VAMS™ publication list

August 2019 Edition

2019

Vethe, Nils Tore., Gustavsen, Marte Theie., Midtvedt, Karsten., Lauritsen, May Ellen., Andersen, Anders M., Åsberg, Anders., Bergan, Stein. **Tacrolimus can be reliably measured with volumetric absorptive capillary microsampling throughout the dose interval in renal transplant recipients.** Therapeutic Drug Monitoring. May 15, 2019. doi: 10.1097/FTD.0000000000000655

Tacolimus | Therapeutic Drug Monitoring (TDM) | Renal Transplant Patients | Assay Development

Remco A Koster, Pascal Niemeijer, Herman Veenhof, Kai van Hateren, Jan-Willem C Alffenaar, Daan J Touw. **A volumetric absorptive microsampling LC–MS/MS method for five immunosuppressants and their hematocrit effects.** Bioanalysis. 2019 Mar 20 Vol. 11, No. 6

Tacrolimus | Sirolimus |Everolimus | Temsirolimus | Cyclosporin A | Mycophenolic acid | Method Validation

Friedl, B., Kurlbaum, M., Kroiss, M. et al. **A method for the minimally invasive drug monitoring of mitotane by means of volumetric absorptive microsampling for a home-based therapeutic drug monitoring.** Anal Bioanal Chem (2019). https://doi.org/10.1007/s00216-019-01868-1

Adrenocortical Carcinoma | Narrow Therapeutic Index | TDM | HPLC-UV

D'Urso, Annachiara, BiolSciD1; Rudge, James, PhD2; Patsalos, Philip N., FRCPath, PhD3; de Grazia, Ugo, PhD*,1 **Volumetric absorptive microsampling - A new sampling tool for therapeutic drug monitoring of anti-epileptic drugs.** Therapeutic Drug Monitoring: May 27, 2019 - Volume Publish Ahead of Print - Issue - pdoi: 10.1097/FTD.0000000000000652

Therapeutic Drug Monitoring (TDM) | Anti-epileptic Drugs (AEDs) | Bioanalytical Method Validation

David Marshall, BSc Brian Keevil, Professor. **Quantification of testosterone, androstenedione and 17-hydroxyprogesterone collected using Mitra® micro sampling devices.** Journal of the Endocrine Society, Volume 3, Issue Supplement_1, April-May 2019, SAT-011

Congenital Adrenal Hyperplasia | Steroid Hormone Biology & Action | Overcoming The Hematocrit Issue

David Sciberras, Christian Otoul, Françoise Lurquin, John Smeraglia, Aurélia Lappert, Steven De Bruyn, Jan Jaap van Lier. **A pharmacokinetic study of radiprodil oral suspension in healthy adults comparing conventional venous blood sampling with two microsampling techniques.** © 2019 The Authors. Pharmacology Research & Perspectives published by John Wiley & Sons Ltd, British Pharmacological Society and American Society for Pharmacology and Experimental Therapeutics.

Bioequivalence | Drug Safety | Pharmacokinetics | Phase 1

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Miranda G.M Kok, Cindy Nix, Gwenaël Nys, Marianne Fillet. **Targeted metabolomics of whole blood using volumetric absorptive microsampling.** Talanta. 2019 May 15; 49-58

Metabolomics | Amino Acids and Organic Acids | Stability Studies

Nadine B. Andriguetti, Letícia L. Lisboa, Siomara R. Hahn, Lidiane R. Pagnussat, Marina V. Antunes, Rafael Linden. **Simultaneous determination of vancomycin and creatinine in plasma applied to volumetric absorptive microsampling devices using liquid chromatography-tandem mass spectrometry.** J Pharm Biomed Anal 2019 February 20: 315-324

Vancomycin & Creatinine | Therapeutic Drug Monitoring | Low-Resource Regions

Jessica D. Schulz, Anna Neodo, Jean T. Coulibaly, Jennifer Keiser. **Pharmacokinetics of albendazole, albendazole sulfoxide and albendazole sulfone determined from plasma, blood, dried blood spots and Mitra® samples of hookworm-infected adolescents.** Antimicrobial Agents and Chemotherapy. Feb 2019; AAC.02489-18; DOI: 10.1128/AAC.02489-18

