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Volumes 881–882, Pages 1-130 (15 January 2012)

1 Editorial Board
Page 1
Show preview | Related articles | Related reference work articles

Regular Papers

2 Implementation of a cost-effective HPLC/UV-approach for medical routine quantification of donepezil in human serum
Original Research Article
Pages 1-11
Ralf Koeber, Hans-Hermann Kluenemann, Reinhold Wainer, Anton Koestlacher, Markus Wittmann, Regina Brandl, Anett Doerfler, Tatjana Jahner, Doris Melchner, Ekkehard Haen
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Highlights

► We describe the first assay for TDM of donepezil by HPLC/UV in routine analysis. ► Three different UV detection wavelengths were used to check for peak impurities. ► Most of the dementia patients with donepezil treatment are underdosed. ► Off-label doses will be necessary to reach the therapeutic concentrations. ► Such an approach can be supported by TDM as suggested in this paper.

3 Multiclass analysis of 23 veterinary drugs in milk by ultraperformance liquid chromatography-electrospray tandem mass spectrometry
Original Research Article
Pages 12-19
Yu-Yun Tang, Hsin-Fang Lu, Hsu-Yang Lin, Yang-Chih Shih, Deng-Fu Hwang
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Highlights

► UPLC–MS/MS method for the simultaneous detection and confirmation veterinary drugs in milk. ► Rapid tool for confirming the presence of 23 veterinary drug residues in milk. ► Extracting more than 30 samples in less than 1 h by using the proposed method.

4 Determination of methylphenidate and its metabolite ritalinic acid in urine by liquid chromatography/tandem mass spectrometry
Original Research Article
Pages 20-26
Sharon M. Paterson, Grant A. Moore, Chris M. Florkowski, Peter M. George
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5. **Automated on-line column-switching HPLC-MS/MS method for the quantification of triclocarbon and its oxidative metabolites in human urine and serum**

Original Research Article

*Pages 27-33*

Xiaoli Zhou, Xiaoyun Ye, Antonia M. Calafat

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### Highlights

- Two Q1/Q3 transitions monitored in SRM for methylphenidate and ritalinic acid in urine. ► No interference with other prescription medications or drugs of abuse. ► Used to monitor compliance as well as screening for abuse in a clinical laboratory setting.

6. **Development and validation of a sensitive solid-phase-extraction (SPE) method using high-performance liquid chromatography/tandem mass spectrometry (LC–MS/MS) for determination of risendronate concentrations in human plasma**

Original Research Article

*Pages 34-41*

Sussan Ghassabian, Linda A. Wright, Andrew D. deJager, Maree T. Smith

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### Highlights

- Human exposure to triclocarbon (TCC) may be assessed by measuring the concentrations of TCC and its metabolites in urine or serum. ► A method for measuring trace levels of TCC and its two oxidative metabolites in human urine and serum was developed. ► This method is fully automatic, sensitive, precise, and accurate. In addition, it involves very minimal sample handling. ► This method could be used for the analysis of a large number of samples for epidemiological studies.

7. **Simultaneous analysis of cortisol and cortisone in saliva using XLC–MS/MS for fully automated online solid phase extraction**

Original Research Article

*Pages 42-48*

Rachel L. Jones, Laura J. Owen, Joanne E. Adaway, Brian G. Keevil

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### Highlights

- An XLC–MS/MS assay for salivary cortisol and cortisone has been validated. ► The Spark Holland Symbiosis™ provides fully automated online solid phase extraction. ► We demonstrated excellent precision, accuracy, linearity, sensitivity and specificity. ► For use in the investigation of disorders of the hypothalamic–pituitary–adrenal axis.

8. **Separation of two constituents from purple sweet potato by combination of silica gel column and high-speed counter-current chromatography**

Original Research Article

*Pages 49-54*

Kai He, Xiaoli Ye, Xuegang Li, Hongying Chen, Luijiang Yuan, Yafei Deng, Xin Chen, Xiaoduo Li

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- Supplementary content
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### Highlights

- A thin layer chromatograph coupling with fluorometric (TLC-F) method for selecting HSCCC solvent system was proposed. ► 6,7-Dimethoxyccumarin and 5-hydroxymethyl-2-furural were successfully separated from purple sweet potato extracts by successive sample injection for the first time. ► The results of our study suggested that the TLC-F method is useful to select HSCCC solvent systems.

9. **Competitive binding between 4,4'-diphenylmethane-bis(methyl) carbamate and RAGE ligand MG-H1 on human umbilical vein endothelial cell by cell membrane chromatography**

Original Research Article

*Pages 55-62*

Lianglei Feng, You-hua Xu, Shan-shan Wang, Wai Au-yeung, Zhao-guang Zheng, Quan Zhu, Ping Xiang

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### Highlights

- CM1 competitively binds to RAGE with RAGE ligand MG-H1. ► A HPLC method was established for competition binding of CM1 with MG-H1. ► This method was an alternative way for competitive binding of drug to receptor. ► This binding was performed on intact cells.
Highlights
► A method for urine DNA extraction using carboxylated magnetic nanoparticles was developed. ► The addition of 10 mM EDTA and pH modification (pH 6.0–7.1) can re-dissolve urine sediments. ► Purified DNA ranged from around 0.1 kb to more than 23 kb. ► DNA quality was validated by its yield, molecular weight, and the ability to serve as PCR templates. ► The developed method proved to be simple, rapid, sensitive and environmentally friendly.

