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   Page 1

2. Investigation of ex vivo stability of fesoterodine in human plasma and its simultaneous determination together with its active metabolite 5-HMT by LC-ESI-MS/MS: Application to a bioequivalence study
   - Jignesh M. Parekh, Mallika Sanyal, Manish Yadav, Pranav S. Shrivastav
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   - Pages 1-11

   Highlights
   - First report on simultaneous determination of FESO and 5-HMT in human plasma.
   - Thorough investigation of ex vivo stability of fesoterodine in plasma samples.
   - Mitigation of FESO degradation by pre-treatment of blood with sodium metabisulphite.
   - The method is practically free of endogenous/exogenous matrix interference.
   - Bioequivalence study in healthy Indian volunteers and incurred sample reanalysis.

3. Rapid determination of letrozole, citalopram and their metabolites by high performance liquid chromatography-fluorescence detection in urine: Method validation and application to real samples
   - J. Rodríguez, G. Castañeda, L. Muñoz
   - Show preview | Related articles | Related reference work articles
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   Highlights
   - This report describes the validation of an high precision and accuracy HPLC-fluorescence method for the simultaneous determination of letrozole, citalopram and their metabolites in human urine.
   - This method was applied to the analysis of human urine samples from cancer patients.
   - The method was performed using a urine sample with only a dilution step 1:2.

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4 Determination of 5-HT receptor antagonists, MEFWAY and MPPF using liquid chromatography-electrospray ionization tandem mass spectrometry in rat plasma and brain tissue; Original Research Article

Pages 24-29
Zhi Zheng, Byung Hoi Lee, Jae Yong Choi, Young Hoon Ryu, Myung Ae Bae, Sung-Hoon Ahn

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Highlights

► A simple, rapid, and sensitive LC-ESI-MS/MS method of MEFWAY and MPPF. ► Validation for the determination of MEFWAY and MPPF in rat plasma and brain. ► The sample preparation followed by one-step protein precipitation using acetonitrile and methanol. ► The assay variability limits set forth in the FDA guidelines. ► The present method can be applied to plasma-brain pharmacokinetic studies to investigate brain penetration in rats.

5 Quantitative determination of capecitabine and its six metabolites in human plasma using liquid chromatography coupled to electrospray tandem mass spectrometry; Original Research Article

Pages 30-40
Maarten J. Deen, Hilde Rosing, Michel J. Hillebrand, Jan H.M. Schellens, Jos H. Beijnen

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Highlights


6 A sensitive and selective quantification of catecholamine neurotransmitters in rat microdialysates by pre-column dansyl chloride derivatization using liquid chromatography-tandem mass spectrometry; Original Research Article

Pages 41-47
Ramakrishna Nirogi, Prashanth Komarneni, Vishwottam Kandikere, Rajeshkumar Boggavarapu, Gopinadh Bhyrapuneni, Vijay Benade, Srinivasarao Gorenita

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Highlights

► Dansyl chloride derivatization of dopamine and norepinephrine in rat microdialysates. ► Sensitive and selective method to determine the basal levels in rat prefrontal cortex. ► Good peak resolution and separation from the interferences using superficial porous micro particulate column. ► Selective method in the neurochemical monitoring for discovery of new chemical entities targeted for the treatment of ADHD. ► The method demonstrated can be applicable in other regions such as medial PFC, striatum and hippocampus.

7 Keto acid profiling analysis as ethoxime/tert-butyldimethylsilyl derivatives by gas chromatography-mass spectrometry; Original Research Article

Pages 48-54
Duc-Toan Nguyen, Gwang Lee, Man-Jeong Paik

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Highlights

► 17 keto acids as to ethoxime/tert-butyldimethylsilyl derivatives were analyzed by GC-MS. ► The optimal method showed good precision, accuracy and sensitivity. ► The method was suitable for simultaneous analysis of 17 keto acids in biological samples.

8 Quantitative determination of diterpenoid alkaloid Fuzilene by hydrophilic interaction liquid chromatography (HILIC)-electrospray ionization mass spectrometry and its application to pharmacokinetic study in rats; Original Research Article

Pages 55-60
Jianguo Sun, Fengyi Zhang, Ying Peng, Jinghan Liu, Yunxi Zhong, Guangji Wang

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Highlights

► Rapid, robust, selective and sensitive method using HPLC-tandem mass spectrometry. The optimal method showed good precision, accuracy and sensitivity. ◄ The method was suitable for simultaneous analysis of 17 keto acids in biological samples.
Highlights

► A HILIC–ESI-MS was developed for the detection of Fuziline in rat plasma. ► The pharmacokinetic of fuziline in rats was studied for the first time. ► The absolute bioavailability of Fuziline after i.g. in rats (4 mg/kg) was 21.1 ± 7.0%.

