in water and soil by gas chromatography using an electron-capture detector 537(1991)385

Properties and biomedical applications of packings with high-density coverage of  $C_{18}$  chemically bonded phase for high-performance liquid chromatography and solid-phase extraction 538(1991)293

#### 288

Characterization of cyano bonded silica phases from solid-phase extraction columns. Correlation of surface chemistry with chromatographic behavior 542(1991)205

Sample preparation for ion chromatography by solid-phase extraction 546(1991)61

Carrier effect in the analysis of phenylurea herbicides using high-performance liquid chromatography-particle beam-mass spectrometry 549(1991)237

Chiral separation of ibutilide enantiomers by derivatization with 1-naphthyl isocyanate and high-performance liquid chromatography on a Pirkle column 550(1991)621

#### Solid-phase isolation

Bioanalysis of the peptide des-enkephalin-γendorphin. On-line sample pretreatment using membrane dialysis and solid-phase isolation 511(1990)137

#### Solid-phase reactor

Solid-phase reagent containing the 3,5dinitrophenyl tag for the improved derivatization of chiral and achiral amines, amino alcohols and amino acids in high-performance liquid chromatography with ultraviolet detection 537(1991)123

Determination of analytes at extreme concentration ratios by gradient ion chromatography with solid-phase reaction detection 546(1991)151

#### Solid-phase reagents

Practical applications of solid-phase reagent conductivity detection in ion chromatography 546(1991)189

Separation and detection of non-chromophoric, anionic surfactants 546(1991)395

# Solid-state nuclear magnetic resonance spectroscopy

Characterization of bonded phases by solid-state NMR spectroscopy (Review) 544(1991)345

#### Solid-surface room-temperature phosphorescence

Solid-surface room-temperature phosphorescence detection for high-performance liquid chromatography 508(1990)37

# Solubility

Quantitative correlations between solute molecular structure and solubility in supercritical fluids 517(1990)449 Use of chromatographic retention measurements to obtain solubilities in a liquid or supercritical fluid mobile phase 517(1990)459

Solvent selection guide for counter-current chromatography 538(1991)109

Solubility of gasoline components in different lubricants for combustion engines determined by gas-liquid partition chromatography 538(1991)241

#### Solubility parameters

Solubility parameter treatment for the characterization of the stationary phase in the reversed-phase chromatography of benzene derivatives 515(1990)3

Effect of composition of polyacrylamide gels on exclusion limits 535(1990)173

#### Solubility properties

Structure-retention correlation in liquid chromatography (Review) 550(1991)313

#### Solute selectivity

Effect of temperature and organic modifier on the isocratic retention characteristics of nitrated polycyclic aromatic hydrocarbons on a reversed-phase octadecylsilane column 513(1990)117

#### Solute-solvent interactions

Comments on solute-solvent interactions in quantitative high-performance liquid chromatography 502(1990)236

#### Solute-sorbent interactions

Determination of contributions of different types of solute-sorbent interactions in gas-adsorption chromatography by linear regression of adsorption energies 537(1991)295

#### Solute-stationary phase interactions

Confirmation and application of transmission near infrared absorption technique for absolute quantitation of functional groups on silica gel 503(1990)69

Chemical properties of and solute-support interactions with the gel filtration medium Superdex 75 prep grade 514(1990)137

Silicas chemically bonded with multidentate phenyl groups as stationary phases in reversedphase liquid chromatography used for nonplanarity recognition of polycyclic aromatic hydrocarbons 517(1990)193 Lead selenide as a polar adsorbent for gas chromatography 520(1990)15

Evaluation of the effect of the cyanopropyl radical on the interaction of the methylene group with silicone stationary phases 547(1991)269

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

# Solvation energy

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

# Solvatochromic behaviour

Linear solvation energy relationships in the study of the solvatochromic properties and liquid chromatographic retention behaviour of benzodiazepines 522(1990)37

# Solvatochromic parameters

Solvatochromic hydrogen bond donor acidity of aqueous binary solvent mixtures for reversed-phase liquid chromatography 513(1990)107

Empirical scheme for the classification of gas chromatographic stationary phases based on solvatochromic linear solvation energy relationships 517(1990)103

Quantitative correlation of the parameters  $\log k'_{w}$ and -S in the retention equation in reversedphase high-performance liquid chromatographic and solvatochromic parameters 522(1990)49

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

# Solvent effects

High-performance liquid chromatographic method for the study of solvent effects on the peptidase and esterase activity of thermitase 520(1990)333

#### Solvent elimination

Coupling of microcolumn high-performance liquid chromatography with Fourier transform infrared spectrometry 506(1990)443

#### Solvent extraction

New sensitive method for the examination of the volatile flavor fraction of cabernet sauvignon wines 522(1990)315

High-performance liquid chromatographic purification of antiviral components in Neuramide 548(1991)289

# Solvent flushing

Post-extraction solvent flush of the pressure restrictor in supercritical fluid extraction 543(1991)187

#### Solvent-generated ion exchange

Equilibrium of octadecylsilica gel with sodium dodecyl sulphate 515(1990)67

# Solvent segmentation, post column

Direct and reverse flow-through heterogeneous scintillation counting of radiolabelled amino acids using post-column solvent segmentation 508(1990)301

#### Solvent selection

Solvent selection guide for counter-current chromatography 538(1991)109

# Solvent selectivity

Multivariate characterization of solvent strength and solvent selectivity in reversed-phase highperformance liquid chromatography 550(1991)397

# Solvent selectivity effects

Chromatographic behaviour of diastereoisomers. X. Thin-layer chromatographic retentions on silica of some (E)- and (Z)-oxazolones and related cinnamates as a function of mobile phase effects or Hammett constants 545(1991)161

#### Solvent selectivity triangle

Implications of solvent selectivity triangles in assessing stationary phases for gas chromatography 504(1990)186

#### Solvent strength

Use of a short analytical column for the isolation and identification of degradation products of ICI 200 880, a peptidic elastase inhibitor 522(1990)213

Optimization of chromatographic selectivity of twelve sulphonamides in reversed-phase highperformance liquid chromatography using mixture designs and multi-criteria decision making 545(1991)101

Role of  $\pi$ - $\pi$  interactions in reversed-phase liquid chromatography 550(1991)267

Multivariate characterization of solvent strength and solvent selectivity in reversed-phase highperformance liquid chromatography 550(1991)397

# Solvent systems

Use of thin-layer chromatography for the testing of avermeetins produced by *Streptomyces* avermitilis strains 513(1990)401

Practical approach to high-speed counter-current chromatography 550(1991)677

#### Solvophobic interactions

High-performance liquid chromatography on silica dynamically modified with hydrazinium derivatives 521(1990)19

#### Solvophobic theory

High-performance liquid chromatography of amino acids, peptides and proteins. CX. Principal component analysis of four sets of group retention coefficients derived from reversed-phase high-performance liquid chromatography of peptides 548(1991)105

Role of  $\pi$ - $\pi$  interactions in reversed-phase liquid chromatography 550(1991)267

# Sorbate-sorbent interactions

Relationship between the structure and retention of *n*-alkenes and *n*-alkynes on silicone phases 520(1990)137

#### Sorbents

see also Adsorbents

Capillary gas chromatographic determination of sulphadimidine in pork tissues 503(1990)260

Modified sorbents in binary stationary phase systems in gas chromatography 508(1990)193

Sorbents with cross-linked polysiloxane phases for gas-liquid chromatography with packed columns 509(1990)85

Comparison of sorbents for solid-phase extraction of polar compounds from water 509(1990)123

Use of polymeric sorbents for the off-line preconcentration of priority pollutant phenols from water for high-performance liquid chromatographic analysis 509(1990)135 Determination of cannabinoid acids by highperformance liquid chromatography of their neutral derivatives formed by thermal decarboxylation. I. Study of the decarboxylation process in open reactors 520(1990)339

Silica-dextran sorbent composites and their cleaning in place 523(1990)35

#### Sorption

Sorption of primary *n*-alkanols on Tenax 518(1990)234

#### Sorption isotherms

see also Adsorption isotherms

Sorption isotherms of mobile phase components in capillary supercritical fluid chromatography 505(1990)139

Sorption isotherms of organic vapours on Tenax 514(1990)279

Reversed-phase liquid chromatographic study of excess and absolute sorption isotherms of acetonitrile-water mixtures 550(1991)285

# Sorption, partial molar free energy

Comparison of methods for the determination of the polarity and selectivity of stationary phases in gas chromatography from a thermodynamic point of view 517(1990)51

# Soxhlet extraction

Determination of resin and fatty acids in sediments near pulp mill locations 547(1991)315

Multi-step procedure for the separation of vinyl chloride oligomers 550(1991)539

#### Speciation

The speciation of iron, manganese, phosphorus and platinum in aqueous solutions by using ion chromatography coupled with an element selective detector 547(1991)211

# Spectral libraries, UV

Standardization of a multi-wavelength UV detector for liquid chromatography-based toxicological analysis 550(1991)449

#### Speed of analysis

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Very high speed separation of proteins with a  $20-\mu m$  reversed-phase sorbent 547(1991)452

# Split-peak effect

Application of the split-peak effect to study the adsorption kinetics of human serum albumin on a reversed-phase support 548(1991)81

#### Stability constants

Chromatographic behaviour of cyclodextrin complexes of NADH and NADP 508(1990)127

Study of chelating tendency of sulphur-containing amino acids by electrophoresis 547(1991)554

#### Stability, stationary phases

Characterization and stability of silanized and polymer-coated octadecyl reversed phases 540(1991)53

# Static coating

Static coating of 5 to 50  $\mu$ m I.D. capillary columns for open tubular column chromatography 517(1990)503

#### Stationary phase retention

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). I. Design of the apparatus and studies on retention of stationary phase 538(1991)59

Cross-axis synchronous flow-through coil planet centrifuge (Type XLL). II. Speculation on the hydrodynamic mechanism in stationary phase retention 538(1991)67

# Stationary phases, GC

Gas chromatographic retention indices of monoterpenes and sesquiterpenes on methyl silicone and Carbowax 20M phases (Review) 503(1990)1