11 Profiling and characterization of volatile secretions from the European slink bug Graphosoma lineatum (Heteroptera: Pentatomidae) by two-dimensional gas chromatography/time-of-flight mass spectrometry
Original Research Article
Pages 69-75
Miroslav Šanda, Petr Žáček, Ludvik Streinž, Martin Dračinský, Bohumír Koutek
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Highlights
► Analysis of volatile secretions from the European slink bug Graphosoma lineatum ► Analysis using HS-SPME coupled to GC × GC/TOF-MS. ► Identification of 57 compounds, 39 of these are reported for the first time. ► No differences in the composition of the secretions between sexes were found.

12 Rapid detection of sepsis in rats through volatile organic compounds in breath
Original Research Article
Pages 76-82
Aina V. Guarnán, Alba Carreras, Daniel Calvo, Idoya Agudo, Daniel Navajas, Antonio Pardo, Santiago Marco, Ramon Farré
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Highlights
► Breath analysis with Ion Mobility Spectrometry (IMS) was used as rapid diagnosis for sepsis. ► High levels of accuracy, specificity and sensitivity were achieved by processing IMS spectra. ► Breath samples were measured with GC/MS as reference technique. ► A pattern of compounds were related to sepsis by analysing chromatograms of GC/MS. ► Results showed that breath analysis can be used as point of care tool for diagnosis of sepsis.

13 A liquid chromatography tandem mass spectrometry method for simultaneous determination of acid/alkaline phytohormones in grapes
Original Research Article
Pages 83-89
Zheng Han, Gang Liu, Qinxiong Rao, Bing Bai, Zhihuia Zhao, Hong Liu, Albo Wu
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Highlights
► A rapid LC–MS/MS for simultaneous determination of acid/alkaline phytohormones was developed. ► The procedures for sample preparation were thoroughly optimized. ► The performances of linearity, sensitivity, precision and matrix effects were satisfactory. ► The method was proved to be capable of rapid multiresidue analysis of multiclass phytohormones.

14 Determination of Carbadox and metabolites of Carbadox and Olaquindox in muscle tissue using high performance liquid chromatography–tandem mass spectrometry
Original Research Article
Pages 90-95
Anna Merou, George Kaklamanos, Georgios Theodoridis
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Highlights
► LC–MS/MS provides the technological tool for the determination of antimicrobial agents. ► Method was validated at 1 µg/kg. Method's accuracy and precision were satisfactory. ► Recoveries ranged from 92% to 101%. ► The developed method proved efficient and straightforward. ► The method allows for positive identification and quantitation of the target banned analytes.

15 Metabolism of mequindox and its metabolites identification in chickens using LC–LTQ-Orbitrap mass spectrometry
Original Research Article
Pages 96-106
Qi Shan, Yiming Liu, Limin He, Huazhong Ding, Xianhui Huang, Fan Yang, Yafei Li, Zhenling Zeng
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► http://www.sciencedirect.com/science/journal/15700232/881
19/4/2555
The metabolism of mequindox in vivo was studied using LC–LTQ-Orbitrap. 12 new metabolites were detected and identified for the first time. Acetyl hydroxylation and deacetylation were new metabolic pathways of MEO.

Determination of N,N-dimethyltryptamine in Mimosa tenuiflora inner barks by matrix solid-phase dispersion procedure and GC–MS

Pages 107-110
Alain Gaujac, Adriano Aquino, Sandro Navickiene, Jailson Bittencourt de Andrade

Easy and fast LC–MS/MS determination of lidocaine and MEGX in plasma for therapeutic drug monitoring in neonates with seizures

Pages 111-114
E. ter Weijden, M.P.H. van den Broek, F.F.T. Ververs

Liquid chromatography-tandem mass spectrometry quantification of 6-thioguanine in DNA using endogenous guanine as internal standard

Pages 115-118
Jack H. Jacobsen, Kjeld Schmiegelow, Jacob Nersting

Salt-out homogeneous liquid–liquid extraction approach applied in sample pre-processing for the quantitative determination of entecavir in human plasma by LC–MS

Pages 119-125
Feng-Juan Zhao, Hong Tang, Qing-Hua Zhang, Jin Yang, Andrew K. Davey, Ji-ping Wang

Determination of Bis(9)-(-)-Meptazinol, a bis-ligand for Alzheimer's disease, in rat plasma by liquid chromatography–tandem mass spectrometry: Application to pharmacokinetics study

Pages 126-130
Xin-xing Ge, Xiao-liang Wang, Pan Jiang, Ying Xie, Tao Jiang, Zheng-xing Rong, Qi-zhi Zhang, Qiong Xie, Zhi-bai Gou, Hao Wang, Hong-zhuai Chen

We develop and validate a HPLC–MS/MS method of a new anti-Alzheimer's dimer B9M. Mobile phase buffered at pH 9.8 obtains good peak shape and high sensitivity. The method is characteristic of short running time and simple preparation process. We evaluate preliminary PK profile of B9M in rat after iv and sc administration.