



LIST OF CONTENTS

Number 1

Publisher's note	vii
<i>Regular papers</i>	
Development of a chiral assay for a novel, nonfluorinated quinolone, PGE-9509924, in dog plasma using high performance liquid chromatography with electrospray tandem mass spectrometry or fluorescence detection P.H. Zoutendam, J.F. Canty, M.J. Martin, M.K. Dirr (Mason, OH, USA)	1
Determination of codeine and its metabolite in human urine by CE with amperometric detection T. Zhou, H. Yu, Q. Hu, Y. Fang (Shanghai, PR China)	13
Simultaneous determination of domperidone maleate and cinnarizine in a binary mixture using derivative ratio spectrophotometry and classical least squares calibration M.Y. Salem, M.G. El-Bardicy, M.F. El-Tarras, E.S. El-Zanfally (Cairo, Egypt).	21
Stability indicating methods for the determination of clozapine N.Y. Hasan, M.A. Elkawy, B.E. Elzeany, N.E. Wagieh (Cairo, Egypt).	35
Stability-indicating HPLC assays for the determination of prilocaine and procaine drug combinations M.L. Storms, J.T. Stewart (Athens, GA, USA).	49
Flow injection photochemical spectrofluorimetry for the determination of carbamazepine in pharmaceutical preparations C. Huang, Q. He, H. Chen (Hangzhou, PR China)	59
Simultaneous determination of terpene lactones and flavonoid aglycones in <i>Ginkgo biloba</i> by high-performance liquid chromatography with evaporative light scattering detection W. Li, J.F. Fitzloff (Chicago, IL, USA).	67
Simultaneous determination of binary mixtures of trimethoprim and sulfamethoxazole or sulphamethoxy-pyridazine by the bivariate calibration spectrophotometric method L. López-Martínez, P.L. López-de-Alba, L.M. de-León-Rodríguez, M.L. Yopez-Murrieta (Guanajuato, Mexico).	77
Experimental substantiation of the possibility of developing selenium- and iodine-containing pharmaceuticals based on blue-green algae <i>Spirulina platensis</i> L.M. Mosulishvili, E.I. Kirkesali, A.I. Belokobylsky, A.I. Khizanishvili (Tbilisi, Georgia), M.V. Frontasyeva, S.S. Pavlov, S.F. Gundorina (Dubna, Russia)	87
Investigation of 4,5-epoxymorphinan degradation during analysis by HPLC M.A. Quarry, D.S. Sebastian (Wilmington, DE, USA), F. Diana (Chadds Ford, PA, USA)	99
Determination of diphenhydramine hydrochloride in some single tertiary alkylamine pharmaceutical preparations by flow injection spectrophotometry P. Tipparat, S. Lapanantnoppakhun, J. Jakmunee, K. Grudpan (Chiang Mai, Thailand)	105

A sensitive LC-MS/MS assay for the determination of dextromethorphan and metabolites in human urine—application for drug interaction studies assessing potential CYP3A and CYP2D6 inhibition S.S. Vengurlekar, J. Heitkamp, F. McCush, P.R. Velagaleti (Columbia, MO, USA), J.H. Brisson, S.L. Bramer (Rockville, MD, USA)	113
Solid-state carbon NMR characterization of the polymorphs of roxifiban R.D. Vickery, G.A. Nemeth (Wilmington, DE, USA), M.B. Maurin (Boothwyn, PA, USA)	125
Differential pulse adsorption voltammetry for determination of procaine hydrochloride at a pumice modified carbon paste electrode in pharmaceutical preparations and urine C.Y. Wang, X.Y. Hu, G.D. Jin, Z.Z. Leng (Yangzhou, People's Republic of China)	131
The in vitro metabolism of thalicarpine, an aporphine–benzyltetrahydroisoquinoline alkaloid, in the rat: API-MS/MS identification of thalicarpine and metabolites W.-N. Wu, L.A. McKown (Spring House, PA, USA)	141
¹ H-NMR study of the effect of acetonitrile on the interaction of ibuprofen with human serum albumin Z. Ji, H. Yuan, M. Liu, J. Hu (Wuhan, People's Republic of China)	151
<i>Short communications</i>	
Analysis of proprietary Chinese medicines for the presence of toxic ingredients by LC/MS/MS S.-k. Wong, S.-k. Tsui, S.-y. Kwan (Homantin, Hong Kong)	161
High performance liquid chromatography for routine monitoring of serum flecainide R. Nakagawa (Saitama, Japan), M. Homma, K. Kuga, I. Yamaguchi (Ibaraki, Japan), D. Kobayashi, Y. Morimoto (Saitama, Japan), Y. Kohda (Ibaraki, Japan)	171

Number 2

Regular papers

LC method for the analysis of Oxiconazole in pharmaceutical formulations J. Milano, L.M. Morsch, S.G. Cardoso (Santa Maria, Brazil)	175
Polymeric membrane ion-selective electrode for determination of bismuth (III) in pharmaceutical substances S.V. Kharitonov (Tver, Russia)	181
Correlation of tramadol pharmacokinetics and CYP2D6*10 genotype in Malaysian subjects S.H. Gan, R. Ismail, W.A. Wan Adnan, Z. Wan (Kubang Kerian, Malaysia)	189
Formation of novel toxic compounds from oxidative interaction between salsolinol and cysteine F. Zhang (Skillman, NJ, USA)	197
A chiral HPLC method for the determination of low amounts of D-carnitine in L-carnitine after derivatization with (+)-FLEC S. Freimüller, H. Altorfer (Zurich, Switzerland)	209
Voltammetric analysis of trazodone HCl in pharmaceuticals and biological fluids N. EL-Enany, F. Belal, M.S. Rizk (Mansoura, Egypt)	219
Investigation of the effects of grinding and co-grinding on physicochemical properties of glisentide P. Mura, M. Cirri, M.T. Faucci (Firenze, Italy), J.M. Ginès-Dorado (Sevilla, Spain), G.P. Bettinetti (Pavia, Italy)	227
Specific, sensitive and accurate LC–MS/MS method for the measurement of levovirin in rat and monkey plasma C.-c. Lin, J.Y.N. Lau (Costa Mesa, CA, USA)	239
Simultaneous determination of amphetamine and one of its metabolites by HPLC with electrochemical detection N.A. Santagati, G. Ferrara, A. Marrazzo, G. Ronsisvalle (Catania, Italy)	247