Anthelmintic | Pharmacokinetic Study | VAMS vs DBS

Ganesh S. Moorthy, Christina Vedar, Nicole Zane, Janice L. Prodell, Athena F. Zuppa. **Development and validation of a volumetric absorptive microsampling assay for analysis of voriconazole and voriconazole N-oxide in human whole blood.** J Chromatography B. 2019 February 15: 67-75

Antifungal | Assay Development | Stability Studies

R.B.Verheijen, B.Thijssen, F.Atrafi, J.H.M.Schellens, H.Rosing, N.de Vries, J.H.Beijnen, R.H.J.Mathijssen, N.Steeghs, A.D.R.Huitemaae. **Validation and clinical application of an LC-MS/MS method for the quantification of everolimus using volumetric absorptive microsampling.** J Chromatography B. 2019 Jan 1; 234-239

Immunosuppressant | Bioanalytical Validation | Clinical Application

2018

M. Resano, M.A. Belarra, E. Garcia-Ruiz, M. Armendia & Rello, L. **Dried matrix spots and clinical elemental analysis. Current status, difficulties, and opportunities.** TrAC Trends in Analytical Chemistry February 2018, Volume 99, pp 75-87

Advantages of Dried Matrix Sampling | Quantitative Elemental Information

Velghe, S. & Stove, C.P. **Volumetric absorptive microsampling as an alternative tool for therapeutic drug monitoring of first-generation anti-epileptic drugs.** Anal Bioanal Chem March 2018, Volume 410, Issue 9, pp 2331-2341

Anti-epileptic Drugs | Sample Preparation and Method Validation | UPLC-MS/MS

Jana Kovac, Gordana Panic, Anna Neodo, Isabel Meister, Jean T Coulibaly, Jessica D Shulz & Jennifer Keis-

er. **Evaluation of a novel micro-sampling device, Mitra™, in comparison to dried blood spots, for analysis of praziquantel in Schistosoma haematobium-infected children in rural Côte d'Ivoire.** J Pharm Biomed Anal 2018 Mar 20: 339-346

Parasitic Drugs | vs. Dried Blood Spot | Low Resource Region

Charlotte Jones, Gareth J Dunseath, Jessica Lemon. & Stephen D Luzio. **Microsampling collection methods for measurement of C-peptide in whole blood.** Journal of Diabetes Science and Technology March 9 2018 https://doi.org/10.1177/1932296818763464

Circulating Biomarker | vs. Dried Blood Spot | Plasma Reference Range Agreement

Jani Koponen, James Rudge, Stuart Kushon, & Hannu Kiviranta. **Novel volumetric adsorptive microsampling technique for determination of perfluorinated compounds in blood.** Analytical Biochemistry, Volume 545, 2018, Pages 49-53

Perfluoroalkyl Acids | Environmental Pollutant | Biomonitoring

Kim Y, Jeon JY, Han SH, Ha N, Jang K, & Kim MG. **Quantitative analysis of acetylsalicylic acid in human blood using volumetric absorptive microsampling.** Transl Clin Pharmacol. 2018 Mar;26(1):32-38

Stabilizing Reagents | Validation | Aspirin

Ida Kristine, LysgaardAndersen, CecilieRosting, Astrid Gjelstad, & Trine GrønhaugHalvorsen. **Volumetric absorptive MicroSampling vs. other blood sampling materials in LC–MS-based protein analysis – preliminary investigations.** J Pharm Biomed Anal 2018 Jul 15: 239-246

Proteins | Vs. Dried Blood Spot | LC-MS

Xie I, Xu Y, Anderson M, Wang M, Xue L, Breidinger S, Goykhman D, Woolf EJ, & Bateman KP. **Extractability-mediated stability bias and hematocrit impact: High extraction recovery is critical to feasibility of volumetric adsorptive microsampling (VAMS) in regulated bioanalysis.** J Pharm Biomed Anal. 2018 Apr 5: 156:58-66

Regulated Bioanalysis | Extraction Recovery | Stability

Michele Protti, Maria Carmen Catapano, Boaz Gedaliahu Samolsky Dekel, James Rudge, Gilberto Gerra, Lorenzo Somaini, Roberto Mandrioli, & Laura Mercolini. **Determination of oxycodone and its major metabolites in haematic and urinary matrices: Comparison of traditional and miniaturised sampling approaches.** J Pharm Biomed Anal Volume 152, 2018 Apr 15: 204-214