Adsorption effect on the retention volume of hydrocarbons and dialkyl ethers in gas-liquid chromatography using a polar stationary phase and silica gel support 503(1990)25

Regression against temperature of gas chromatographic retention data 504(1990)45

Implications of solvent selectivity triangles in assessing stationary phases for gas chromatography 504(1990)186

Preparation and gas chromatographic characterization of some immobilized crown ether-polysiloxane stationary phases 504(1990)279

Modified sorbents in binary stationary phase systems in gas chromatography 508(1990)193

Long-term use of liquid-crystalline stationary phase for separation and determination of polynuclear aromatic hydrocarbons in carbochemical products. Comparison of results obtained by different methods 509(1990)53

Sorbents with cross-linked polysiloxane phases for gas-liquid chromatography with packed columns 509(1990)85

Trace determination of lower volatile fatty acids in sediments by gas chromatography with chemically bonded FFAP columns 511(1990)317

Poly(styrene-dimethylsiloxane) block copolymer as a stationary phase for capillary gas chromatography 511(1990)390

Determination of biogenic and anthropogenic volatile halocarbons in sea water by liquid–liquid extraction and capillary gas chromatography 513(1990)39

Possible value of a liquid crystal stationary phase for the gas chromatographic study of aromatic constituents of essential oils 513(1990)311

Gas-liquid chromatographic method for the determination of marine wax esters according to the degree of unsaturation 513(1990)327

Gas chromatography of the atmosphere of Titan. II. Analysis of low-molecular-weight hydrocarbons and nitriles with a potassium chloride-deactivated alumina PLOT capillary column 514(1990)65

Behaviours of siloxane polymers containing phenyl or silarylene as stationary phases for high-temperature gas chromatography 514(1990)259

Comparison of methods for the determination of the polarity and selectivity of stationary phases in gas chromatography from a thermodynamic point of view 517(1990)51

Empirical scheme for the classification of gas chromatographic stationary phases based on solvatochromic linear solvation energy relationships 517(1990)103

Capillary gas chromatography with graphitized carbon black 517(1990)123

Static coating of 5 to 50  $\mu$ m I.D. capillary columns for open tubular column chromatography 517(1990)503

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53

Hydrogen bonding. XV. A new characterisation of the McReynolds 77-stationary phase set 518(1990)329

Comparative study of some columns for direct determination of carbofuran by gas-liquid chromatography with nitrogen-specific detection 519(1990)359

Quantitative determination of free volatile fatty acids from dairy products on a Nukol capillary column 519(1990)369

Lead selenide as a polar adsorbent for gas chromatography 520(1990)15

Polymer-inorganic selective adsorbents for gas chromatography produced by graft polymerization 520(1990)21

Short columns for gas chromatography packed with plasma-modified silica gels 520(1990)33

Retention and heats of adsorption of *n*-alkanes, aromatic hydrocarbons, aliphatic alcohols and ketones on macroporous silicas 520(1990)47

Determination of heats of adsorption on graphite and on a microporous carbon black by gas-solid chromatography 520(1990)69

High-resolution gas chromatography with liquid crystal glass capillaries. XII. Separation of isomeric  $C_{17}$ - $C_{18}$  *n*-alkenes 520(1990)75

Blended liquid crystalline stationary phases in capillary gas chromatography 520(1990)85

Gas chromatographic determination of traces of light hydrocarbons and sulphur compounds in gases at low pressure by the simultaneous use of flame ionization and flame photometric detectors 521(1990)99

Poly(crown ether) stationary phase for opentubular capillary column chromatography 521(1990)128

Analysis of haloalkanes on wide-bore capillary columns of different polarity connected in series 522(1990)329

Liquid crystals for the gas chromatographic determination of the stereochemistry of insect sex pheromones 537(1991)482

Immobilization of chiral phases for enantiomer separations in supercritical fluid and gas chromatography 540(1991)217

New polar polysiloxane stationary phases containing cyano, nitrophenyl and 8-quinolinyl units attached to diethylene oxide side groups 540(1991)279

Determination of peroxyacetyl nitrate, peroxypropionyl nitrate and alkyl nitrates of atmospheric importance using capillary columns 541(1991)99

Gas chromatographic separations of all 136 tetrato octa-polychlorinated dibenzo-*p*-dioxins and polychlorinated dibenzofurans on nine different stationary phases 541(1991)131

Determination of plant triacylglycerols using capillary gas chromatography, high-performance liquid chromatography and mass spectrometry 542(1991)145

Crown ethers as stationary phases in gas chromatography. Comparison between dibenzo-18-crown-6, dibenzo-24-crown-8 and dicyclohexano-24-crown-8 with respect to polarity, selectivity and stability 543(1991)179

Chemically bonded chelates as selective complexing sorbents for gas chromatography. I. Alkenes 547(1991)259

Stereoselectivity of  $\alpha^2$ ,  $\beta^2$  and  $\gamma^2$ -cyclodextrin complexation relative to *cis-trans* acyclic alkenes and cyclooctenes under conditions of gas-liquid chromatography 547(1991)283

Use of a liquid crystal stationary phase at temperatures below its melting point for the gas chromatographic study of some volatile oil constituents 547(1991)335

Gas chromatographic properties of organoammonium exchanged montmorillonites. I. Tetraalkylammonium cations 549(1991)273

Gas chromatographic retention properties of organoammonium exchanged montmorillonites. II.  $CH_3N^+H_3$ ,  $(CH_3)_4N^+$ ,  $(CH_3)_3N^+CH_2C_6H_5$  and 1,4-diazabicyclo[2.2.2]octane  $\cdot 2H^+$  549(1991)283 Hydrogen-deuterium exchange in fused-silica capillary columns 549(1991)416

Application of substituted liquid crystals as stationary phases in gas-liquid chromatography for the separation of mono- and dimethyl naphthalenes 549(1991)423

Measurement of solute dipolarity/polarizability and hydrogen bond acidity by inverse gas chromatography 550(1991)101

Effect of stationary phase on predictions of the statistical model of overlap from gas chromatograms 550(1991)135

Application of multivariate analysis to the selection of test solutes for characterizing stationary phase selectivity in gas chromatography 550(1990)213

#### Stationary phases, LC

Use of an activated nylon membrane (Immunodyne) as an affinity adsorbent for the purification of phosphofructokinase and phosphoglycerate kinase from yeast 502(1990)171

Reversed-phase high-performance liquid chromatography of proteins and peptides on a pellicular support based on hydrophilic resin 502(1990)416

Large-scale purification of factor VIII by affinity chromatography: optimization of process parameters 503(1990)103

Direct liquid chromatographic separation of enantiomeric and diastereomeric terpenic alcohols as  $\beta$ -cyclodextrin inclusion complexes 503(1990)266

Aluminum ion mediated stabilization of silicabased anion-exchange packings to caustic regenerants 503(1990)385

Surface affinity chromatographic separation of blood cells. VII. Relationship between capacity factors of human peripheral blood cells and the rate of penetration of liquids into xerogel column packings 504(1990)69

Study of the dynamic binding capacity of two anion exchangers using bovine serum albumin as a model protein 504(1990)89 High-performance liquid chromatography separation media based on functional polymers containing phenolic hydroxyls 504(1990)97

Comparison of various stationary phases for normal-phase high-performance liquid chromatography of ethoxylated alkylphenols 504(1990)297

High-performance liquid chromatographic separation of biomolecules using calcium phosphate supported on macroporous silica microparticles 504(1990)319

Comparison of octadecyl-bonded alumina and silica for reversed-phase high-performance liquid chromatography 505(1990)307

Normal-phase high-performance liquid chromatographic analysis of polyhydroxysteroids using non-polar bonded silica columns 505(1990)408

Correlation between chemical structure of noncongeneric solutes and their retention on polybutadiene-coated alumina 506(1990)3

Silanol effects in reversed-phase liquid chromatography 506(1990)97

Chromatographic characteristics of nucleic acid components on vinyl alcohol copolymer gel columns 506(1990)145

Aligned fiber columns for size-exclusion chromatography 506(1990)303

High-performance liquid chromatography of transfer ribonucleic acids on spherical hydroxyapatite beads 506(1990)319

Peptide behaviour and analysis on a chemically stable  $C_{18}$ -bonded vinyl alcohol copolymer column with alkaline and acidic eluents 506(1990)327

Investigations by <sup>29</sup>Si cross-polarization magic angle spinning NMR spectroscopy of reaction pathways of silica gel polyfunctional modification 506(1990)343

Novel, highly deactivated reversed-phase for basic compounds 506(1990)357

Development and use of carbon adsorbents in the liquid chromatographic separation of isomers 506(1990)371

Effect of polystyrene coating on pore, structural and chromatographic properties of silica packings 506(1990)391

Displacement chromatography on cyclodextrinsilicas. III. Enantiomer separations 506(1990)481

Hydrodynamic chromatography of macromolecules on small spherical non-porous silica particles 506(1990)547

Direct injection high-performance liquid chromatographic assay of morphine with electrochemical detection, a polymeric column and an alkaline eluent 507(1990)253

Isolation of toxic polychlorinated biphenyls by electron donor-acceptor high-performance liquid chromatography on a 2-(1-pyrenyl) ethyldimethylsilylated silica column 507(1990)389

Liquid chromatography of organotin compounds on cyanopropyl silica gel 507(1990)427

Rapid high-performance liquid chromatography of nucleic acids with polystyrene-based micropellicular anion exchangers 508(1990)61

Design and applications of biomimetic anthraquinone dyes. III. Anthraquinoneimmobilised C.I. Reactive Blue 2 analogues and their interaction with horse liver alcohol dehydrogenase and other adenine nucleotidebinding proteins 508(1990)109

Optical resolution of abscisic acid metabolites using an ovomucoid-conjugated high-performance liquid chromatographic column 508(1990)217

High-performance affinity chromatography of DNA 508(1990)279

Modification of silica with glucose for the separation of proteins by high-performance liquid chromatography 508(1990)289