Polarographic determination of benzaldehyde in benzyl alcohol and sodium diclofenac injection formulations A.G. Kazemifard (Tehran, Iran), D.E. Moore (Sydney, Australia), A. Mohammadi (Tehran, Iran)	257
Polyoxyethylene- $\Delta^{9,11}$ -didehydrostearate and glycerol-polyoxyethylene- $\Delta^{9,11}$ -didehydrostearate: two new components of the non-ionic emulsifier Cremophor® EL T. Meyer (Freiburg im Breisgau, Germany), D. Waidelich (Langen, Germany), A.W. Frahm (Freiburg im Breisgau, Germany).	263
A RP-LC method with evaporative light scattering detection for the assay of simethicone in pharmaceutical formulations D.E. Moore, T.X. Liu, W.G. Miao (Sydney, Australia), A. Edwards, R. Elliss (Caringbah, Australia)	273
Voltammetric determination of fenbendazole in veterinarian formulations M.F. de Oliveira, N.R. Stradiotto (Araraquara, Brazil)	279
Development and validation of an LC assay for sumatriptan succinate residues on surfaces in the manufacture of pharmaceuticals M.J. Nozal, J.L. Bernal, L. Toribio, M.T. Martín, F.J. Díez (Valladolid, Spain)	285
Chiral separation of pemoline enantiomers by cyclodextrin-modified micellar capillary chromatography C. Zhu, X. Lin, Y. Wei (Jinan, People's Republic of China)	293
Highly sensitive liquid chromatography-tandem mass spectrometry method for quantification of a new bone anabolic agent, TAK-778, in human serum K. Teshima, T. Kondo, C. Maeda, T. Oda, T. Hagimoto, R. Tsukuda, Y. Yoshimura (Osaka, Japan)	299
Verapamil drug metabolism studies by automated in-tube solid phase microextraction M. Waller (Hanover, Germany), W.M. Mullett (Waterloo, Canada), K. Levsen, J. Borlak, G. Wunsch (Hanover, Germany), J. Pawliszyn (Waterloo, Canada).	307
NMR spectroscopy: a useful tool for characterisation of plant extracts, the case of supercritical CO ₂ arnica extract A.R. Bilia, M.C. Bergonzi, G. Mazzi, F.F. Vincieri (Florence, Italy)	321
Renal excretion profiles of psilocin following oral administration of psilocybin: a controlled study in man F. Hasler (Zürich, Switzerland), D. Bourquin, R. Brenneisen (Bern, Switzerland), F.X. Vollenweider (Zürich, Switzerland)	331
Separation of tricyclic antidepressants by capillary zone electrophoresis with <i>N,N,N',N'</i> -tetramethyl-1,3-butanediamine (TMBD) as an effective electrolyte additive C. Dell'Aquila (Rome, Italy).	341
<i>Short communications</i>	
Validation of a LC method for the analysis of phenolic compounds from aqueous extract of <i>Phyllanthus niruri</i> aerial parts T.P. De Souza, M.H. Holzschuh, M.I. Lionço, G. González Ortega, P.R. Petrovick (Porto Alegre, Brazil)	351
Two derivative spectrophotometric determinations of indapamide in pharmaceutical dosage forms İ. Süslü, S. Altunöz (Ankara, Turkey).	357
Simultaneous detection of hippuric acid and methylhippuric acid in urine by empore™ disk and gas chromatography–mass spectrometry T. Saito, S. Takeichi (Kanagawa, Japan).	365
Comparison of UV- and second derivative-spectrophotometric and LC methods for the determination of valsartan in pharmaceutical formulation S. Tatar, S. Sağlık (İstanbul, Turkey).	371

Number 3

Publishers note	vii
Special Issue: 12 th International Symposium on Pharmaceutical and Biomedical Analysis (PBA 2001)	
Edited by: C.E. Lunte	
LC-MS-MS determination of nemorubicin (methoxymorpholinyl-doxorubicin, PNU-152243A) and its 13-OH metabolite (PNU-155051A) in human plasma D. Fraier, E. Frigerio, G. Brianceschi, C.A. James (Milan, Italy)	377
Reverse phase HPLC for polar lipids. Simple and selective HPLC procedures for analysis of phospholipid-based derivatives of valproic acid and various non-steroidal anti-inflammatory drugs V. Ioffe, T. Kalendarev, I. Rubinstein, G. Zupkovitz (Rehovot, Israel)	391
Determination of protein–drug binding constants by pressure-assisted capillary electrophoresis (PACE)/frontal analysis (FA) Z. Jia, T. Ramstad, M. Zhong (Kalamazoo, MI, USA)	405
A new sensitive HPLC assay for methoxyamine and its analogs E. Wang, E. Struble (Menlo Park, CA, USA), P. Liu (Bethesda, MD, USA), A.P. Cheung (Menlo Park, CA, USA)	415
Development of a sensitive bioanalytical method for determination of PNU-83757 in rat, monkey and human plasma: from LC-UV to LC-MS/MS M.G. Williams, E.M. Shobe, B.E. Bothwell, W.Z. Zhong (Kalamazoo, MI, USA)	429
Enantioseparation of vesamicol in human serum by capillary electrophoresis with solid phase extraction and sulfated- β -cyclodextrin M. Zhou, J.T. Stewart (Athens, GA, USA)	443
<i>Regular papers</i>	
An evaluation of direct orthogonal signal correction and other preprocessing methods for the classification of clinical study lots of a dermatological cream J. Luybaert (Brussels, Belgium), S. Heuerding (Basel, Switzerland), S. de Jong (Vlaardingen, The Netherlands), D.L. Massart (Brussels, Belgium)	453
Near infrared transfectance spectroscopy: Determination of dexketoprofen in a hydrogel M. Blanco, M.A. Romero (Bellaterra, Spain)	467
Determination of ethamsylate in pharmaceutical preparations based on an auto-oxidation chemiluminescence reaction F. Yang, C. Zhang (Beijing, People's Republic of China), W.R.G. Baeyens (Ghent, Belgium), X. Zhang (Beijing, People's Republic of China)	473
First derivative ratio spectrophotometric, HPTLC-densitometric, and HPLC determination of nicergoline in presence of its hydrolysis—induced degradation product A.K.S. Ahmad, M.A. Kawy, M. Nebsen (Cario, Egypt)	479
Determination of minocycline by oxidative coupling and diazocoupling reactions in pharmaceutical formulations A.V.S.S. Prasad, C.S.R. Lakshmi, C.S.P. Sastry, V.P. Uppuleti (Visakhapatnam, India)	491
Identification of degradation products of Ibuprofen arising from oxidative and thermal treatments G. Caviglioli, P. Valeria, P. Brunella, C. Sergio (Genova, Italy), A. Attilia (Giuliano Milanese, Italy), B. Gaetano (Genova, Italy)	499
Determination of a new reversible proton pump inhibitor, DBM-819, in human plasma and urine, and rat tissue homogenates by high-performance liquid chromatography E.J. Kim, M.H. Lee (Seoul, South Korea), S.H. Kim (Gangnung, Gangwon-Do, South Korea), S.-O. Kim, D.H. Lee, H. Lim (Taejeon, South Korea), H.S. Lee (Iksan, South Korea), M.G. Lee (Seoul, South Korea)	511
Determination of a new isoquinolinedione derivative, 7-anilino-5,8-isoquinolinedione, in plasma, urine and tissue homogenates by high-performance liquid chromatography S.H. Kim (Gangwon-Do, South Korea), Y.J. Moon, C.-K. Ryu, M.G. Lee (Seoul, South Korea)	519