Anti-doping | Bioanalysis | Blood & Urine

Kita, K., Noritake, K. & Mano, Y. **Application of a Volumetric Absorptive Microsampling Device to a Pharmacokinetic Study of Tacrolimus in Rats: Comparison with Wet Blood and Plasma.** Eur J Drug Metab Pharmacokinet (2018) https://doi.org/10.1007/s13318-018-0493-7

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Tacrolimus | PK Study in Rats | Dried Blood vs. Wet Blood vs. Plasma

Nick Verougstraete, Veronique Stove, & Christophe Stove. **Wet absorptive microsampling at home for HbA1c monitoring in diabetic children.** Clinical Chemistry and Laboratory Medicine, 2018 June 14, Epub Ahead of Print https://doi.org/10.1515/cclm-2018-0207

HbA1c | Remote Monitoring | Pediatrics

Michele Protti, Roberto Mandrioli, & Laura Mercolini. **Tutorial: Volumetric absorptive microsampling (VAMS).** Analytica Chima, 2018 Sep 5. doi: 10.1016/j.aca.2018.09.004. [Epub ahead of print]

VAMS Use Cases | Analytical Workflow | Automation

M.G.M. Kok, M. Fillet. **Volumetric absorptive microsampling: Current advances and applications.** J Pharm Biomed Anal. 2018 Jan 5: 147:288-296

Application Overview | Sample Preparation | Hematocrit

Kasie Fang, Chester L Bowen, John F Kellie, Molly Z Karlinsey, & Christopher A Evans. **Drug monitoring by volumetric absorptive microsampling: method development considerations to mitigate hematocrit effects.** Bioanalysis, Ahead of Print Published Online 15 Jan 2018 | https://doi.org/10.4155/bio-2017-0221

Regulated Bioanalysis | Pharmacokinetics / Toxicokinetics | Hematocrit

Karin Bloem, Tiny Schaap, Ronald Boshuizen, Eva L Kneepkens, Gerritt J Wolbink, Annick de Vries, & Theo Rispens. **Capillary blood microsampling to determine serum biopharmaceutical concentration: Mitra microsampler vs dried blood spot.** Bioanalysis, 2018 June 04; 10(11)

Therapeutic mAbs | VAMS vs DBS | Serum/Plasma Concentration Estimations

Fragala MS, Goldman SM, Goldman MM, Bi C, Colletti JD, Arent SM, Walker AJ, & Clarke NJ. **Measurement of Cortisol and Testosterone in Athletes: Accuracy of Liquid Chromatography-Tandem Mass Spectrometry Assays for Cortisol and Testosterone Measurement in Whole-Blood Microspecimens.** J Strength Cond Res, 2018 Jul 4. doi: 10.1519/JSC.0000000000002726. [Epub ahead of print]

Hormones | Performance Monitoring | Finger-prick vs Venous Specimens

Marcello Pirritano, Tobias Fehlmann, Thomas Laufer, Nicole Ludwig, Gilles Gasparoni, Yongping Li, Eckart Meese, Andreas Keller, and Martin Simon. **Next Generation Sequencing Analysis of Total Small Noncoding RNAs from Low Input RNA from Dried Blood Sampling.** Anal Chem, 2018 Sep 10. doi: 10.1021/acs.analchem.8b03557. [Epub ahead of print]

Biomarkers | Library Preparation | Remote Patient Monitoring

Sangeeta Tanna, Ahmed Alalaqi, Dennis Bernieh & Graham Lawson. **Volumetric absorptive microsampling (VAMS) coupled with high-resolution, accurate-mass (HRAM) mass spectrometry as a simplified alternative to dried blood spot (DBS) analysis for therapeutic drug monitoring of cardiovascular drugs.** Clinical Mass Spectrometry Volume 10, December 2018. 1-8 [Epub ahead of print]

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VAMS vs. DBS cards | Remote Drug Monitoring | Cardiovascular Drugs

Lisa Delahaye, Evelyn Dhont, Pieter De Cock, Peter De Paepe, Christophe P. Stove. **Volumetric absorptive microsampling as an alternative sampling strategy for the determination of paracetamol in blood and cerebrospinal fluid.** Anal Bioanal Chem (2018). https://doi.org/10.1007/s00216-018-1427-6