High-performance gel permeation chromatography of water-soluble  $\beta$ -1,3-glucans 509(1990)213

Phase transition chromatography of polyesters on macroporous glycidyl methacrylate–ethylene dimethacrylate copolymers 509(1990)233

Ion-exchange high-performance liquid chromatographic separation of peptides with UV photometric and electrochemical detection 509(1990)245

Hydrazido-derivatized supports in affinity chromatography (Review) 510(1990)13

Double-coated silica supports for highperformance affinity chromatography of proteins 510(1990)71

High-performance affinity chromatography of concanavalin A 510(1990)95

Tresyl-activated support for high-performance affinity chromatography 510(1990)101

Novel media for chromatography and immobilization using a radiation grafting technique 510(1990)115

Specific adsorption of serine proteases on coated silica beads substituted with amidine derivatives 510(1990)123

New ion exchangers for the chromatography of biopolymers 510(1990)133

High-performance affinity chromatography of basic fibroblast growth factor on polystyrene sulphonate resins modified with serine 510(1990)141

Rapid protein purification using phenylbutylamine–Eupergit: a novel method for large-scale procedures 510(1990)149

Screening method for large numbers of dyeadsorbents for enzyme purification 510(1990)155

Immobilization of reactive dyes on several matrices that allow high and very high flow-rates to be used. Application to the purification of a proteinase inhibitor from corn 510(1990)165

Affinity chromatography on novel perfluorocarbon supports. Immobilisation of C.I. Reactive Blue 2 on a polyvinyl alcohol-coated perfluoropolymer support and its application in affinity chromatography 510(1990)177

Composite affinity sorbents and their cleaning in place 510(1990)213

One-step purification of trypsin and  $\alpha$ -chymotrypsin by affinity chromatography on Eupergit–aprotinin, a novel carrier for purification of serine proteases 510(1990)239

Chemistry and preparation of affinity ligands useful in immunoglobulin isolation and serum protein separation 510(1990)281

Site-directed immobilization of proteins 510(1990)293

Eupergit C as a carrier for high-performance liquid chromatographic-based immunopurification of antigens and antibodies 510(1990)311

Glucose-silica, an improved medium for highpressure gel filtration chromatography 511(1990)69

Preparation and comparison of a pentafluorophenyl stationary phase for reversed-phase liquid chromatography 511(1990)79

Characteristics of ovomucoid-conjugated columns in the direct liquid chromatographic resolution of racemic compounds 511(1990)89

Separation of human apolipoproteins A-IV, A-I and E by reversed-phase high-performance liquid chromatography on a TSK Phenyl-5PW column 511(1990)147

Comparison of the EASI-EXTRACT immunoaffinity concentration procedure with the AOAC CB method for the extraction and quantitation of aflatoxin  $B_1$  in raw ground unskinned peanuts 511(1990)379

Separation of fragments from human serum albumin and its charged variants by reversedphase and cation-exchange high-performance liquid chromatography 512(1990)165

Simultaneous determination of *Bordetella pertussis* toxin and filamentous haemagglutinin concentrations by hydroxyapatite highperformance liquid chromatography 512(1990)227

High-performance metal chelate interaction chromatography of proteins with silica-bound ethylenediamine-N,N'-diacetic acid 512(1990)237

Optimization of high-performance liquid chromatographic peptide separations with alternative mobile and stationary phases 512(1990)273

Tryptic fingerprinting on a poly(styrenedivinylbenzene) reversed-phase column 512(1990)315 Immobilization of Protein A at high density on azlactone-functional polymeric beads and their use in affinity chromatography 512(1990)345

Preparative high-performance liquid chromatography on a unique high-speed macroporous resin 512(1990)365

Binding of lysozyme on the surface of entrapped phosphatidylserine-phosphatidylcholine vesicles and an example of high-performance lipid vesicle surface chromatography 512(1990)377

Rapid separation, quantitation and purification of products of polymerase chain reaction by liquid chromatography 512(1990)433

Investigation of the reversed-phase highperformance liquid chromatographic ligandexchange retention mechanism on a triamine stationary phase 513(1990)145

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219

Studies on the chromatographic behaviour of some uronic acids and neutral sugars on an amino-bonded phase column 513(1990)227

Effect of type and concentration of coupling buffer on coupling yield in the coupling of proteins to a tresyl-activated support for affinity chromatography 513(1990)367

High-performance ion-exchange chromatography of peptides on a pellicular ion exchanger 513(1990)384

Monosized polymer particles in size-exclusion chromatography. I. Toluene as solvent 514(1990)1

Characterization of an adamantyl-modified silica used as a stationary phase in high-performance liquid chromatography 514(1990)11

Retention reproducibility of basic drugs in highperformance liquid chromatography on a silica column with a methanol-high-pH buffer eluent. Effect of operating conditions on separations using an organic buffer 514(1990)97

Anomalous behavior of selected methylsubstituted polycyclic aromatic hydrocarbons in reversed-phase liquid chromatography 514(1990)111

Chemical properties of and solute-support interactions with the gel filtration medium Superdex 75 prep grade 514(1990)137

High-performance liquid affinity chromatography for the purification of immunoglobulin A from human serum using jacalin 514(1990)219

Separation of peracetylated flavanoid and flavonoid polyphenols by normal-phase highperformance liquid chromatography on a cyanosilica column and their determination 514(1990)334

Solubility parameter treatment for the characterization of the stationary phase in the reversed-phase chromatography of benzene derivatives 515(1990)3

Preparation and evaluation of octadecyl-treated porous glasses. Application to the determination of methotrexate in serum 515(1990)43

Novel silica-based strong anion exchanger for single-column ion chromatography 515(1990)49

Characterization of an internal-surface reversedphase silica support for liquid chromatography and its application to assays of drugs in serum 515(1990)59

Method for the preparation of internal-surface reversed-phase packing materials starting from alkylsilylated silica gels 515(1990)73

Fundamental study of hydroxyapatite highperformance liquid chromatography. II. Experimental analysis on the basis of the general theory of gradient chromatography 515(1990)91

Titania and zirconia: possible new ceramic microparticulates for high-performance liquid chromatography 515(1990)149

Copper(II)-iminodiacetic acid chelating resin as a stationary phase in the immobilized metal ion affinity chromatography of some aromatic amines 515(1990)169

Characteristics of  $C_4$ - and  $C_8$ -bonded vinyl alcohol copolymer gels for reversed-phase highperformance liquid chromatography 515(1990)175

Separation of anionic and cationic compounds of biomedical interest by high-performance liquid chromatography on porous graphitic carbon 515(1990)183 Binding capacities of hydroxyapatite for globular proteins 515(1990)193

Separation of membrane protein-sodium dodecyl sulphate complexes by high-performance liquid chromatography on hydroxyapatite 515(1990)399

High-performance liquid chromatography of proteins on a ceramic hydroxyapatite with volatile buffers 515(1990)521

Application of high-performance liquid chromatography in establishing an accurate index of blood glucose control 515(1990)531

High-performance liquid chromatography of transfer ribonucleic acids on spherical hydroxyapatite beads. II. Effects of pH and sodium chloride on chromatography 515(1990)563

Fabrication of columns for open-tubular liquid chromatography using photopolymerization of acrylates 516(1990)301

Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides 516(1990)333

Retention of benzo[a]pyrene on cyclodextrinbonded phases 516(1990)355

Simultaneous ion chromatography of inorganic anions together with some organic anions and alkaline earth metal cations using chelating agents as eluents 516(1990)383

Dispersion in the interstitial space of packed columns 517(1990)31

Silicas chemically bonded with multidentate phenyl groups as stationary phases in reversedphase liquid chromatography used for nonplanarity recognition of polycyclic aromatic hydrocarbons 517(1990)193

Evaluation of the stability of polymer-coated silica-based packing materials for highperformance liquid chromatography 517(1990)257

Magnetic resonance imaging in reversed-phase liquid chromatography 517(1990)263

Non-porous polybutadiene-coated silicas as stationary phases in reversed-phase chromatography 517(1990)269 Water-soluble proteins do not bind octyl glucoside as judged by molecular sieve chromatographic techniques 518(1990)111

High-performance size-exclusion chromatography of porcine colonic mucins. Comparison of Bio-Gel\* TSK 40XL and Sepharose® 4B columns 518(1990)349

Flow-through particles for the high-performance liquid chromatographic separation of biomolecules: perfusion chromatography 519(1990)1

Evaluation of a zirconia-based carbon-polymer composite reversed-phase chromatographic support 519(1990)31

High-performance liquid chromatographic separation of monosaccharides as their peracetylated ketoximes and aldononitriles 519(1990)228

Studies on texture and properties of porous glass and silica gel used as supports for chemically bonded amino phases for high-performance liquid chromatography 520(1990)237

Polyalkylenes used as stationary phases for preparative reversed-phase liquid chromatography 520(1990)263

Study of the characteristics and analytical application of a capillary chromatograph with an electrochemical detector 520(1990)307

Procedure for the purification of streptavidin by hydrophobic interaction chromatography 520(1990)325

Ion-exchange separation of inorganic anions on a HEMA 1000 Q-L column 520(1990)349

Synthesis and protein-binding properties of spacer-free thioalkyl agaroses 521(1990)1

Gas-phase synthesis, properties and some applications of acylamide stationary phases for high-performance liquid chromatography 521(1990)29

Purification of the subunits of pea mitochondrial  $F_1$ -ATPase by high-performance liquid chromatography 521(1990)43

Problems in the size-exclusion chromatography of cellulose nitrates: non-exclusion effects and universal calibration 522(1990)67

Adsorption of proteins on porous and nonporous poly(ethyleneimine) and tentacle-type anion exchangers 522(1990)77

Chemically modified polymeric resins for highperformance liquid chromatography 522(1990)95

Reversed-phase liquid chromatography of polar benzene derivatives on poly(vinylbenzo-18crown-6)-immobilized silica as a stationary phase 522(1990)107

Effects of mobile phase composition on the reversed-phase separation of dipeptides and tripeptides with cyclodextrin-bonded-phase columns 522(1990)143