Evaluation of molecularly imprinted anion-functionalized poly(ionic liquid)s by multi-phase dispersive extraction of flavonoids from plant

Original Research Article

Pages 61-68
Wen Tao Bi, Minglei Tian, Kyung Ho Row

Highlights

► Poly(ionic liquid)s with different functional anions were developed. ► The anion-functionalized poly(ionic liquid)s were achieved anion metathesis. ► The anion-functionalized polymers were upgraded with molecularly imprinting. ► Multi-phase dispersive extraction was developed for the extraction and clean-up.

Identification of characteristic flavour precursors from enzymatic hydrolysis-mild thermal oxidation tallow by descriptive sensory analysis and gas chromatography–olfactometry and partial least squares regression

Original Research Article

Pages 69-76
Xiaoxia Shi, Xiaoming Zhang, Shiqing Song, Chen Tan, Chengsheng Jia, Shuju Xia

Highlights

► The "enzymatic hydrolysis-mild thermal oxidation" method has been developed. ► The new method makes beeflike flavours more similar to natural beef flavour. ► The precursors of oxidized tallow are identified using PLSR.

Analytical method for urinary metabolites of the fluorine-containing pyrethroids metofluthrin, profluthrin and transfluthrin by gas chromatography/mass spectrometry

Original Research Article

Pages 77-83
Toshiaki Yoshida

Highlights

► We develop an analytical method of metabolites of fluorine-containing pyrethroids. ► They are used widely recently as mosquito repellents or moth-repellents in houses. ► The metabolites from hydrolyzed urine are analyzed by GC/MS(EI) after derivatization. ► They can be measured accurately and precisely. ► The collected urine samples can be stored for up to 1 month at -20 °C in a freezer.

Development and validation of an LC–MS/MS method for the determination of tolvaptan in human plasma and its application to a pharmacokinetic study

Original Research Article

Pages 84-89
Qi Pei, Bikui Zhang, Hongyi Tan, Lihua Liu, Xiangdong Peng, Zuojun Li, Panhao Huang, Mi Luo, Xiaocong Zuo, Chengxian Guo, Guoping Yang

Highlights

► A novel LC–MS/MS method for determination of tolvaptan in human plasma was developed. ► Simple protein precipitation was used for the sample preparation. ► The LLOQ of the method was 0.457 ng/mL, which was the lowest reported so far. ► The chromatographic run time was only 3.5 min. ► The method has been applied to a pharmacokinetic study of tolvaptan in volunteers.
First liquid chromatographic method for the simultaneous determination of amiodarone and desethylamiodarone in human plasma using microextraction by packed sorbent (MEPS) as sample preparation procedure

Original Research Article
Pages 90-97
Márcio Rodrigues, Gilberto Alves, Marília Rocha, João Queiroz, Amílcar Falcão

Highlights

► First MEPS/HPLC method for analysis of amiodarone and desethylamiodarone in plasma.
► Enables rapid and simultaneous analysis of both analytes.
► Fully validated in the range of 0.1–10 μg/mL for both analytes.
► The method was applied to real plasma samples of patients under amiodarone therapy.

Gas chromatographic–mass spectrometry method for the detection of busulphan and its metabolites in plasma and urine

Original Research Article
Pages 98-105
Ibrahim El-Serafi, Ylva Terelius, Brigitte Twelkmeyer, Ann-Louise Hagbjörk, Zuzana Hassan, Moustapha Hassan

Highlights

► We designed a new method for the detection of busulphan and its four major metabolites.
► Different extraction forms were utilized according to the compound chemical properties.
► One single GC–MS was used to detect busulphan and its four metabolites using fused silica non-polar phase column.
► The method showed acceptable results in validation conduction and quantitative analysis.
► Clinical application was carried out using patient plasma and urine samples.

In chemico evaluation of skin metabolism: Investigation of eugenol and isoeugenol by electrochemistry coupled to liquid chromatography and mass spectrometry

Original Research Article
Pages 106-112
Daniel Melles, Torsten Vielhaber, Anne Baumann, Raniero Zazzeroni, Uwe Karst

Highlights

► Activation of eugenol and isoeugenol into protein reactive haptens was achieved.
► Electrochemistry coupled to liquid chromatography and mass spectrometry was used.
► Protein modification as a key step in the hapten concept was performed.
► EC/LC/MS serves as tool for the assessment of pre- and pro-haptens.

