CHROMATOGRAPHIA

An International Journal for Rapid Communication in Chromatography, Electrophoresis, and Associated Techniques

Scientific Editors

- E. R. Adlard, Burton, UK
- T. A. Berger, Englewood, FL, USA
- H. Lingeman, Amsterdam, The Netherlands
- G. Massolini, Pavia, Italy
- G. K. E. Scriba, Jena, Germany
- R. M. Smith, Loughborough, UK



Chromatographia

An International Journal for Rapid Communication in Chromatography, Electrophoresis, and Associated Techniques

Volume 73 · Numbers 3-4 · February 2011

REVIEW

International Guidelines for Bioanalytical Method Validation: A Comparison and Discussion on Current Scenario

S. Kollipara · G. Bende · N. Agarwal · B. Varshney · J. Paliwal **201**

ORIGINALS

Column Liquid Chromatography

Comparison of UPLC and HPLC for Analysis of Dietary Folates

J. Jastrebova · H.S. Strandler · J. Patring · T. Wiklund 219

Simultaneous Determination of Four Sudan Dyes in Egg Yolks by Molecularly Imprinted SPE Coupled with LC-UV Detection

J. Qiao · H. Yan · H. Wang · Y. Wu · P. Pan · Y. Geng 227

Determination of Trace Sudan IV Residues in Foods Through Molecularly Imprinted SPE Coupled with LCX. Junhong · Z. Dongyan · Z. Limin · X. Zhixiang · Z. Jie · Q. Dejing 235

Simultaneous Determination of Cimaterol, Salbutamol, Terbutaline and Ractopamine in Feed by SPE Coupled to UPLC

C.H. Qu \cdot X.L. Li \cdot L. Zhang \cdot C.X. Xi \cdot G.M. Wang \cdot N.B. Li \cdot H.Q. Luo $\mathbf{243}$

Chiral Separation of β -Adrenergic Blockers in Human Plasma by SPE-HPLC

I. Ali · Z.A. Al-Othman · A. Hussain · K. Saleem · H.Y. Aboul-Enein **251**

HPLC-MS-MS for the Simultaneous Determination of Atorvastatin and Amlodipine in Plasma of Hypertensive Patients

Q. Yu \cdot Z.-Y. Hu \cdot F.-Y. Zhu \cdot J.-H. Zhu \cdot L.-L. Wan \cdot Y. Li \cdot C. Guo **257**

Rapid and Simultaneous Determination of Efavirenz, 8-Hydroxyefavirenz, and 8,14-Dihydroxyefavirenz Using LC-MS-MS in Human Plasma and Application to Pharmacokinetics in Healthy Volunteers

K.-B. Kim · H. Kim · F. Jiang · C.-W. Yeo · S.K. Bae · Z. Desta · J.-G. Shin · K.-H. Liu **263**

Simultaneous LC-MS-MS Determination of HM30181A, [2-(2-{4-[2-(6,7-Dimethoxy-3,4-dihydro-1*H*-isoquinolin-2-yl)-ethyl]-phenyl}-2*H*-tetrazol-5-yl)-4,5-dimethoxyphenyl]amide, as a new P-Glycoprotein Inhibitor and Its Two Metabolites, M1 and M2, in Human Plasma: Application to a Pharmacokinetic Study Y.H. Choi · S. Oh · S.-H. Yoon · T.-E. Kim · N. Gu ·

Y.H. Choi · S. Oh · S.-H. Yoon · T.-E. Kim · N. Gu · E.Y. Kim · H.K. Kim · K.-S. Yu · I.-J. Jang · S.-G. Shin · J.-Y. Cho 273

LC-UV Detection of 5'-Chloro-2,3-didehydroindo-lo[2',3':2,3]betulinic Acid in Rat Plasma and Its Application to a Pharmacokinetic Study G. Mishra · M.K. Singh · A. Awasthi · M. Jaggi · F.J. Ahmad 281

Purification of C-Phycocyanin from Spirulina platensis by Single-Step Ion-Exchange Chromatography X. Liao · B. Zhang · X. Wang · H. Yan · X. Zhang 291

Reversed-Phase Ion-Pair HPLC and TLC-Densitometric Methods for the Simultaneous Determination of Ciprofloxacin Hydrochloride and Metronidazole in Tablets E.F. Elkady · M.A. Mahrouse 297

Electrophoresis

Determination of Nerve Growth Factor in Rat Spinal Cord by Capillary Electrophoresis-Based Immunoassay with a Laser Induced Fluorescence Detector

X. Zou · Y. Li · T. Wang · C. Zhou · H. Zeng 307

Gas Chromatography

Application of Dispersive Liquid–Liquid Microextraction for the Analysis of Six Fungicides in Fruit Samples by GC–ECD X. Huo · Q. Li · X. Lin · X. Chen · K. Bi 313