Silica-dextran sorbent composites and their cleaning in place 523(1990)35

Performance of wide-pore silica- and polymerbased packing materials in polypeptide separation: effect of pore size and alkyl chain length 535(1990)13

Porous zirconia and titania as packing materials for high-performance liquid chromatography 535(1990)111

New family of high-resolution ion exchangers for protein and nucleic acid purifications from laboratory to process scales 535(1990)127

Monosized stationary phases for chromatography 535(1990)147

Synthesis of mixed-functional-phase silica supports for liquid chromatography and their applications to assays of drugs in serum 535(1990)163

Effect of composition of polyacrylamide gels on exclusion limits 535(1990)173

Non-ideal behaviour of silica-based stationary phases in trifluoroacetic acid-acetonitrile-based reversed-phase high-performance liquid chromatographic separations of insulins and proinsulins 536(1991)43

Purification of proteins on an epoxy-activated support by high-performance affinity chromatography 536(1991)95

High-performance affinity chromatography of immunoglobulin E on a column of dinitrophenylamino acids covalently bound to a

highly cross-linked polymeric micropellicular support 536(1991)155

Liquid chromatographic separation of isomeric phenanthrols on monomeric and polymeric  $C_{18}$  columns 536(1991)245

Size-exclusion chromatography of lignocellulosics in wheat straw 536(1991)303

Method for the characterization of stationary phases for the separation of proteins by highperformance liquid chromatography 537(1991)1

Chemical, physical and chromatographic properties of Superdex 75 prep grade and Superdex 200 prep grade gel filtration media 537(1991)17

Comparison of the liquid chromatographic behaviour of selected steroid isomers using different reversed-phase materials and mobile phase compositions 537(1991)73

Properties and biomedical applications of packings with high-density coverage of  $C_{18}$  chemically bonded phase for high-performance liquid chromatography and solid-phase extraction 538(1991)293

Mild hydrophobic interaction chromatography: prediction of chromatographic behaviour by preliminary analysis by "partition between aqueous two-phase systems" 538(1991)456

Semi-preparative separation of polyhydroxylated sterols using a  $\beta$ -cyclodextrin high-performance liquid chromatography column 539(1991)15

Kinetic behaviour of a novel matrix ion exchanger, carboxymethyl-HVFM operated at high flow-rate 539(1991)255

Immobilization of dermatan sulphate on a silica matrix and its possible use as an affinity chromatography support for heparin cofactor II purification 539(1991)289

Polymer ligands for mild hydrophobic interaction chromatography —principles, achievements and future trends (Review) 539(1991)297

Comparative affinity chromatographic studies using novel grafted polyamide and poly(vinyl alcohol) media 539(1991)307

Immobilized Cibacron Blue —leachables, support stability and toxicity on cultured cells 539(1991)355 Affinity chromatography of fibroblast growth factors on coated silica supports grafted with heparin 539(1991)417

Characterization and stability of silanized and polymer-coated octadecyl reversed phases 540(1991)53

Analytical- and preparative-scale chromatographic separation of phenylalanine from aspartame using a new polymeric sorbent 540(1991)85

Monosized adsorbents for high-performance affinity chromatography. Application to the purification of calf intestinal alkaline phosphatase and human urine urokinase 540(1991)103

Measurement of lipophilicity indices by reversedphase high-performance liquid chromatography: comparison of two stationary phases and various eluents 541(1991)221

Comparison of polybutadiene-coated alumina and octadecyl-bonded silica for separations of proteins and peptides by reversed-phase highperformance liquid chromatography 541(1991)303

Properties of supports for the partition chromatography of proteins 542(1991)55

Use of polymeric reversed-phase columns for the characterization of polypeptides extracted from human pancreata. I. Effect of the mobile phase 542(1991)65

Use of polymeric reversed-phase columns for the characterization of polypeptides extracted from human pancreata. II. Effect of the stationary phase 542(1991)83

Characterization of cyano bonded silica phases from solid-phase extraction columns. Correlation of surface chemistry with chromatographic behavior 542(1991)205

Determination of size limits of membrane separation in vesicle chromatography by fractionation of polydisperse dextran 542(1991)239

Chromatographic stability of silica-based aminopropyl-bonded stationary phases 543(1991)1

Coated silica and its behaviour in dye-affinity chromatography 543(1991)9

New ligands for boronate affinity chromatography. Synthesis and properties 543(1991)17

Enantiomeric separation of amines using Nbenzoxycarbonylglycyl-L-proline as chiral additive and porous graphitic carbon as solid phase 543(1991)287

High-performance affinity chromatography of a chick lectin on an adsorbent based on hydrophilic polymer gel 543(1991)315

High-performance liquid chromatography packing materials for the analysis of small molecules in biological matrices by direct injection (Review) 544(1991)13

Semipermeable-surface reversed-phase media for high-performance liquid chromatography 544(1991)25

Hydrophilic shielding of hydrophobic, cationand anion-exchange phases for separation of small analytes: direct injection of biological fluids onto high-performance liquid chromatographic columns (Review) 544(1991)41

Bare silica, dynamically modified with long-chain quaternary ammonium ions – the technique of choice for more reproducible selectivity in reversed-phase high-performance liquid chromatography (Review) 544(1991)53

Apparent simplicity of reversed stationary phases for high-performance liquid chromatography (Review) 544(1991)77

Anion-exchange chromatography on selected silica-based reversed-phase high-performance liquid chromatographic columns 544(1991)99

Polar bonded phase with the zwitterionic sulfobetaine functional group. Comparison to silica 544(1990)113

Silica-based supports for high-performance liquid chromatography of biopolymers using nondenaturing conditions (Review) 544(1991)125

Controlled-pore glass as a stationary phase in chromatography (Review) 544(1991)137

Hydroxyapatite as a liquid chromatographic packing (Review) 544(1991)147

Fluoropolymers and fluorocarbon bonded phases as column packings for liquid chromatography (Review) 544(1991)187 Rigid macroporous copolymers as stationary phases in high-performance liquid chromatography (Review) 544(1991)201

Evaluation of vinylpyridine and vinylpyridinium polymers as column packings for highperformance liquid chromatography (Review) 544(1991)219

Coated hydrophilic polystyrene-based packing materials 544(1991)233

Macroporous synthetic hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1991)249

Non-porous hydrophilic resin-based packings for the separation of biopolymers (Review) 544(1989)257

Perfusion chromatography packing materials for proteins and peptides 544(1991)267

Liposome chromatography: liposomes immobilized in gel beads as a stationary phase for aqueous column chromatography (Review) 544(1991)283

Electrochemical chromatography —packings, hardware and mechanisms of interaction (Review) 544(1991)305

Microscopic characterization of high-performance liquid chromatographic packing materials (Review) 544(1991)319

Characterization of bonded phases by solid-state NMR spectroscopy (Review) 544(1991)345

Chromatographic characterization of silica-based reversed phases (Review) 544(1991)371

Characterization of reversed phases by chemometric methods 544(1991)381

Factor analysis and experiment design in highperformance liquid chromatography. X. Chemometric characterization of packings, solvents and solutes with hierarchical ascending classification and correspondence factor analysis 544(1991)393

Design requirements of silica-based matrices for biopolymer chromatography 544(1991)413

Separation and purification of oligonucleotides using a new bonded-phase packing material 545(1991)79

Separation of ribosomal subunits on Trisacryl GF 2000 545(1991)196

Application of macrocyclic ligands to ion chromatography (Review) 546(1991)73

Universal stationary phase for the separation of anions on suppressor-based and single-column ion chromatographic systems 546(1991)89

Anion-cation separations on a mixed-bed ionexchange column with indirect photometric detection 546(1991)101

Separation of inorganic analyte anions on dyecoated stationary phases 546(1991)199

Azide determination in protein samples by ion chromatography 546(1991)325

Low-capacity latex-coated resins for anion chromatography 547(1991)11

Stability of Superdex 75 prep grade and Superdex 200 prep grade under different chromatographic conditions 547(1991)21

Reversed-phase high-performance liquid chromatographic separation of  $5\beta$ ,20dihydroxyecdysone and 20-hydroxyecdysone on a  $\beta$ -cyclodextrin-bonded stationary phase 547(1991)443

Solution properties of polyelectrolytes. VII. Non-ideal mechanisms in size-exclusion chromatography of synthetic polyions, peptides and proteins 548(1991)93

Characterization of synthetic macroporous ion-exchange resins in low-pressure cartridges and columns. Evaluation of the performance of Macro-Prep 50 S resin in the purification of anti-Klenow antibodies from goat serum 548(1991)165

Comparison of silica-based cyanopropyl and octyl reversed-phase packings for the separation of peptides and proteins 548(1991)179

Silica versus polymer-based stationary phases for reversed-phase high-performance liquid chromatographic analyses of rat insulin biosynthesis. A comparison of resolution and recovery 548(1991)195

Ion-exchange high-performance liquid chromatography of nucleotides and polypeptides on new types of ion-exchange sorbents, based on polystyrene-coated silicas 548(1991)207

Effect of antigen size on optimal ligand density of immobilized antibodies for a high-performance liquid chromatographic support 548(1991)243

Silica: backbone material of liquid chromatographic column packings (Review) 549(1991)1

Selectivity of carbon packing materials in comparison with octadecylsilyl- and pyrenylethylsilylsilica gels in reversed-phase liquid chromatography 549(1991)29

Study of the fluoride adsorption characteristics of porous microparticulate zirconium oxide 549(1991)43

Fluoride-modified zirconium oxide as a biocompatible stationary phase for highperformance liquid chromatography 549(1991)59

Comparison of the selectivity of di(methacryloyloxymethyl)naphthalene– divinylbenzene copolymers in reversed-phase high-performance liquid chromatography 549(1991)77

Ion chromatography of inorganic iodine species using  $C_{18}$  reversed-phase columns coated with cetyltrimethylammonium 549(1991)265

Role of  $\pi$ - $\pi$  interactions in reversed-phase liquid chromatography 550(1991)267

Stationary phase effects in reversed-phase liquid chromatography under overload conditions 550(1991)301