Bleomycin DNA damage: Anomalous mobility of 3′-phosphoglycolate termini in an automated capillary DNA sequencer

Original Research Article
Pages 113-122
Trung V. Nguyen, Jon K. Chen, Vincent Murray

Highlights

► The relative mobility of DNA fragments was determined by capillary electrophoresis.
► The electrophoretic mobility was dependent on the 3′-terminal residue.
► 3′-Phosphoglycolate termini have anomalous mobility in capillary electrophoresis.
► Important for the elucidation of the sequence specificity of DNA damaging agents.

Determination of malachite green, crystal violet and their leuco-metabolites in fish by HPLC–VIS detection after immunooaffinity column clean-up

Original Research Article
Pages 123-128
Jie Xie, Tao Peng, Dong-Dong Chen, Qing-Jie Zhang, Guo-Min Wang, Xiong Wang, Qi Guo, Fan Jiang, Dan Chen, Jian Deng

Highlights

► The relative mobility of DNA fragments was determined by capillary electrophoresis.
► The electrophoretic mobility was dependent on the 3′-terminal residue.
► 3′-Phosphoglycolate termini have anomalous mobility in capillary electrophoresis.
► Important for the elucidation of the sequence specificity of DNA damaging agents.
18 Sensitive method for plasma and tumor Ko143 quantification using reversed-phase high-performance liquid chromatography and fluorescence detection
Serge A.L. Zander, Jos H. Beijnen, Olaf van Tellingen

19 Combination of electromembrane extraction with dispersive liquid–liquid microextraction followed by gas chromatographic analysis as a fast and sensitive technique for determination of tricyclic antidepressants
Shahram Seidi, Yadollah Yamini, Maryam Rezaeezadeh

20 Simultaneous quantification of vinblastine and desacetylvinblastine concentrations in canine plasma and urine samples using LC–APCI–MS/MS
Satyanarayana Achanta, Minh Ngo, Allison Vedernheimer, Lara K. Maxwell, Jarrad R. Wagner

21 Accuracy profile validation of a new analytical method for butane measurement using headspace-gas chromatography–mass spectrometry
V. Varlet, F. Smith, M. Augsburger

22 Simultaneous quantification of F2-isoprostanes and prostaglandins in human urine by liquid chromatography tandem-mass spectrometry
Jeevan K. Prasain, Alireza Arabshahi, Pam R. Taub,
Scott Sweeney, Ray Moore, J. Daniel Sharer, Stephen Barnes

Highlights
► Measurement of F2-isoprostanes and prostaglandins in human urine by LC-MS/MS.
► Base line separation of the isomers measured.
► Quantification of analytes over a linear dynamic range (0.05–50 ng/mL).
► Excellent recoveries (79–100%), no major matrix effects and absence of carry over.
► Urinary F2-isoprostanes and PGs analysis in patients undergoing cardiac surgery.

Short Communications

23
Quantitation of aldosterone in human plasma by ultra high performance liquid chromatography tandem mass spectrometry
Pages 19-23
Edward Hinchliffe, Stephanie Carter, Laura J. Owen, Brian G. Keevil

Highlights
► We report a novel UPLC–MS/MS method for the quantitation of aldosterone from human plasma.
► Sample extraction utilises a rapid solid phase extraction technique.
► Chromatography uses highly selective pentafluorophenyl functional groups.
► Short chromatographic run times enable high throughput analysis of clinical samples.
► The LC–MS/MS method demonstrates improved specificity compared to immunoassay.

24
Quantification of voriconazole in human bronchoalveolar lavage fluid using high-performance liquid chromatography with fluorescence detection
Pages 171-173
S.C. Heng, R.L. Nation, B. Levvey, G.I. Snell, M.A. Slavin, D.C.M. Kong

Highlights
► Validation of a HPLC-fluorescence method for the determination of VRC in human BAL samples.
► Freeze-drying step to concentrate BAL samples, attaining high sensitivity with LLOQ of 2.5 ng/mL.
► Successful application in a clinical study in immunocompromised lung transplant recipients, who are at risk of low VRC concentrations.

Letters to the Editor

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Citrulline and metabolomics in acute kidney injury
Page 137
Carlo Chiarla, Ivo Giovannini

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Comment on “Simultaneous quantification of metronidazole, tinidazole, ornidazole and morinidazole in human saliva”: Saliva or gingival crevicular fluid?
Pages 169-170
Yi Jiang, Xia Wu, Lingling E

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