Determination of a new phosphodiesterase V inhibitor, DA-8159, in plasma and urine by high-performance liquid chromatography H.J. Shim (Seoul, Kyunggi-Do, South Korea), E.J. Lee (Seoul, South Korea), Y.H. Jung (Kyunggi-Do, South Korea), S.H. Kim (Gangwon-Do, South Korea), S.H. Kim, M. Yoo, J.W. Kwon, W.B. Kim (Kyunggi-Do, South Korea), M.G. Lee (Seoul, South Korea)	527
Simultaneous dissolution profiles of two drugs, sulfadiazine-trimethoprim and amitriptyline-perphenazine, in solid oral dosage forms by a FIA manifold provided with a single spectrophotometric detector A.M. Gálvez, J.V.G. Mateo, J. Martínez Calatayud (Valencia, Spain).	535
Flow injection biamperometric determination of captopril M.E. Palomeque, B.S.F. Band (Bahía Blanca, Argentine)	547
Studies and analytical application of reaction of imipramine with chrome azurol S B. Starczewska, P. Hałaburda, A. Kojło (Białystok, Poland).	553
Liquid chromatographic determination of fluoxetine M.A. El-dawy, M.M. Mabrouk, F.A. El-Barbary (Tanta, Egypt)	561
Determination of nifedipine in human plasma by square wave adsorptive stripping voltammetry N. Özaltın, C. Yardımcı, I. Süslü (Ankara, Turkey)	573
A validated high performance liquid chromatographic method for analysis of isosorbide mononitrate in bulk material and extended release formulations R.K. Verma, S. Garg (SAS Nagar, India)	583
Determination of 5-methoxypsoralen in human serum L.-H. Wang, M. Tso (Tainan, Taiwan).	593
Flow injection potentiometric determination of amantadine HCl N.T. Abdel-Ghani, A.F. Shoukry, S.H. Hussein (Giza, Egypt)	601
Stability of the constituents of Calendula, Milk-thistle and Passionflower tinctures by LC-DAD and LC-MS A.R. Bilia, M.C. Bergonzi, S. Gallori, G. Mazzi, F.F. Vincieri (Firenze, Italy).	613
Protometric thermometric titrations of sparingly soluble compounds in water in the presence of <i>n</i> -octanol G. Burgot, J.-L. Burgot (Rennes, France)	625
Isolation and characterization of process-related impurities in linezolid K.V.S.R. Krishna Reddy, S. Mahender Rao, G. Om Reddy, T. Suresh, J. Moses Babu, P.K. Dubey, K. Vyas (Hyderabad, India)	635
LC method for the analysis of cefetamet pivoxil hydrochloride in drug substance and powder for oral suspension L.M. Morsch (Santa Cruz do Sul, Brazil), C.F. Bittencourt, M.J. e Souza (Santa Cruz do Sul, Santa Maria, Brazil), J. Milano (Santa Cruz do Sul, Brazil)	643
Determination of nitrofurantoin drug in pharmaceutical formulation and biological fluids by square-wave cathodic adsorptive stripping voltammetry E. Hammam (Tanta, Egypt)	651
Simultaneous determination of amoxicillin and clavulanic acid in human plasma by HPLC with UV detection G. Hoizey, D. Lamiable, C. Frances, T. Trenque, M. Kaltenbach, J. Denis, H. Millart (Reims, France).	661
Potentiometric determination of fentanyl in pharmaceutical formulations L.J. Peng, M.L. Wen, Y. Yao (Kunming, People's Republic of China)	667
Simultaneous determination of five HIV protease inhibitors nelfinavir, indinavir, ritonavir, saquinavir and amprenavir in human plasma by LC/MS/MS J. Chi (San Francisco, CA, Houston, TX, USA), A.L. Jayewardene, J.A. Stone, T. Motoya, F.T. Aweeka (San Francisco, CA, USA)	675