High-performance liquid chromatography of amino acids, peptides and proteins. CIX. Investigations on the relation between the ligand density of Cibacron Blue immobilized porous and non-porous sorbents and protein-binding capacities and association constants 550(1990)383

#### Stationary phase solvation

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

# Stationary phases, SFC

Sorption isotherms of mobile phase components in capillary supercritical fluid chromatography 505(1990)139 Comparison of stationary phases for packedcolumn supercritical fluid chromatography 506(1990)563

Supercritical fluid chromatography of polychlorinated biphenyls on packed columns 522(1990)267

Immobilization of chiral phases for enantiomer separations in supercritical fluid and gas chromatography 540(1991)217

Analysis of sulphonamides using supercritical fluid chromatography and supercritical fluid chromatography-mass spectrometry 540(1991)239

#### Stationary phases, TLC

Retention characteristics of CN,  $NH_2$  and diol precoated high-performance thin-layer chromatographic plates in the adsorption and reversed-phase separation of some benzodiazepine derivatives 514(1990)45

Porous glass sheets for use in thin-layer chromatography 515(1990)205

Anomalous retention behaviour of some synthetic nucleosides on aluminium oxide layers 543(1991)425

Direct use of Empore sheets in overpressured thin-layer chromatography 547(1991)403

# Statistical models

Effect of stationary phase on predictions of the statistical model of overlap from gas chromatograms 550(1991)135

#### Step gradients

Analysis of dilute peptide samples by capillary zone electrophoresis 516(1990)79

#### Stepwise elution

Preparative chromatography of proteins. Design calculation procedure for gradient and stepwise elution 512(1990)89

# Stereo-isomers

Separation and study of corrinoid cobalt-ligand isomers by high-performance liquid chromatography 536(1991)185

# Stereoselectivity

Analytical gas chromatographic separations of diastereomeric *tert.*-butylmethoxyphenylsilyl ethers 514(1990)305

Stereoselectivity of  $\alpha$ -,  $\beta$ - and  $\gamma$ -cyclodextrin complexation relative to *cis-trans* acyclic alkenes and cyclooctenes under conditions of gas-liquid chromatography 547(1991)283

# Steric field-flow fractionation

Evaluation of pinched inlet channel for stopless flow injection in steric field-flow fractionation 517(1990)423

# Stokes' diameter

Determination of size limits of membrane separation in vesicle chromatography by fractionation of polydisperse dextran 542(1991)239

# Streaming potential measurements

Enantiomeric resolution of amino acid derivatives on molecularly imprinted polymers as monitored by potentiometric measurements 516(1990)323

# Streptomyces hygroscopicus

Separation and determination of polyether carboxylic antibiotics from *Streptomyces hygroscopicus* NRRL B 1865 by thin-layer chromatography with flame ionization detection 547(1991)411

#### Stroboscopic sampling

Study of rapid reaction kinetics by computerized gas chromatography with stroboscopic sampling 517(1990)175

# Structural descriptors

Correlation between chemical structure of noncongeneric solutes and their retention on polybutadiene-coated alumina 506(1990)3

#### Structural isomers

Reversed-phase chromatographic separation of selected hydroxyl aromatics with  $\beta$ -cyclodextrin as a mobile phase additive 514(1990)19

Relationship between the structure and retention of *n*-alkenes and *n*-alkynes on silicone phases 520(1990)137

Application of sodium lauryl sulphate ion-pairing reversed-phase high-performance liquid chromatography in the separation of some isomeric and other closely related basic compounds in pharmaceutical analysis 520(1990)367

#### Structure-activity relationships

Hydrophobicity parameters determined by reversed-phase liquid chromatography. I.

Relationship between capacity factors and octanol-water partition coefficients for monosubstituted pyrazines and the related pyridines 514(1990)123

Relationship between retention parameters in reversed-phase high-performance liquid chromatography and antitumour activity of some pyrimidine bases and nucleosides 547(1991)161

Lipophilic character of cardiac glycosides: correlation between  $R_M$  values and acute toxicity data in different animal species. 547(1991)523

#### Structure-function relationships

Monitoring of protein conformation by highperformance size-exclusion liquid chromatography and scanning diode array second-derivative UV absorption spectroscopy 540(1991)187

#### Structure-nucleotide incorporation rate relationship

Application of chromatographic retention data in an investigation of a quantitative structure– nucleotide incorporation rate relationship 506(1990)35

# Structure-retention relationships

Gas chromatographic analyses of hydroxyoxime extractants of metals and their intermediates. I. Alkylsalicylaldehyde oximes 503(1990)442

Lipophilic character of cardiac glycosides.  $R_M$  values as lipophilicity parameters 504(1990)163

Correlation between chemical structure of noncongeneric solutes and their retention on polybutadiene-coated alumina 506(1990)3

Partition coefficients and capacity factors of some nucleoside analogues 506(1990)119

Optimization of the high-performance liquid chromatography of coumarins in *Angelica archangelica* with reference to molecular structure 507(1990)367

Isolation of toxic polychlorinated biphenyls by electron donor-acceptor high-performance liquid chromatography on a 2-(1-pyrenyl) ethyldimethylsilylated silica column 507(1990)389

Structure-retention correlations of isomeric alkylphenols in gas-liquid chromatography 509(1990)3

Effects of molecular structure on parameters a, b and c in the fundamental retention equation 509(1990)171

Anomalous behavior of selected methylsubstituted polycyclic aromatic hydrocarbons in reversed-phase liquid chromatography 514(1990)111

Advances in expert systems for high-performance liquid chromatography 515(1990)13

Immobilized metal ion affinity chromatography. Effect of solute structure, ligand density and salt concentration on the retention of peptides 516(1990)333

Relationship between the structure and retention of *n*-alkenes and *n*-alkynes on silicone phases 520(1990)137

Linear solvation energy relationships in the study of the solvatochromic properties and liquid chromatographic retention behaviour of benzodiazepines 522(1990)37

Quantitative correlation of the parameters  $\log k'_{w}$ and -S in the retention equation in reversedphase high-performance liquid chromatographic and solvatochromic parameters 522(1990)49

Reversed-phase chromatography of *Escherichia* coli ribosomal proteins. Correlation of retention time with chain length and hydrophobicity 522(1990)163

Analysis of haloalkanes on wide-bore capillary columns of different polarity connected in series 522(1990)329

Chromatographic behaviour of aromatic acids in reversed-phase high-performance liquid chromatography 523(1990)227

High-performance liquid chromatography of amino acids, peptides and proteins. CVII. Analysis of group retention contributions for peptides separated with a range of mobile and stationary phases by reversed-phase highperformance liquid chromatography 536(1991)165

Reversed-phase ion-pair liquid chromatography of the angiotensins 536(1991)357

High-performance liquid chromatography of red fruit anthocyanins 537(1991)101

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. I. Methyl substitution of pyridopyrimidine derivatives 537(1991)365

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. II. Alkyl substitution of quinazolone derivatives 537(1991)371

Correlation between structure and gas chromatographic behaviour of nitrogencontaining heterocyclic compounds. III. Variation of ring size 537(1991)377

High-performance liquid chromatography of substituted trinuclear osmium carbonyl clusters,  $Os_3(CO)_{12-n}[P(C_6F_5)_3]_n$  (n=0, 1, 2) 537(1991)475

Correlation of structure with linear retention index for bromo- and bromochlorodibenzo-*p*dioxins and bromodibenzofurans 540(1991)293

Application of topographic indices to chromatographic data: calculation of the retention indices of alkanes 540(1991)430

Anomalous retention behaviour of some synthetic nucleosides on aluminium oxide layers 543(1991)425

Effect of organic modifier concentration on retention in reversed-phase ion-pair liquid chromatography 545(1991)59

Topological indices as structural parameters. Structure-retention relationships for oxyethylene derivatives of alcohols, thioalcohols and alkylamines 547(1991)247

High-performance liquid chromatography of amino acids, peptides and proteins. CX. Principal component analysis of four sets of group retention coefficients derived from reversed-phase high-performance liquid chromatography of peptides 548(1991)105

Gas chromatography of homologous esters. XXXIV. Alkyl borate and boronate esters 550(1991)155

Structure-retention correlation in liquid chromatography (Review) 550(1991)313 Retention prediction of analytes in reversed-phase high-performance liquid chromatography based on molecular structure. VI. Disubstituted aromatic compounds 550(1991)335

Chromatographic data for pharmacological classification of imidazol(in)e drugs 550(1991)573

#### Sulphobetaine stationary phase

Polar bonded phase with the zwitterionic sulfobetaine functional group. Comparison to silica 544(1990)113

# Sulphuric acid treatment

Behaviour of 23 persistent organochlorine compounds during sulphuric acid clean-up on a solid-matrix column 513(1990)333

#### Sunflower

Gas chromatography of tryptophan together with other amino acids in hydrochloric acid hydrolysates 520(1990)193

#### Superadsorbents

Fate of superabsorbents in the environment. Analytical techniques 513(1990)93

#### Supercritical capillary electrophoresis

High-pressure and supercritical capillary electrophoresis 517(1990)573

# Supercritical fluid chromatography

Packed columns in supercritical fluid chromatography (Review) 505(1990)3

Some aspects of capillary supercritical fluid chromatography (Review) 505(1990)19

Preparative supercritical fluid chromatography (Review) 505(1990)37

Coupling of supercritical fluid extraction with chromatographic techniques (Review) 505(1990)45

Physicochemical model of retention for capillary supercritical fluid chromatography 505(1990)79

Isocratic networks in supercritical fluid chromatography. III. Dependence of capacity factor, selectivity and resolution on temperature, pressure, density and free volume of pentane as shown in multi-dimensional plots 505(1990)99

Three-dimensional network plots using colours for a fourth variable with binary mixtures of

pentane and 1,4-dioxane under sub- and supercritical conditions 505(1990)109

Comparison of supercritical carbon dioxide and supercritical propane as mobile phases in supercritical fluid chromatography 505(1990)119

Sorption isotherms of mobile phase components in capillary supercritical fluid chromatography 505(1990)139