Derivatization Method for Determination of Nitrosamines by GC-MS X. Wang · Y. Gao · X. Xu · J. Zhao · G. Song · Y. Hu 321

Thin Layer Chromatography

About Some Specific Features of TLC in an Ultra-Small Volume S-Chamber and a Chamber with a Closed Sorption Layer

V.G. Berezkin · S.S. Khrebtova 329

Separation of Some Aromatic Amino Acid
Enantiomers with Pressurized Planar
Electrochromatography and TLC
B. Polak · K.K. Wojtanowski · P. Ślazak · T.H. Dzido 339

FULL SHORT COMMUNICATIONS

Column Liquid Chromatography

HPLC Separation of Nimesulide and Five Impurities using a Narrow-Bore Monolithic Column: Application to Photo-Degradation Studies

C.K. Zacharis · P.D. Tzanavaras 347

A Sensitive LC-MS-MS Method for Simultaneous Quantification of Two Structural Isomers, Hyperoside and Isoquercitrin: Application to Pharmacokinetic Studies

C. Zhou · Y. Liu · D. Su · G. Gao · X. Zhou · L. Sun · X. Ba · X. Chén · K. Bi 353

Semi-Preparative Isolation and Purification of Three Tauro-Conjugated Cholic Acids from Pulvis Fellis Suis by HSCCC Coupled with ELSD Detection

J. He · Y. Zhang · Y. Ito · W. Sun 361

Determination of Pyridinium Ionic Liquid Cations by Reversed Phase Ion-Pair Chromatography Using Gradient Elution

L. Meng · H. Yu · Y. Liu 367

Electrokinetic Chromatography

Separation of Steroids and the Determination of Estradiol Content in Transdermic Patches by Microemulsion Electrokinetic Chromatography C.A. Silva · M.S. Aurora-Prado · K.D. Altria · M.F.M. Tavares 373

Gas Chromatography

Ordered Nanoporous Carbon-Based SPME and Determination by GC
M. Anbia · M. Khazaei 379

Development of an Analytical Method Based on Accelerated Solvent Extraction, Solid-Phase Extraction Clean-Up, then GC–ECD for Analysis of Fourteen Organochlorine Pesticides in Cereal Crops Y. Zhang \cdot J. Yang \cdot R. Shi \cdot Q. Su \cdot Y. Gao \cdot X. Zhu 385

Combination of Extraction by Silylated Vessel-Dispersive Liquid–Liquid Microextraction as a High-Enrichment Factor Technique: Optimization and Application in Preconcentration of Some Triazole Pesticides from Aqueous Samples Followed by GC-FID Determination M.A. Farajzadeh · M. Bahram · F. Jafary · M. Bamorowat 393

LIMITED SHORT COMMUNICATIONS

Column Liquid Chromatography

Determination of Phenylureas Herbicides in Foodstuffs Based on Matrix Solid-Phase Dispersion Extraction and RP-LC with UV Detection

Y. Wang · C. Cai · L. Xiao · Q. Wu · G. Cheng 403

Determination of T-2 and HT-2 Toxins in Traditional Chinese Medicine Marketed in China by LC–ELSD after Sample Clean-Up by Two Solid-Phase Extractions Y. Tan \cdot Y. Kuang \cdot R. Zhao \cdot B. Chen \cdot J. Wu 407

LC with Electrochemical Detection for Analysis of Caffeic Acid and Caffeic Acid Phenyl Ester in Propolis W. Cao \cdot H.-F. Liu \cdot N. Cheng \cdot H. Gao \cdot B.-N. Wang \cdot J.-B. Zheng 411

Quantitative Determination of Phillyrin in Human Plasma Using HPLC with Fluorescence Detection Z. Zhang · J. Peng 415

BOOK REVIEWS

Jack Cazes (Ed): Encyclopedia of Chromatography C.F. Poole 419

Angel Ríos, Alberto Escarpa and Bartolomé Simonet:
Miniaturization of Analytical Systems: Principles,
Design and Applications
P. Myers 421

Calendar of Events A5

Further articles can be found at www.springerlink.com

Abstracted/Indexed in Academic OneFile, AGRICOLA,
Analytical Abstracts, ASFA, CAB Abstracts, CAB International,
CAS, Chemical Abstracts Service (CAS), ChemWeb, Chimica,
Elsevier Biobase, EMBASE, Food Science and Technology
Abstracts, Gale, GeoRef, Global Health, Google Scholar,
IBIDS, INIS Atomindex, International Bibliography of Periodical
Literature (IBZ), Mass Spectrometry Bulletin, OCLC,
PASCAL, Proquest, SCOPUS, Summon by Serial Solutions,
VINITI - Russian Academy of Science

Instructions for Authors for *Chromatographia* are available at www.springer.com/10337