Spectrophotometric determination of vitamin B ₁ in a pharmaceutical formulation using triphenylmethane acid dyes S. Liu, Z. Zhang, Q. Liu, H. Luo, W. Zheng (Chongqing, PR China)	685
Determination of zafirlukast by stability indicating LC and derivative spectrophotometry T. Radhakrishna (Visakhapatnam, India), J. Satyanarayana (Gaddapotaram, India), A. Satyanarayana (Visakhapatnam, India)	695
Voltammetric determination of josamycin (a macrolide antibiotic) in dosage forms and spiked human urine F. Belal, A. Al-Majed (Riyadh, Saudi Arabia), K.E.E. Ibrahim (Khartoum, Sudan), N.Y. Khalil (Riyadh, Saudi Arabia)	705
Spectrophotometric quantitative determination of cilazapril and hydrochlorothiazide in tablets by chemometric methods E. Dinç (Ankara, Turkey), D. Baleanu (Ankara, Turkey; Bucharest, Romania)	715
Drug-selective electrode for ketamine determination in pharmaceutical preparations and electrochemical study of drug with BSA N. Alizadeh, R. Mehdipour (Tehran, Iran)	725
Immunoenzymometric assay for recombinant methioninase in biological fluids G. Kominami, T. Agou, A. Kanda, M. Ohno (Osaka, Japan)	733
Evaluation of lipophilicity of some benzimidazole and benzotriazole derivatives by RP HPTLC and PCA C. Sârbu (Cluj-Napoca, Romania), T. Djaković-Sekulić, N. Perišić-Janjić (Novi Sad, Yugoslavia)	739
Development and validation of a stability-indicating HPLC method for the simultaneous determination of Losartan potassium, hydrochlorothiazide, and their degradation products D.L. Hertzog, J.F. McCafferty, X. Fang, R.J. Tyrrell, R.A. Reed (West Point, PA, USA).	747
Spectrophotometric determination of diaminopyrimidines using benzoquinone A. Numan, B.A. Musial, N.D. Danielson (Oxford, OH, USA)	761
Identification of <i>N</i> ¹ -methyl-2-pyridone-5-carboxamide and <i>N</i> ¹ -methyl-4-pyridone-5-carboxamide as components in urine extracts of individuals consuming coffee P. Wong, A. Bachki, K. Banerjee, B. Leyland-Jones (Montreal, Canada)	773
Rapid determination of serum melatonin by ESI-MS-MS with direct sample injection S. Yang, X. Zheng, Y. Xu, X. Zhou (Cleveland, OH, USA)	781
Simultaneous determination of dextromethorphan, diphenhydramine and phenylephrine in expectorant and decongestant syrups by capillary electrophoresis M.R. Gomez, R.A. Olsina, L.D. Martínez, M.F. Silva (San Luis, Argentina)	791
HPLC assay for albendazole and metabolites in human plasma for clinical pharmacokinetic studies D. Kitzman, K.-J. Cheng, L. Fleckenstein (Iowa City, IA, USA)	801
Simultaneous determination of ingredients in a vitamin-enriched drink by micellar electrokinetic chromatography H. Okamoto, T. Nakajima, Y. Ito (Saitama, Japan)	815
Direct chiral separation of troglitazone stereoisomers using reversed-phase high-performance liquid chromatography N. Suzuki, A. Takemura, A. Miyamoto, T. Yoshioka, S. Tsutsumi, T. Kawasaki (Tokyo, Japan)	823
<i>Short communications</i>	
Polarographic determination of propranolol in pharmaceutical formulation M.A. El-Ries (Cairo, Egypt), M.M. Abou-Sekkina (, Egypt), A.A. Wassel (Cairo, Egypt)	837
RP-HPLC determination of puerarin in Chinese traditional medicinal preparations containing pueraria B.-S. Yu, X.-P. Yan, G.-B. Zhen, Y.-P. Rao (Zhanjiang, People's Republic of China)	843

Simultaneous spectrophotometric determination of sulfadoxine and pyrimethamine in pharmaceutical formulations J.O. Onah, J.E. Odeiani (Jos, Nigeria)	851
Determination of some histamine H ₁ -receptor antagonists in dosage forms A.A. Gazy, H. Mahgoub, F.A. El-Yazbi, M.A. El-Sayed, R.M. Youssef (Alexandria, Egypt)	859
Determination of CMC of sodium glucocorticoides hemisuccinates by CE Y. Mrestani (Halle/S., Germany), S. Claussen (Jena, Germany), R.H.H. Neubert (Halle/S., Germany)	869
In vitro study of enzymatic hydrolysis of dipiperodon enantiomers in blood serum by two-dimensional LC K. Hroboňová, J. Lehotay, J. Čížmárik (Bratislava, Slovak Republic), D.W. Armstrong (Ames, IA, USA)	875
The determination of levofloxacin by flow injection analysis using UV detection, potentiometry, and conductometry in pharmaceutical preparations G. Altioğka, Z. Atkosar, N.O. Can (Eskisehir, Turkey)	881
Spectrofluorimetric assay for the photodegradation products of alprazolam N.S. Nudelman, C. Gallardo Cabrera (Buenos Aires, Argentina)	887
Calendar of forthcoming events	895

Number 4

Development and validation of a highly sensitive RIA for zoledronic acid, a new potent heterocyclic bisphosphonate, in human serum, plasma and urine F. Legay (Basel, Switzerland), S. Gauron, F. Deckert, G. Gosset (Rueil Malmaison, France), U. Pfaar (Basel, Switzerland), C. Ravera (East Hanover, NJ, USA), H. Wiegand (Basel, Switzerland), H. Schran (East Hanover, NJ, USA)	897
New approaches for quantifying hyaluronic acid in pharmaceutical semisolid formulations using HPLC and CZE J.A. Alkrad, Y. Merstani, R.H.H. Neubert (Halle/S., Germany)	913
Determination of verapamil by adsorptive stripping voltammetry in urine and pharmaceutical formulations E.A. Kasim, M.A. Ghandour (Assiut, Egypt), M.T. El-Haty, M.M. Ahmed (Aswan, Egypt)	921
A sequential injection analysis system for potassium clavulanate determination using two potentiometric detectors A.M. Pimenta, A.N. Araújo, M.C.B.S.M. Montenegro (Porto, Portugal)	931
Anti- and pro-oxidant activity of water soluble compounds in <i>Cichorium intybus</i> var. <i>silvestre</i> (Treviso red chicory) A. Papetti, M. Daglia, G. Gazzani (Pavia, Italy)	939
Determination of undecylenic and sorbic acids in cosmetic preparations by high performance liquid chromatography with electrochemical detection E. Bousquet, A. Spadaro, N.A. Santagati (Catania, Italy), S. Scalia (Ferrara, Italy), G. Ronsisvalle (Catania, Italy)	947
Determinations of zidovudine/didanosine/nevirapine and zidovudine/didanosine/ritonavir in human serum by micellar electrokinetic chromatography B. Fan, J.T. Stewart (Athens, GA, USA)	955
Determination of moxifloxacin in human plasma by liquid chromatography electrospray ionization tandem mass spectrometry K. Vishwanathan, M.G. Bartlett, J.T. Stewart (Athens, GA, USA)	961
HPLC analysis of the novel antipsychotic drug quetiapine in human plasma R. Mandrioli (Bologna, Italy), S. Fanali (Roma, Italy), A. Ferranti, M.A. Raggi (Bologna, Italy)	969
Determination of diminazene aceturate in pharmaceutical formulations by HPLC and identification of related substances by LC/MS C. Atsriku, D.G. Watson, J.N.A. Tettey, M.H. Grant, G.G. Skellern (Glasgow, UK)	979