Retention and selectivity in supercritical fluid chromatography on an octadecylsilyl-silica column 505(1990)147

Retention studies in supercritical fluid chromatography 505(1990)161

Determination of binary diffusion coefficients of organic compounds in supercritical carbon dioxide by supercritical fluid chromatography 505(1990)169

Analysis of aliphatic and phenolic carboxylic acids by capillary supercritical fluid chromatography–Fourier-transform infrared microspectrometry 505(1990)179

Supercritical fluid chromatography with lightscattering detection. I. Preliminary results of the analysis of polar compounds with packed columns 505(1990)191

Supercritical fluid chromatography-mass spectrometry of non-ionic surfactant materials using chloride-attachment negative ion chemical ionization 505(1990)199

Ion mobility detection of polydimethylsilicone oligomers following supercritical fluid chromatographic separation 505(1990)215

Fractionation of lemon-peel oil by semipreparative supercritical fluid chromatography 505(1990)237

Isolation of tocopherols from wheat germ oil by recycle semi-preparative supercritical fluid chromatography 505(1990)257

Quantitative analysis of additives in polymers using coupled supercritical fluid extractionsupercritical fluid chromatography 505(1990)273

Characterization of polymer additives by supercritical fluid chromatography and by liquid chromatography 505(1990)283 Analysis of triazine and triazole herbicides by gradient-elution supercritical fluid chromatography 505(1990)293

Analysis of sugars by supercritical fluid chromatography using polar packed columns and light-scattering detection 505(1990)299

Comparison of high-performance liquid chromatography, supercritical fluid chromatography and capillary zone electrophoresis in drug analysis 507(1990)125

Packed-column supercritical fluid chromatography-mass spectrometry and supercritical fluid chromatography-tandem mass spectrometry with ionization at atmospheric pressure 511(1990)257

Investigation of parameters in the separation of amino acid enantiomers by supercritical fluid chromatography 514(1990)253

Comparison of helium head pressure carbon dioxide and pure carbon dioxide as mobile phases in supercritical fluid chromatography 514(1990)309

Sample introduction and elution method for preparative supercritical fluid chromatography 515(1990)285

Enrichment of eicosapentaenoic acid and docosahexaenoic acid esters from esterified fish oil by programmed extraction–elution with supercritical carbon dioxide 515(1990)295

Separation of amphetamines by supercritical fluid chromatography 515(1990)385

Supercritical fluid extraction and chromatography of cholesterol in food samples 515(1990)509

Supercritical fluid extraction and chromatography of steroids with Freon-22 515(1990)515

Application of supercritical fluid chromatography and supercritical fluid extraction to the measurement of hydroperoxides in foods 515(1990)555

Applications of semi-micro supercritical fluid chromatography with gradient elution to synthetic oligomer separation 515(1990)629

Capillary supercritical fluid chromatography of aliphatic amines. Studies on the selectivity and

symmetry with three different columns using carbon dioxide or nitrous oxide as mobile phase 516(1990)415

Plate height theory for compressible mobile phase fluids and its application to gas, liquid and supercritical fluid chromatography 517(1990)3

Quantitative correlations between solute molecular structure and solubility in supercritical fluids 517(1990)449

Use of chromatographic retention measurements to obtain solubilities in a liquid or supercritical fluid mobile phase 517(1990)459

Element-selective detection after supercritical fluid chromatography by means of a Surfatron plasma in the near-infrared spectral region 517(1990)477

Use of sulfur chemiluminescence detection after supercritical fluid chromatography 517(1990)491

Effect of carbon dioxide flow-rate on the separation of triacylglycerols by capillary supercritical fluid chromatography 518(1990)69

Analysis of azadirachtin by supercritical-fluid chromatography 519(1990)137

Capillary supercritical fluid chromatography of explosives. Investigations on the interactions between the analytes, the mobile phase and the stationary phase 521(1990)63

Supercritical fluid chromatography of polychlorinated biphenyls on packed columns 522(1990)267

Determination of mefloquine in blood by supercritical fluid chromatography with electroncapture detection 527(1990)51

Liquid and high-pressure carbon dioxide chromatography of  $\beta$ -blockers. Resolution of the enantiomers of nadolol 539(1991)55

Chiral recognition mechanisms on chiral stationary phases derived from tyrosine. Specific influence of the nature of the asymmetric centre vicinal functional group 540(1991)129

Behaviour of phenols under supercritical fluid chromatographic conditions in relation to the pyrolysis of lignocellulosic materials 540(1991)225 Analysis of sulphonamides using supercritical fluid chromatography and supercritical fluid chromatography-mass spectrometry 540(1991)239

Analysis of veterinary drugs using supercritical fluid chromatography and supercritical fluid chromatography-mass spectrometry 540(1991)257

Packed-microbore supercritical fluid chromatography with flame ionization detection of abused vegetable oils 540(1991)271

Enthalpy of transfer in supercritical fluid chromatography 543(1991)262

Derivatization of hydroxyeicosatetraenoic acid methyl esters with pentafluorobenzoic anhydride and analysis with supercritical fluid chromatography-chemical ionization mass spectrometry 543(1991)405

Generalized treatment of spatial and temporal column parameters, applicable to gas, liquid and supercritical fluid chromatography. II. Application to supercritical  $CO_2$  545(1991)135

Factors governing the analytical supercritical fluid extraction and supercritical fluid chromatographic retention of polycyclic aromatic hydrocarbons 545(1991)149

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

Analysis of lipids in aging seed using capillary supercritical fluid chromatography 547(1991)393

Separation of triacylglycerols by supercriticalfluid argentation chromatography 550(1991)765

Sorption isotherms in supercritical fluid chromatography (Review) 550(1991)775

# Supercritical fluid extraction

Coupling of supercritical fluid extraction with chromatographic techniques (Review) 505(1990)45

Integrated analysis of solid samples by on-line supercritical fluid extraction-gas chromatography 505(1990)227

Extraction of major alkaloids from poppy straw with near-critical mixtures of carbon dioxide and polar modifiers 505(1990)247

Quantitative analysis of additives in polymers using coupled supercritical fluid extractionsupercritical fluid chromatography 505(1990)273

Enrichment of eicosapentaenoic acid and docosahexaenoic acid esters from esterified fish oil by programmed extraction-elution with supercritical carbon dioxide 515(1990)295

Supercritical fluid extraction and chromatography of cholesterol in food samples 515(1990)509

Supercritical fluid extraction and chromatography of steroids with Freon-22 515(1990)515

Application of supercritical fluid chromatography and supercritical fluid extraction to the measurement of hydroperoxides in foods 515(1990)555

Quantitative correlations between solute molecular structure and solubility in supercritical fluids 517(1990)449

Quantitative extraction of linear alkylbenzenesulfonates using supercritical carbon dioxide and a simple device for adding modifiers 541(1991)185

Post-extraction solvent flush of the pressure restrictor in supercritical fluid extraction 543(1991)187

Supercritical fluid extraction from a brown alga by stagewise pressure increase 543(1991)413

Factors governing the analytical supercritical fluid extraction and supercritical fluid chromatographic retention of polycyclic aromatic hydrocarbons 545(1991)149

#### Superdex 75

Stability of Superdex 75 prep grade and Superdex 200 prep grade under different chromatographic conditions 547(1991)21

# Superdex 200

Stability of Superdex 75 prep grade and Superdex 200 prep grade under different chromatographic conditions 547(1991)21

#### Suppressed conductivity

Electrodialytic cluent generation and suppression. Ultralow background conductance suppressed anion chromatography 546(1991)159

#### Suppressors

Electrodialytic eluent generation and suppression. Ultralow background conductance suppressed anion chromatography 546(1991)159

Recent advances in the simultaneous determination of anions and silica in high-purity water 546(1991)209

#### Surface accessibility

High-performance liquid chromatography of insulin. Accessibility and flexibility 502(1990)325

# Surface area

Binding capacities of hydroxyapatite for globular proteins 515(1990)193

Evaluation of the stability of polymer-coated silica-based packing materials for highperformance liquid chromatography 517(1990)257

Tracer pulse chromatographic method for the determination of nitrogen BET isotherms and surface areas 518(1990)319

Synthesis and protein-binding properties of spacer-free thioalkyl agaroses 521(1990)1

#### Surface excess isotherms

Effect of pore size on the surface excess isotherm of silica packings 515(1990)159

#### Surface heterogeneity

Use of a gamma energy distribution to model the gas chromatographic temperature dependence of solute retention on aryl-siloxane chemically modified porous carbon 513(1990)1

#### Surface interaction

Studies on the interaction of a surface-bound ligand with a multi-valent high-molecular-weight ligate. The biotinylcellulose-avidin system 510(1990)23

#### Surface kinetics

High-performance liquid chromatography of amino acids, peptides and proteins. CXIII. Predicting the performance of non-porous particles in affinity chromatography of proteins 548(1991)147

#### Surface potential

Potential-barrier field-flow fractionation, a versatile new separation method 517(1990)345

#### Surface pressure-area isotherms

Purification of galactolipids by high-performance liquid chromatography for monolayer and Langmuir-Blodgett film studies 542(1991)307

# Surface structure

Fundamental study of hydroxyapatite highperformance liquid chromatography. III. Direct experimental confirmation of the existence of two types of adsorbing surface on the hydroxyapatite crystal 515(1990)125

# Surface treatment

Surface treatment effects in microcolumn liquid chromatography 540(1991)77

#### Surfactants

Degradation and analysis of oligooxyethylene glycol mono(4-*tert*.-octylphenyl) ethers in the presence of acetyl chloride 502(1990)407

Simultaneous optimization of variables influencing selectivity and elution strength in micellar liquid chromatography. Effect of organic modifier and micelle concentration 511(1990)17

Enantiomeric resolution by micellar electrokinetic chromatography with chiral surfactants 515(1990)221

Chiral separation of diltiazem, trimetoquinol and related compounds by micellar electrokinetic chromatography with bile salts 515(1990)233

#### Surfatron plasma

Element-selective detection after supercritical fluid chromatography by means of a Surfatron plasma in the near-infrared spectral region 517(1990)477