Cerebrospinal Fluid (CSF) | Paracetamol | LC-MS/MS Method Development

Joseph M Taylor, Andrew T Hughes, Anna M Milan, James Rudge, Andrew S Davison & Lakshminarayan R Ranganath.**Evaluation of the Mitra microsampling device for use with key urinary metabolites in patients with Alkaptonuria.** Bioanalysis, 2018 November 6; 10 (23)

Amino Acids | Inborn Metabolism Error | LC-MS/MS

Hua Li, Tammy Bigwarfe, Maria Myzithras, Erica Waltz & Jennifer Ahlberg. **Application of Mitra microsampling for pharmacokinetic bioanalysis of monoclonal antibodies in rats.** Bioanalysis, 2018 November 21; 11 (1)

Monoclonal Antibody (mAb) | Animal PK Studies | ELISA

2017

Youhnovski, N., Mayrand-Provencher, L., Bérubé, ER., Plomley, J., Montpetit, H., Furtado, M., Keyhani, A. **Volumetric absorptive microsampling combined with impact-assisted extraction for hematocrit effect free assays.** Bioanalysis. 2017 Nov 9 (22): 1761-1769 …. Add to 2017 section

Bead-based Extraction Protocol | HCT Bias Study | Naproxen & Ritonavir

Protti, M., Rudge, J., Sberna, A. E., Gera, G., & Mercolini, L. **Dried haematic microsamples and LC–MS/MS for the analysis of natural and synthetic cannabinoids.** J Chromatogr B Analyt Technol Biomed Life Sci. 2017 Feb 15;1044-1045:77-86

Illicit Drugs | vs. Dry Blood Spots | Bioanalytical Validation

Thiry, J., Evrard, B., Nys, G., Fillet, M., & Kok, G.M. **Sampling only ten microliters of whole blood for the quantification of poorly soluble drugs: Itraconazole as case study.** J Chromatogr A. 2017 Jan 6;1479:161-168

Animal Testing | NC3Rs | Bioavailability of Drug Formulations

Ye, Z., & Gao, H. **Evaluation of sample extraction methods for minimizing hematocrit effect on whole blood analysis with volumetric absorptive microsampling.** Bioanalysis. 2017 Feb;9(4):349-357

Extraction Studies | Hematocrit (HCT)

Verougstraete, N., Lapauw, B., Van Aken, S., Delanghe, J. Stove, C., & Stove, V. **Volumetric absorptive microsampling at home as an alternative tool for the monitoring of HbA1c in diabetes patients.** Clin Chem Lab Med. 2017 Mar 1;55(3):462-469

Disease Monitoring | At-home Sampling | vs. Venous Blood

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Kip, A.E., Kiers, K.C., Rosing, H., Schellens, J.H.M., Beijnen, J.H., & Dorlo, T.P.C. **Volumetric absorptive microsampling (VAMS) as an alternative to conventional dried blood spots in the quantification of miltefosine in dried blood samples.** J Pharm Biomed Anal. 2017 Feb 20; 135: 160-166

Low-resource Region | vs. Dry Blood Spot | Method Validation

Plomley, J., Villeneuve, D., Chen, M., Mekhssian, K., Didur, O., Ruddock, R., & Keyhani, A. **Large molecule application of volumetric absorptive microsampling for the determination of a single-rodent PK profile for exenatide by LC-MS/MS.** WRIB 11th Annual Conference, 3-7 April 2017, Los Angeles, CA

Animal Testing | Biotherapeutic | Single Rodent PK Profile

Koop, M., & Rychlik, M. **Assessing volumetric absorptive microsampling coupled with stable isotope dilution assay and liquid chromatography-tandem mass spectrometry as potential diagnostic tool for whole blood 5-methyltetrahydrofolic Acid.** Front Nutr. 2017 Apr 18;4:9

Micronutrient Monitoring | vs. Dried Blood Spot | Stable Isotope Dilution Assay (SIDA)

Lehmann, S., Picas, A., Tiers, L., Vialaret J., & Hirtz, C. **Clinical perspectives of dried blood spot protein quantification using mass spectrometry methods.** Crit Rev Clin Lab Sci. 2017 May; 54(3): 173-184