Simple determination of propranolol in pharmaceutical preparations by heavy atom induced room temperature phosphorescence B. Cañabate Díaz, C. Cruces Blanco, A. Segura Carretero, A. Fernández Gutiérrez (Granada, Spain)	987
Simultaneous LC determination of tiazofurin, its acetyl and benzoyl esters and their active metabolite thiazole-4-carboxamide adenine dinucleotide in biological samples J. Tasic, S. Ristic, V. Piperski, M. Dacevic, V. Pejanovic, M. Jokanovic, L. Mandic (Belgrade, Yugoslavia)	993
LC/MS determination of the enaminoxones E139, DM5 and DM27 in rat serum M.E. Abdel-Hamid, I.O. Edafiogho (Safat, Kuwait), K.R. Scott (Washington, DC, USA)	1001
Sensitive determination of nefopam and its metabolite desmethyl-nefopam in human biological fluids by HPLC G. Aymard, D. Warot, P. Demolis, I. Laville, B. Diquet (Paris, France)	1013
Triiodide ion and alizarin red S as two new reagents for the determination of clotrimazole and ketoconazole K. Farhadi, R. Maleki (Urmia, Iran)	1023
Determination of ketoprofen enantiomers in human serum by capillary zone electrophoresis: man pharmacokinetic studies after administration of rac-ketoprofen tablets F.K. Główska (Poznań, Poland)	1035
Determination of sugars in Chinese traditional drugs by CE with amperometric detection Q. Hu (Nanjing, China), T. Zhou (Shanghai, China), G. Hu (Nanjing, China), Y. Fang (Shanghai, China)	1047
Direct determination of ranitidine and famotidine by CE in serum, urine and pharmaceutical formulations T. Pérez-Ruiz, C. Martínez-Lozano, V. Tomás, E. Bravo, R. Galera (Murcia, Spain)	1055
Determination of doxorubicin and its metabolites in rat serum and bile by LC: application to preclinical pharmacokinetic studies Q. Zhou, B. Chowbay (Singapore, Singapore)	1063
Monitoring of ampicillin and its related substances by NMR M. Shamsipur (Kermanshah, Iran), Z. Talebpour, H.R. Bijanzadeh (Tehran, Iran), S. Tabatabaei (Tabriz, Iran)	1075
¹⁹ F NMR spectrometric determination of the partition coefficients of some fluorinated psychotropic drugs between phosphatidylcholine bilayer vesicles and water A.A. Omran, K. Kitamura, S. Takegami, M. Kume, M. Yoshida (Kyoto, Japan), A.-A.Y. El-Sayed, M.H. Mohamed, M. Abdel-Mottaleb (Assiut, Egypt)	1087
Analysis of β -lactam antibiotics by high performance liquid chromatography–atmospheric pressure chemical ionization mass spectrometry using bromoform S. Horimoto, T. Mayumi, K. Aoe, N. Nishimura, T. Sato (Osaka, Japan)	1093
Determination of the antibacterial ofloxacin in human urine and serum samples by solid-phase spectrofluorimetry O. Ballesteros, J.L. Vilchez, A. Navalón (Granada, Spain)	1103
Quantitative determination of polymorphic composition in intact compacts by parallel-beam X-ray powder diffractometry W. Cao (West Lafayette, IN, USA), S. Bates (Chestnut Ridge, NY, USA), G.E. Peck, P.L.D. Wildfong, Z. Qiu, K.R. Morris (West Lafayette, IN, USA)	1111
Simultaneous determination of amiloride hydrochloride and hydrochlorothiazide in synthetic samples and pharmaceutical formulations by multivariate analysis of spectrophotometric data M.C.F. Ferraro, P.M. Castellano, T.S. Kaufman (Rosario, Argentina)	1121
Spectrophotometric determination of omeprazole, lansoprazole and pantoprazole in pharmaceutical formulations A.-A.M. Wahbi, O. Abdel-Razak, A.A. Gazy, H. Mahgoub, M.S. Moneeb (Alexandria, Egypt)	1133
Quantitative and structural determination of pseudoephedrine sulfate and its related compounds in pharmaceutical preparations using high-performance liquid chromatography N. Wu, W. Feng, E. Lin, G. Chen, J. Patel, T.-M. Chan, B. Pramanik (Kenilworth, NJ, USA)	1143