#### Synaptosomes

Subfractions of membranes from calf brain synaptosomes obtained and studied by liquid– liquid partitioning 547(1991)79

#### System peaks

Evaluation of refractive index artifacts in liquid chromatographic absorbance detection. Extension to non-ideal injection and gradient elution 503(1990)127

Studies on system peaks in ion-pair adsorption chromatography. III. Regulation of system peak gradient retention for obtaining analyte peak compression 506(1990)61

Competition between phenylalanine and acetic acid in a chromatographic column as indicated by their adsorption isotherms 517(1990)285 Studies on system peaks in ion-pair adsorption chromatography. IV. Optimization of peak compression 535(1990)93

# Table salt

Determination of iodide in dairy products and table salt by ion chromatography with electrochemical detection 518(1990)268

#### Tag-along effect

Optimization of the experimental conditions in preparative liquid chromatography with touching bands 517(1990)229

# Tailing reducers

Role of additives in packed column supercritical fluid chromatography: suppression of solute ionization 547(1991)377

#### Tandem mass spectrometry

Capillary column gas chromatography-mass spectrometry and gas chromatography-tandem mass spectrometry detection of chemical warfare agents in a complex airborne matrix 504(1990)259

Packed-column supercritical fluid chromatography-mass spectrometry and supercritical fluid chromatography-tandem mass spectrometry with ionization at atmospheric pressure 511(1990)257

Tandem mass spectrometry —an additional dimension of chromatography for the determination of biomarkers in fossil fuels (Review) 550(1991)193

#### Tea

Counter-current chromatography of black tea infusions 505(1990)357

#### **Temperature effects**

Use of a gamma energy distribution to model the gas chromatographic temperature dependence of solute retention on aryl-siloxane chemically modified porous carbon 513(1990)1

Capillary supercritical fluid chromatography of explosives. Investigations on the interactions between the analytes, the mobile phase and the stationary phase 521(1990)63

#### **Temperature gradients**

Refractive index gradient detection of biopolymers separated by high-temperature liquid chromatography 536(1991)289

Temperature programming in macrocycle-based ion chromatography 546(1991)139

# Temperature-programmed index

Calculation of programmed temperature gas chromatographic characteristics from isothermal data. III. Predicted retention indices and equivalent temperatures 504(1990)269

# **Temperature programming**

Theory of temperature-programmed gas chromatography. The method of moment analysis 521(1990)71

Gas chromatographic system for the identification of halogenated pesticides by retention indices using *n*-alkanes as standards 547(1991)355

#### Tentacle-type sorbents

High-performance liquid chromatography of amino acids, peptides and proteins. CXI. Retention behaviour of proteins with macroporous tentacle-type anion exchangers 548(1991)117

#### Ternary phase diagrams

Practical approach to high-speed counter-current chromatography 550(1991)677

# Ternary system

Forced-flow multi-phase liquid extraction, a separation method based on relative and absolute counter-current distribution. I. Description of the method and basic possibilities 523(1990)43

#### Theoretical plate

Nature of the eddy dispersion in packed beds 535(1990)189

# Theoretical plate, height equivalent

Effect of carbon dioxide flow-rate on the separation of triacylglycerols by capillary supercritical fluid chromatography 518(1990)69

#### Thermal band broadening

Thermal model of capillary electrophoresis and a method for counteracting thermal band broadening 516(1990)191

#### Thermal degradation

Behaviours of siloxane polymers containing phenyl or silarylene as stationary phases for high-temperature gas chromatography 514(1990)259

#### Thermal desorption

Thermal desorption-gas chromatography of some organophosphates and S-mustard after trapping on Tenax 514(1990)273

Thermal desorption of organic pollutants enriched on activated carbon. V. Desorption behaviour and temperature profile 520(1990)131

Retention index monitoring of compounds of chemical defence interest using thermal desorption gas chromatography 538(1991)249

Analysis of volatile organic compounds in estuarine sediments using dynamic headspace and gas chromatography-mass spectrometry 542(1991)413

Thermal desorption- and sniffing-mass spectrometric monitoring of enriched trace compounds by means of a "live total transfer system" 547(1991)516

#### Thermal diffusion

Retention effects in thermal field-flow fractionation 517(1990)377

Characterization of polymers by thermal field-flow fractionation 517(1990)405

# Thermal energy analyser

Determination of primary and secondary amines in foodstuffs using gas chromatography and chemiluminescence detection with a modified thermal energy analyser 539(1991)141

#### Thermal field-flow fractionation

Retention effects in thermal field-flow fractionation 517(1990)377

Characterization of polymers by thermal fieldflow fractionation 517(1990)405

#### Thermal zone broadening

High-performance displacement electrophoresis in 0.025- to 0.050-mm capillaries coated with a polymer to suppress adsorption and electroendosmosis 550(1991)811

#### Thermodynamic parameters

Changes in the enthalpy and entropy of hydroxyl aromatics in reversed-phase liquid

chromatography with  $\beta$ -cyclodextrin in the mobile phase 537(1991)61

Enthalpy of transfer in supercritical fluid chromatography 543(1991)262

Evaluation of the effect of the cyanopropyl radical on the interaction of the methylene group with silicone stationary phases 547(1991)269

# Thermospray mass spectrometry

Identification of a new minor iridoid glycoside in Symplocos glauca by thermospray liquid chromatography-mass spectrometry 515(1990)503

Reversed-phase high-performance liquid chromatography-thermospray mass spectrometry of alprenolol and its ketoxime analogues 541(1991)474

Identification of vitamin  $D_2$  by thermosprayinterface mass spectrometry 543(1991)241

#### Thin-film electrodes

Electrochemical biosensors on thin-film metals and conducting polymers 510(1990)355

# Thiophilic affinity chromatography

Salt-promoted adsorption chromatography 510(1990)47

# Tick-borne encephalitis virus

Purification and analysis of infectious virions and native non-structural antigens from cells infected with tick-borne encephalitis virus 502(1990)59

#### Time array detector

Renaissance of gas chromatography-time-offlight mass spectrometry. Meeting the challenge of capillary columns with a beam deflection instrument and time array detection 518(1990)283

#### **Topographic indices**

Application of topographic indices to chromatographic data: calculation of the retention indices of alkanes 540(1991)430

#### **Topological indices**

Topological indices as structural parameters. Structure-retention relationships for oxyethylene derivatives of alcohols, thioalcohols and alkylamines 547(1991)247

#### Trace analysis

Development of an automated high-performance liquid chromatographic method for the on-line

pre-concentration and determination of trace concentrations of pesticides in drinking water 503(1990)167

High-precision sampling of trace gas-borne volatiles by the dynamic solvent effect with a comparative review of alternative techniques 504(1990)21

Examination of organic trace contamination and thermo-oxidative deterioration of  $\varepsilon$ -caprolactam by high-performance liquid chromatography 508(1990)149

On-line chromatography with capillary columns and temperature programming. Determination of traces of 2-butenes in 1-butene and analysis of a reformate 509(1990)33

Simple device for the determination of volatile chlorinated hydrocarbons in water by gas chromatography 509(1990)111

Application of gas chromatography with electroncapture detection to trace analysis of halogenated compounds 509(1990)115

Some possibilities of combining high-performance liquid chromatography with isotachophoresis for the trace determination of ionogenic compounds present in complex matrices 509(1990)271

Computer-assisted choice of electrolyte systems and spacing constituents for two-dimensional capillary isotachophoresis 509(1990)287

Reversed-phase liquid chromatographic column switching for the trace-level determination of polar compounds. Application to chloroallyl alcohol in ground water 511(1990)243

Trace determination of lower volatile fatty acids in sediments by gas chromatography with chemically bonded FFAP columns 511(1990)317

Separation and determination of acidic herbicides on a PRP-1 polymeric column 513(1990)219

Formazan derivatives as the precolumn derivatization reagents in a coupled highperformance liquid chromatographicspectrophotometric system for trace metal determination 515(1990)603

Determination of aromatic amines at trace levels by ion interaction reagent reversed-phase highperformance liquid chromatography. Analysis of hair dyes and other water-soluble dyes 518(1990)149

New sensitive method for the examination of the volatile flavor fraction of cabernet sauvignon wines 522(1990)315

Application of a hydrogen storage alloy to the determination of trace impurities in high-purity hydrogen by gas chromatography. Group analysis of  $C_1$ ,  $C_2$  and  $C_3$  hydrocarbons 541(1991)75

Separation and detection of group I and II cations by ion chromatography 546(1991)229

Cation analysis of fermentation broth by highperformance liquid chromatography utilizing ion interaction 546(1991)251

# Trace enrichment

Enrichment and mass spectrometric analysis of trace impurity concentrations in gases 502(1990)265

Capillary electrophoresis of urinary porphyrins with absorbance and fluorescence detection 516(1990)271

Packed column gas chromatography–capillary column gas chromatography–mass spectrometry coupling for the qualitative characterization of technical products 520(1990)175

Separation and detection of group I and II cations by ion chromatography 546(1991)229

Thermal desorption- and sniffing-mass spectrometric monitoring of enriched trace compounds by means of a "live total transfer system" 547(1991)516

# Tracer pulse chromatography

Tracer pulse chromatographic method for the determination of nitrogen **BET** isotherms and surface areas 518(1990)319

# **Transfer rules**

Gradient elution methods for predicting isocratic conditions (Review) 550(1991)425

#### Transmission electron microscopy

Microscopic characterization of high-performance liquid chromatographic packing materials (Review) 544(1991)319

#### Transport systems

Gas chromatographic detectors for use in column liquid chromatography (Review) 550(1991)461

#### Transyl-activated support

Effect of type and concentration of coupling buffer on coupling yield in the coupling of proteins to a tresyl-activated support for affinity chromatography 513(1990)367

#### Tresyl-activated support

Tresyl-activated support for high-performance affinity chromatography 510(1990)101

#### Trianiine stationary phase

Investigation of the reversed-phase highperformance liquid chromatographic ligandexchange retention mechanism on a triamine stationary phase 513(1990)145