Protein Quantitation | Multiple Reaction Monitoring | LC-MS/MS

Tanna, S., Alalaqi, A., Bernieh, D., & Lawson, G. **LC-HRMS analysis of 216 patient micro-volume blood samples to allow clinical assessment of medication adherence.** MSACL Annual Conference, 22-26 January 2017, Palm Springs, CA

Medication Adherence | Clinical Study | vs. Dried Blood Spots

Qu, Y., Brady, K., Apilado, R., O'Malley, T., Reddy, S., Chitkara, P., Ibarra, C., Alexander R.V., & Dervieux, T. **Capillary blood collected on volumetric absorptive microsampling (VAMS) device for monitoring hydroxychloroquine in rheumatoid arthritis patients.** J Pharm Biomed Anal. 2017 Jun 5;140:334-341

Therapeutic Drug Monitoring | vs. Venous Blood | vs. Dried Blood Spot

Nys, G., Gallez, A., Kok, MGM., Cobraiville, G., Servais, A.C., Piel, G., Pequeux, C., & Fillet, M. **Whole blood microsampling for the quantitation of estetrol without derivatization by liquid chromatography-tandem mass spectrometry.** J Pharm Biomed Anal. 2017 Jun 5; 140:258-265

Animal Testing | PK Studies in Mice | Bioanalytical Validation

Anoshkina, Y., Costas-Rodriguez, M., & Vanhaecke, F. **Iron isotopic analysis of finger-prick and venous blood by multi-collector inductively coupled plasma-mass spectrometry after volumetric absorptive microsampling.** J. Anal. At. Spectrom. 2017, 32, 314-321

Fe Concentration | vs. Venous Blood | Extraction Studies

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Cañabate, A., Garcia-Ruíz, E., Resano, M., & Todolí, J.L. **Analysis of whole blood by ICP-MS equipped with a high temperature total sample consumption system.** J. Anal. At. Spectrom. 2017, 32, 78-87

hTISIS | Multi-Element Analysis

Wharton, R.E., Feyereisen, M.C, Gonzalez, A.L., Abbot N.L, Hamelin E., & Johnson, R.C. **Quantification of saxitoxin in human blood by ELISA.** Toxicon., 2017 Jul; 133: 110-115

Marine Toxin | Validated Method | ELISA

Volani, C., Caprioli, G., Calderisi, G., Sigurdsson B.B., Rainer, J., Gentilini, I., Hicks, A.A., Pramstaller, P.P., Weiss, G., Smarason, S.V., & Paglia, G. **Pre-analytic evaluation of volumetric absorptive microsampling and integration in a mass spectrometry-based metabolomics workflow.** Anal Bioanal Chem., 2017 Aug 17 Epub ahead of print

Metabolomics | Extraction Procedures | Stability

Kita, K., Mano, Y. **Application of volumetric absorptive microsampling device for quantification of tacrolimus in human blood as a model drug of high blood cell partition.** J Pharm Biomed Anal. 2017 Sep 5: 143:168-175

Tacrolimus | Hematocrit Evaluation | Stability

Cala, MP., Meesters, RJ. **Comparative study on microsampling techniques in metabolic fingerprinting studies applying gas chromatography-MS analysis.** Bioanalysis. 2017 Sep 9 (17): 1329-1340

Metabolomics | Breast Cancer Fingerprinting

Rebecca L. Cordell, Thalassa S.E. Valkenburg, Hitesh C. Pandya, Daniel B., Hawcutt, Malcolm G. Semple & Paul S. Monks (2017): **Quantitation of salbutamol using microvolume blood sampling – applications to exacerbations of pediatric asthma.** Journal of Asthma 2017 Nov 3; 1-9

Therapeutic Drug Monitoring | Pediatrics | Asthma

Barco, S., Castagnola, E., Moscatelli, A, Rudge, J., Tripodi, G., & Cangemi, G. **Volumetric adsorptive microsampling-liquid chromatography tandem mass spectrometry assay for the simultaneous quantification of four antibiotics in human blood: Method development, validation and comparison with dried blood spot.** J Pharm Biomed Anal., 2017 Oct 25;145:704-710