LC-MS/MS determination of a farnesyl transferase inhibitor in human plasma and urine M.E. DePuy, D.G. Musson, S. Yu, A.L. Fisher (West Point, PA, USA)	1157
Assessment of solid-state interactions of naproxen with amorphous cyclodextrin derivatives by DSC G.P. Bettinetti, M. Sorrenti, S. Rossi, F. Ferrari (Pavia, Italy), P. Mura, M.T. Faucci (Firenze, Italy)	1173
Comparative studies of the influence of cyclodextrins on the stability of the sunscreen agent, 2-ethylhexyl- <i>p</i> -methoxycinnamate S. Scalia, A. Casolari, A. Iaconinoto, S. Simeoni (Ferrara, Italy)	1181
Spectrofluorometric determination of labetolol in pharmaceutical preparations and spiked human urine through the formation of coumarin derivative F. Belal, S. Al-Shaboury, A.S. Al-Tamrah (Riyadh, Saudi Arabia)	1191
Derivation of system suitability test limits from a robustness test on an LC assay with complex antibiotic samples E. Hund, Y. Vander Heyden, D.L. Massart, J. Smeyers-Verbeke (Brussels, Belgium)	1197
Simultaneous LC determination of trimethoprim and sulphamethoxazole in pharmaceutical formulations C. Akay, S.A. Özkan (Ankara, Turkey)	1207
Electrochemical behaviour and determination of acrivastine in pharmaceuticals and human urine R. Fernández Torres, M. Callejón Mochón, J.C. Jiménez Sánchez, M.A. Bello López, A. Guiraúm Perez (Seville, Spain)	1215
Infrared imaging of laser-induced heating during Raman spectroscopy of pharmaceutical solids J. Johansson, S. Pettersson, L.S. Taylor (Möln dal, Sweden)	1223
Use and validation of NMR assays for the identity and <i>O</i> -acetyl content of capsular polysaccharides from <i>Neisseria meningitidis</i> used in vaccine manufacture C. Jones, X. Lemercinier (Herts, UK)	1233
A high performance liquid chromatography method for simultaneous determination of albendazole metabolites in human serum A. Mirfazaelian, S. Dadashzadeh, M.R. Rouini (Tehran, Iran)	1249
Simultaneous determination of dexamethasone and trimethoprim by liquid chromatography J.M. Lemus Gallego, J. Pérez Arroyo (Ciudad Real, Spain)	1255
Evaluation of essential parameters in the chromatographic determination of cyclosporin A and metabolites using a D-optimal design M. Hermann, H. Christensen, J.L.E. Reubsæet (Oslo, Norway)	1263
LC determination of moclobemide and three metabolites in plasma G. Misztal, R. Skibiński, M. Olajossy, B. Paw (Lublin, Poland)	1277
Photostability profiles of the experimental antitumour ruthenium complex NAMI-A M. Bouma, B. Nuijen, M.T. Jansen (Amsterdam, The Netherlands), G. Sava (Trieste, Italy), A. Bult (Utrecht, The Netherlands), J.H. Beijnen (Amsterdam, Utrecht, The Netherlands)	1287
Optimisation of collection, storage and preparation of rat plasma for ¹ H NMR spectroscopic analysis in toxicology studies to determine inherent variation in biochemical profiles S. Deprez, B.C. Sweatman, S.C. Connor, J.N. Haselden, C.J. Waterfield (Herts, UK)	1297
Direct determination of praziquantel in pharmaceutical formulations and human plasma by cathodic adsorptive stripping differential-pulse voltammetry M.M. Ghoneim, M.M. Mabrouk, A. Tawfik (Tanta, Egypt)	1311
Determination of bioequivalence of lomefloxacin tablets using urinary excretion data S.A. Shah, I.S. Rathod, S.S. Savale, D.B. Patel (Ahmedabad, India)	1319

Determination of capsaicinoids in topical cream by liquid–liquid extraction and liquid chromatography E. Kaale, A. Van Schepdael, E. Roets, J. Hoogmartens (Leuven, Belgium)	1331
Electrochemical biosensor for the interaction of DNA with the alkylating agent 4,4'-dihydroxy chalcone based on guanine and adenine signals B. Meric, K. Kerman, D. Ozkan, P. Kara, A. Erdem, O. Kucukoglu, E. Erciyas, M. Ozsoz (Izmir, Turkey)	1339
<i>Short communications</i>	
Colorimetric determination of β -blockers in pharmaceutical formulations A.S. Amin (Benha, Egypt), G.H. Ragab, H. Saleh (Zagazig, Egypt)	1347
Simultaneous determination of ibuprofen and hydroxypropylmethylcellulose (HPMC) using HPLC and evaporative light scattering detection M.R. Whelan, J.L. Ford, M.W. Powell (Liverpool, UK)	1355
Determination of taltirelin, a new stable thyrotropin-releasing hormone analogue, in human plasma by high-performance liquid chromatography turbo-ion-spray ionization tandem mass spectrometry S. Horimoto, T. Mayumi, K. Tagawa, H. Yamakita, M. Yoshikawa (Osaka, Japan)	1361
Determination of the 5-fluorouracil and NI(2'-furanidyl)uracil in the presence of tegafur by zero-crossing first derivative spectrometry I. Badea, D. Moja, A. Tudose, D. Stoicescu (Bucharest, Romania)	1371
A new second-derivative spectrophotometric method for the determination of permethrin in shampoo M. Kazempour (Tehran, Iran), E. Noroozian (Kerman, Iran), M. Saber Tehrani, M. Mahmoudian (Tehran, Iran) . . .	1379
Spectrophotometric determination of phenylephrine HCl and orphenadrine citrate in pure and in dosage forms S.A. Shama (Benha, Egypt)	1385
On-line coupling of SEC and RP–LC for the determination of structurally related enkephalins in cerebrospinal fluid T. Stroink, G. Wiese, J. Teeuwssen (Utrecht, The Netherlands), H. Lingeman (Amsterdam, The Netherlands), J.C.M. Waterval (Oss, The Netherlands), A. Bult, G.J. de Jong, W.J.M. Underberg (Utrecht, The Netherlands)	1393
An optimized method for the simultaneous determination of vitamins B ₁ , B ₆ , B ₁₂ , in multivitamin tablets by high performance liquid chromatography C.K. Markopoulou, K.A. Kagkadis (N. Erithrea, Greece), J.E. Koundourellis (Thessaloniki, Greece)	1403
Method development for determining the antibacterial linezolid in human serum by micellar electrokinetic capillary chromatography T. Kitahashi, I. Furuta (Osaka, Japan).	1411
Differential-pulse polarography determination of pipamperone in pharmaceutical formulations J.-E. Belgaied (Tunis, Tunisia), H. Trabelsi (Tunis-Carthage, Tunisia)	1417
Differential pulse cathodic stripping voltammetric determination of selenium in pharmaceutical products A.-I. Stoica, G.-R. Babaua, E.-E. Iorgulescu (Bucharest, Romania), D. Marinescu (Ramnicu Valcea, Romania), G.-E. Baiulescu (Bucharest, Romania)	1425

Number 5

Regular papers

Application of LC–NMR for the study of the volatile metabolite of MK-0869, a substance P receptor antagonist M.V.S. Elipe, S.-E.W. Huskey, B. Zhu (Rahway, NJ, USA)	1431
A double antibody radioimmunoassay for the determination of XV459, the active hydrolysis metabolite of roxifiban, in human plasma H.J. Pieniaszek Jr., A.F. Davidson (Newark, DE, USA), H.L. Walton, D.J. Pinto, R.E. Olson, T.M. Reilly (Wilmington, DE, USA), Y.C. Barrett (Vienna, VA, USA)	1441