#### Tripeptide ligands, transition-state

Affinity purification of tissue plasminogen activator using transition-state analogues 510(1990)83

# Tris-phosphate buffer mobile phase

High-performance liquid chromatographic separation of tachykinins using Tris-phosphate as the buffer component of the mobile phase 533(1990)179

#### Tritium labelling

Use of radio-gas chromatography and tritium label to optimize derivatization procedures 530(1990)1

#### Troubleshooting, LC columns

Systematic approach to the isolation, correction, and prevention of liquid chromatographic column problems 544(1991)3

#### TRUEX process

Analysis of *n*-octyl(phenyl)-N,Ndiisobutylcarbamoylmethylphosphine oxide and TRUEX process solvent by gas and liquid chromatography 516(1990)395

# Trypanosoma brucei

Purification of the membrane-form variant surface glycoprotein of *Trypanosoma brucei* 521(1990)239

#### Tryptic digests

Capillary zone electrophoresis of  $\alpha_1$ -acid glycoprotein fragments from trypsin and endoglycosidase digestions 536(1991)31

Capillary electrophoretic separation in both  $H_2O$ and  ${}^{2}H_2O$ -based electrolytes can provide more information on tryptic digests 547(1991)551

# **Tryptic maps**

High-performance displacement chromatography-mass spectrometry of tryptic peptides of recombinant human growth hormone 512(1990)299

# TSK Phenyl-5PW

Separation of human apolipoproteins A-IV, A-I and E by reversed-phase high-performance liquid chromatography on a TSK Phenyl-5PW column 511(1990)147

# Tung's integral equation

Direct deconvolution of Tung's integral equation using a multi-Gaussian function model for instrumental band broadening in gel-permeation chromatography 522(1990)57

# **Turbulent dispersion**

Turbulent flow in capillary gas chromatography — evaluation of a theoretical concept by Golay 517(1990)143

# **Turbulent** flow

Turbulent flow in capillary gas chromatography — evaluation of a theoretical concept by Golay 517(1990)143

# **Two-dimensional electrophoresis**

Two-dimensional electrophoresis: agarose gel isotachophoresis followed by sodium dodecyl sulphate–polyacrylamide electrophoresis 545(1991)343

# Two-dimensional non-linear mapping

Comparative investigation of the retention behaviour of nucleoside derivatives on alumina stationary phases in thin-layer chromatography and high-performance liquid chromatography 550(1991)667

# **Two-factor selectivity**

Computer-assisted optimization of two-factor selectivity in gas chromatography using an advanced simplex method 513(1990)13

# Two-phase polymer systems

Protein separation with aqueous-aqueous polymer systems by two types of counter-current chromatographs 550(1991)695

# Two-phase solvent systems

Systematic search for suitable two-phase solvent systems for high-speed counter-current chromatography 538(1991)99

# **Two-phase systems**

Properties of supports for the partition chromatography of proteins 542(1991)55

# U

# Ultracentrifugation

Particle characterization in centrifugal fields. Comparison between ultracentrifugation and sedimentation field-flow fractionation 517(1990)361

Chromatographic and physical studies of tropomyosin in aqueous-organic media at low pH 543(1991)327

# Ultrafiltration

Purification and analysis of infectious virions and native non-structural antigens from cells infected with tick-borne encephalitis virus 502(1990)59

Purification and characterization of hementin, a fibrinogenolytic protease from the leech *Haementeria ghilianii* 502(1990)359

Ion chromatographic determination of plasma oxalate in healthy subjects, in patients with chronic renal failure and in cases of hyperoxaluric syndromes 511(1990)223

Simple method for determination of the cephalosporin DQ-2556 in biological fluids by high-performance liquid chromatography 515(1990)547

High-performance liquid chromatography and ultrafiltration of whey proteins with inorganic porous materials coated with polyvinylimidazole derivatives 548(1991)215

# Ultrasonic nebulizer interface

Ultrasonic nebulizer interface system for coupling liquid chromatography and electrothermal atomic absorption spectrometry 541(1991)243

# Ultraviolet difference spectra

Neutral, alkaline and difference ultraviolet spectra of secondary metabolites from *Penicillium* and other fungi, and comparisons to published maxima from gradient high-performance liquid chromatography with diode-array detection 511(1990)195

# **Unfolding kinetics**

Effect of metal ions on the unfolding kinetics of  $\alpha$ -lactalbumin on weakly hydrophobic surfaces 536(1991)17

# **UNIFAC** method

Application of the UNIFAC method for assessment of retention in reversed-phase liquid chromatography 543(1991)267

# Unified molecular theory of chromatography

Enthalpy of transfer in supercritical fluid chromatography 543(1991)262

#### Universal calibration concept

Problems in the size-exclusion chromatography of cellulose nitrates: non-exclusion effects and universal calibration 522(1990)67



#### Vacancy gel permeation chromatography

High-performance vacancy gel permeation chromatography 518(1990)238

# Van Deemter equation

Gas chromatography of the atmosphere of Titan. II. Analysis of low-molecular-weight hydrocarbons and nitriles with a potassium chloride-deactivated alumina PLOT capillary column 514(1990)65

Determination of gas chromatographic plate heights for hydrocarbon adsorption by superactivated carbon AX21 518(1990)53

#### Vapour pressure

Gas chromatographic identification of complex mixtures of halomethanes and haloethanes by using the correlation between their retention and vapour pressure 537(1991)305

Gas phase retention volume behavior of organic compounds on Carbotrap graphitized carbon 547(1991)488

#### Vegetable oils

Packed-microbore supercritical fluid chromatography with flame ionization detection of abused vegetable oils 540(1991)271

Separation of triacylglycerols by supercriticalfluid argentation chromatography 550(1991)765

# Vesicle chromatography

Determination of size limits of membrane separation in vesicle chromatography by fractionation of polydisperse dextran 542(1991)239

#### Vessel geometry

Partitioning of cells in dextran-poly(ethylene glycol) aqueous phase systems. A study of settling time, vessel geometry and sedimentation effects on the efficiency of separation 542(1991)397

#### Vinyl alcohol copolymer, C18-bonded

Peptide behaviour and analysis on a chemically stable  $C_{18}$ -bonded vinyl alcohol copolymer column with alkaline and acidic eluents 506(1990)327

# Vinylpyridine polymers

Evaluation of vinylpyridine and vinylpyridinium polymers as column packings for highperformance liquid chromatography (Review) 544(1991)219

#### Vinylpyridinium polymers

Evaluation of vinylpyridine and vinylpyridinium polymers as column packings for highperformance liquid chromatography (Review) 544(1991)219

#### Viscosity

Effect of sample viscosity in high-performance size-exclusion chromatography and its control 550(1991)705

#### Viscous flow

Two-dimensional viscous flow analysis in a micro flow-cell of an ultraviolet absorption detector for high-performance liquid chromatography 549(1991)101

# Volatile components

Characterization of volatile components in apricot purées by gas chromatography-mass spectrometry 518(1990)221

New sensitive method for the examination of the volatile flavor fraction of cabernet sauvignon wines 522(1990)315



# Wall coating effects

Surface treatment effects in microcolumn liquid chromatography 540(1991)77

# Water analysis

Environmental applications of ion chromatography (Review) 504(1990)211

# Water, penetration into xerogels

Surface affinity chromatographic separation of blood cells. VII. Relationship between capacity factors of human peripheral blood cells and the rate of penetration of liquids into xerogel column packings 504(1990)69

# Water trap

Adsorption/thermal desorption for the determination of volatile organic compounds in water 537(1991)321

# Wavelength ratios

Standardization of a multi-wavelength UV detector for liquid chromatography-based toxicological analysis 550(1991)449

# Western blotting

Hadamard transform photothermal deflection densitometry of electrophoretically blotted proteins 511(1990)341

Purification of a recombinantly produced transmembrane protein (gp41) of HIV I 521(1990)267

Analysis, purification and properties of a 50 000dalton membrane-associated phosphoprotein from human platelets 521(1990)335

# Wheat straw

Size-exclusion chromatography of lignocellulosics in wheat straw 536(1991)303

# Whey hydrolysate

Monitoring and purification of gluconic and galactonic acids produced during fermentation of whey hydrolysate by *Gluconobacter oxydans* 507(1990)321

#### Wiener number, three-dimensional

Application of topographic indices to chromatographic data: calculation of the retention indices of alkanes 540(1991)430

# Window diagrams

Use of chromatographic models for computerized optimization of coupling-point pressure in dual-column gas chromatography 517(1990)161

# Wines

New sensitive method for the examination of the volatile flavor fraction of cabernet sauvignon wines 522(1990)315

Separation and identification of free phenolic acids in wines by high-performance liquid chromatography 537(1991)93

# Wire stripping

Application of ion chromatography to failure analysis of electronics packaging 546(1991)347



# Xerogels

Surface affinity chromatographic separation of blood cells. VII. Relationship between capacity factors of human peripheral blood cells and the rate of penetration of liquids into xerogel column packings 504(1990)69

# X-Ray crystallography

High-performance liquid chromatography of amino acids, peptides and proteins. C. Characterisation of coulombic interactive regions on hen lysozyme by high-performance liquid anion-exchange chromatography and computer graphic analysis 517(1990)317

# **X-Ray fluorescence**

Use of isotachophoresis as a reference method for the simultaneous determination of barium and strontium 545(1991)475

# Y

# Yadanzi

Determination of the anticancer drug bruceoside-A in the Chinese drug Yadanzi (Brucea Javanica Merr.) 543(1991)250

# Z

# Zirconia-based carbon-polymer composite

Evaluation of a zirconia-based carbon-polymer composite reversed-phase chromatographic support 519(1990)31

# Zone dispersion, field-flow fractionation

Characterization of polymers by thermal field-flow fractionation 517(1990)405

# Zone resistance

Isotachophoresis with two leading ions and migration behaviour in capillary zone electrophoresis. I. Isotachophoresis with two leading ions 508(1990)3

# Zwitterionic bonded phase

Polar bonded phase with the zwitterionic sulfobetaine functional group. Comparison to silica 544(1990)113