Assessment of trace aluminium content in parenteral solutions by combined cloud point preconcentration—flow injection inductively coupled plasma optical emission spectrometry L.L. Sombra, M.O. Luconi, L.P. Fernández, R.A. Olsina, M.F. Silva, L.D. Martínez (San Luis, Argentina)	1451
High-throughput inhibition screening of major human cytochrome P450 enzymes using an in vitro cocktail and liquid chromatography–tandem mass spectrometry S.A. Testino Jr. (Marietta, GA, USA), G. Patonay (Atlanta, GA, USA)	1459
A SPME–GC procedure for monitoring peppermint flavor in tablets D.Y.-H. Yeung, T. Lee, G. Grant (Kirkland, Canada), M. Ma (Thousand Oaks, CA, USA), E. Kwong (Kirkland, Canada)	1469
Analysis of isoaspartate in a recombinant monoclonal antibody and its charge isoforms W. Zhang, M.J. Czupryn (Andover, MA, USA)	1479
2D-IR correlation analysis of deteriorative process of traditional Chinese medicine ‘Qing Kai Ling’ injection L. Zuo, S.-q. Sun, Q. Zhou, J.-x. Tao (Beijing, People’s Republic of China), I. Noda (West Chester, OH, USA)	1491
Flow injection determination of isoniazid using <i>N</i> -bromosuccinimide- and <i>N</i> -chlorosuccinimide-luminol chemiluminescence systems A. Safavi, M.A. Karimi, M.R.H. Nezhad (Shiraz, Iran)	1499
Determination of hydrochlorothiazide and rutin in Chinese herb medicines and human urine by capillary zone electrophoresis with amperometric detection Q. Wang, F. Ding, H. Li, P. He, Y. Fang (Shanghai, People’s Republic of China)	1507
Microcalorimetric studies to determine the enthalpy of solution of diclofenac sodium, paracetamol and their binary mixtures at 310.15 K R. Chadha, N. Kashid, D.V.S. Jain (Chandigarh, India)	1515
Investigation of salicylaldehyde-5-sulfonate as a precolumn derivatizing agent for the determination of <i>n</i> -alkane diamines, lysine, diaminopimelic acid, and isoniazid by capillary zone electrophoresis R. Driouich, T. Takayanagi, Mitsuko, Oshima, S. Motomizu (Okayama, Japan)	1523
Quantification of hyaluronic acid fragments in pharmaceutical formulations using LC–ESI–MS A.V. Kühn, K. Raith (Halle/Saale, Germany), V. Sauerland (Leipzig, Germany), R.H.H. Neubert (Halle/Saale, Germany)	1531
Development of generic continuous-flow enzyme immunoassay system for analysis of aminoglycosides in serum I.A. Darwish (Assiut, Egypt)	1539
Determination of progesterone in commercial formulations and in non conventional micellar systems V. Pucci, F. Bugamelli, R. Mandrioli, B. Luppi, M.A. Raggi (Bologna, Italy)	1549
The metabolism of 2-trifluoromethylaniline and its acetanilide in the rat by 19F NMR monitored enzyme hydrolysis and 1H/19F HPLC–NMR spectroscopy M. Tugnait (London, UK), E.M. Lenz (London, Macclesfield, UK), M. Hofmann, M. Spraul (Rheinstetten, Germany), I.D. Wilson (Macclesfield, UK), J.C. Lindon, J.K. Nicholson (London, UK)	1561
Rapid determination of lidocaine solutions with non-column chromatographic diode array UV spectroscopy and multivariate calibration K. Wiberg (Södertälje, Stockholm, Sweden), A. Hagman (Södertälje, Sweden), S.P. Jacobsson (Södertälje, Stockholm, Sweden)	1575
<i>Short communications</i>	
Capillary electrophoretic separation of drug enantiomers in human serum A. Taga (Higashi-Osaka, Japan), Y. Du (Higashi-Osaka, Japan; Nanjing, China), S. Suzuki, S. Honda (Higashi-Osaka, Japan)	1587

- A chromatographic method for rapid and simultaneous analysis of codeine phosphate, ephedrine HCl and chlorpheniramine maleate in cough-cold syrup formulation
D.J. Hood, H.Y. Cheung (, Hong Kong) 1595
- Identification and quantitation of antineoplastic compounds in chemotherapeutic infusion bags by use of HPTLC: application to the vinca-alkaloids
A. Paci, L. Mercier, P. Bourget (Villejuif, France) 1603
- Simultaneous determination of arylpropionic acidic non-steroidal anti-inflammatory drugs in pharmaceutical formulations and human plasma by HPLC with UV detection
Y. Sun, K. Takaba, H. Kido, M.N. Nakashima, K. Nakashima (Nagasaki, Japan) 1611

Number 6

Special Issue: The importance of Separation Techniques for Pharmaceutical, Biomedical and Environmental Analysis

Edited by: J. Haginaka and H. Lingeman

Preface

- J. Haginaka (Nishinomiya, Japan), H. Lingeman (Amsterdam, The Netherlands) 1623

Review papers

- On-line sample preconcentration techniques in micellar electrokinetic chromatography
J.-B. Kim, S. Terabe (Hyogo, Japan) 1625
- Microchip electrophoresis-based separation of DNA
L. Zhang (Tokushima, Nishinomiya, Japan), F. Dang (Tokushima, Japan), Y. Baba (Takamatsu, Japan) 1645
- Recent progress in derivatization methods for LC and CE analysis
T. Fukushima, N. Usui, T. Santa, K. Imai (Tokyo, Japan) 1655
- Analysis of carbohydrates as 1-phenyl-3-methyl-5-pyrazolone derivatives by capillary/microchip electrophoresis and capillary electrochromatography
S. Honda, S. Suzuki, A. Taga (Higashi-osaka, Japan) 1689
- Immobilized nicotinic receptor stationary phases: going with the flow in high-throughput screening and pharmacological studies
R. Moaddel, I.W. Wainer (Baltimore, MD, USA) 1715
- New label enzymes for bioluminescent enzyme immunoassay
M. Maeda (Tokyo, Japan) 1725
- LC or LC-MS techniques*
- Analysis of an anti-inflammatory steroidal drug, difluprednate, in aqueous humor by combination of semi-micro HPLC and column switching method
S.-i. Yasueda, M. Kimura, A. Ohtori, K. Kakehi (Osaka, Japan) 1735
- Measurement of bisphenol A levels in human blood serum and ascitic fluid by HPLC using a fluorescent labeling reagent
N. Kuroda, Y. Kinoshita, Y. Sun (Nagasaki, Japan), M. Wada (Akita, Japan), N. Kishikawa, K. Nakashima (Nagasaki, Japan), T. Makino (Kanagawa, Japan), H. Nakazawa (Tokyo, Japan) 1743
- Determination of inorganic anions via postcolumn reaction with iodide in ion chromatography
Y. Kitamaki, J.-Y. Jin, T. Takeuchi (Gifu, Japan) 1751
- Analysis of acetaminophen glucuronide conjugate accompanied by adduct ion production by liquid chromatography-atmospheric pressure chemical ionization-mass spectrometry
M. Ohta, N. Kawakami, S. Yamato, K. Shimada (Niigata, Japan) 1759

Sensitive determination of a β -lactam antibiotic, cefaclor by liquid chromatography with chemiluminescence detection M. Kai, H. Kinoshita, K. Ohta (Nagasaki, Japan), S. Hara (Fukuoka, Japan), M.K. Lee (Cheongju, South Korea), J. Lu (Nagasaki, Japan)	1765
Determination of hypnotic benzodiazepines (alprazolam, estazolam, and midazolam) and their metabolites in rat hair and plasma by reversed-phase liquid-chromatography with electrospray ionization mass spectrometry T. Toyo'oka, Y. Kumaki, M. Kanbori, M. Kato (Shizuoka, Japan), Y. Nakahara (Tokyo, Japan)	1773
Micro-HPLC and standard-size HPLC for the separation of peptide stereoisomers employing an ion-exchange principle C. Czerwenka, M. Lämmerhofer, W. Lindner (Vienna, Austria)	1789
Polymer-coated fibrous extraction medium for sample preparation coupled to microcolumn liquid-phase separations M. Imaizumi, Y. Saito (Toyohashi, Japan), M. Hayashida (Tokyo, Japan), T. Takeichi (Toyohashi, Japan), H. Wada (Fushimi-ku, Japan), K. Jinno (Toyohashi, Japan)	1801
Semi-micro column HPLC of triazolam in rat plasma and brain microdialysate and its application to drug interaction study with itraconazole K. Nakashima, K. Yamamoto (Nagasaki, Japan), O.Y. Al-Dirbashi (Kawagoe, Japan), A. Kaddoumi, M.N. Nakashima (Nagasaki, Japan)	1809
Stereospecific analysis of omeprazole in human plasma as a probe for CYP2C19 phenotype H. Kanazawa, A. Okada (Tokyo, Japan), M. Higaki (Kanagawa, Japan), H. Yokota, F. Mashige, K. Nakahara (Tokyo, Japan)	1817
Quantification of the isomerization of Asp residue in recombinant human α A-crystallin by reversed-phase HPLC Y. Sadakane, T. Yamazaki (Toyama, Japan), K. Nakagomi (Kanagawa, Japan), T. Akizawa (Hirakata, Japan), N. Fujii (Osaka, Japan), T. Tanimura, M. Kaneda, Y. Hatanaka (Toyama, Japan)	1825
Uniformly sized molecularly imprinted polymers for bisphenol A and β -estradiol: retention and molecular recognition properties in hydro-organic mobile phases H. Sanbe, J. Haginaka (Hyogo, Japan)	1835
<i>CE, CEC or CE-MS techniques</i>	
Investigation of chromatographic performances and binding characteristics of BSA-encapsulated capillary column prepared by the sol-gel method M. Kato, N. Matsumoto, K. Sakai-Kato, T. Toyo'oka (Shizuoka, Japan)	1845
Amino acid and peptide analysis using derivatization with <i>p</i> -nitrophenol-2,5-dihydroxyphenylacetate bis-tetrahydropyranyl ether and capillary electrophoresis with electrochemical detection M.J. Rose, S.M. Lunte, R.G. Carlson, J.F. Stobaugh (Lawrence, KS, USA)	1851
On-line preconcentration and enantioselective separation of triadimenol by electrokinetic chromatography using cyclodextrins as chiral selectors K. Otsuka, M. Matsumura, J.-B. Kim, S. Terabe (Kamigori, Japan)	1861
Role of phospholipids in drug-LDL bindings as studied by high-performance frontal analysis/capillary electrophoresis Y. Kuroda, Y. Watanabe, A. Shibukawa, T. Nakagawa (Kyoto, Japan)	1869
Determination of clotrimazole in mice plasma by capillary electrophoresis F. Wienen, S. Laug, K. Baumann, A. Schwab, S. Just, U. Holzgrabe (Würzburg, Germany)	1879
Evaluation of an atmospheric pressure chemical ionization interface for capillary electrophoresis-mass spectrometry Y. Tanaka, K. Otsuka, S. Terabe (Hyogo, Japan)	1889
<i>LC and CEC techniques</i>	
Comparative study on the application of capillary liquid chromatography and capillary electrochromatography for investigation of enantiomeric purity of the contraceptive drug levonorgestrel B. Chankvetadze (Münster, Germany; Tbilisi, Georgia), I. Kartoza (Münster, Germany), C. Yamamoto, Y. Okamoto (Nagoya, Japan), G. Blaschke (Münster, Germany)	1897

Other techniques

Studies on neurosteroids XV. Development of enzyme-linked immunosorbent assay for examining whether pregnenolone sulfate is a veritable neurosteroid T. Higashi, Y. Daifu, T. Ikeshima, T. Yagi, K. Shimada (Kanazawa, Japan)	1907
A possible purification method of DNAs' fragments from humic matters in soil extracts using novel stimulus responsive polymer adsorbent K. Hosoya, T. Kubo, N. Tanaka (Kyoto, Japan), J. Haginaka (Nishinomiya, Japan).	1919
Flow injection analysis of ascorbic acid using carriers modified with metal-porphine as oxidative solid catalyses A. Iwado, M. Mifune, H. Akizawa (Okayama, Japan), N. Motohashi (Kobe, Japan), Y. Saito (Okayama, Japan).	1923
Nuclear magnetic resonance studies for the chiral recognition of (+)-(<i>R</i>)-18-crown-6-tetracarboxylic acid to amino compounds Y. Machida, M. Kagawa, H. Nishi (Osaka, Japan)	1929
Novel strategy for molecular imprinting of phenolic compounds utilizing disulfide templates T. Mukawa, T. Goto, H. Nariai (Kobe, Japan), Y. Aoki (Higashi-Hiroshima, Japan), A. Imamura (Hiroshima, Japan), T. Takeuchi (Kobe, Japan)	1943
Calendar of forthcoming events	1949
List of contents	1953
Author index.	1967
Subject index.	1975