Antibiotics | Method Development and Validation | vs. Dried Blood Spot

Hecht, M., Evard, H., Takkis, K., Veigure, R., Aro, R., Lohmus, R., Herodes K., Leito, I., & Kipper, K. **Sponge Spray - Reaching New Dimensions of Direct Sampling and Analysis by MS.** Anal. Chem., Oct 2017 Epub ahead of print

Clinical Samples | No Sample Preparation | "Collect-and-Spray"

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Nys, G., Cobraiville, G., Kok, M.G.M., Wéra, O., Servais, A.C., & Fillet, M. **Comparison of nanofluidic and ultra-high performance liquid chromatography-tandem mass spectrometry for high sensitive pharmacokinetic studies of estrogens starting from whole blood microsampling.** J Chromatogr A. 2017 Nov 17; 1524:160-168

Estrogens | PK Studies in Small Animals | Nanofluidic LC-Chip-MS/MS

2016

Mercolini, L., Protti, M., Catapano, M. C., Rudge, J., & Sberna, A. E. **LC–MS/MS and volumetric absorptive microsampling for quantitative bioanalysis of cathinone analogues in dried urine, plasma and oral fluid samples.** J Pharm Biomed Anal. 2016 May 10;123:186-94

Illicit Drugs | Urine, Plasma, Oral Fluids | Bioanalytical Validation

Neupane, B., Mulla, H., Spooner, N., Abu-Rabie, P., Rudge, J., & Pandya, H. **Midazolam measurement and modelling using matrix samplers (The 4M's Study).** American Pediatrics Association Conference, 14-15 April 2016, Liverpool, England

Pediatrics | Clinical Study | Wet vs. Dry Blood

Stephenson, S., Rudge, J., **Development of a potential at-home assay for tacrolimus monitoring using a microsampling device.** XXVIII Congress of the Scandinavian Transplantation Society, 11-13 May 2016, Stockholm, Sweden

Tacrolimus | At-Home Monitoring | Wet vs. Dry Blood

John H., Willoh, S., Hörmann, P., Sieget, M., Vondran, A.,& Theirmann, H. **Procedures for analysis of dried plasma using microsampling devices to detect sulfur mustard-albumin adducts for verification of poisoning.** Anal. Chem., Aug 2016, 88 (17), pp 8787–8794

Chemical Agent | Dried Plasma | Stability Study

Nicholls H., Tang J.C.Y., Dutton, J., & Fraser, W.D. **Evaluation of the mitra micro-sampling device against dried blood spot cards for measurement of 25-hydroxy vitamin D3 by LC-MS/MS.** MSACL EU Annual Conference, 12-15 Sep 2016, Salzburg, Austria

Micronutrient Monitoring | vs. Plasma | Hematocrit (HCT)

Parker S.L., Guerra Valero, Y.C., Lipman, J., Roberts, J.A., & Wallis, S.C. **Effect of time on recovery of plasma microsamples for the quantitative determination of vancomycin.** Bioanalysis. 2016 Nov;8(21):2235-2242

Glycopeptide | Recovery Study | vs. Dried Plasma

Bolea-Fernandez, E., Phan, K., Balcaen, L., Resano, M., & Vanhaecke, F. **Determination of ultra-trace amounts of prosthesis-related metals in whole blood using volumetric absorptive micro-sampling and tandem ICP - mass spectrometry.** Anal Chim Acta. 2016 Oct 19;941:1-9

Metals | Ultra-trace Levels | ICP-MS/MS

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Marahatta, A., Megaraj, V., McGann, P.T., Ware, R.E., & Setchell, K. **Stable-Isotope Dilution HPLC-Electrospray Ionization Tandem Mass Spectrometry Method for Quantifying Hydroxyurea in Dried Blood Samples.** Clin Chem. 2016 Dec;62(12):1593-1601

Therapeutic Drug Monitoring | Pediatrics | vs. Dried Blood Spots

2015

De Kesel, P.M.M., Lambert, W. E., Stove, C. P. **Does volumetric absorptive microsampling eliminate the hematocrit bias for caffeine and paraxanthine in dried blood samples? A comparative study.** Anal Chim Acta. 2015 Jun 30;881:65-73

Hematocrit (HCT) | vs Dried Blood Spots

Mano, Y.; Kita, K.; Kusano, K. **Hematocrit-independent recovery is a key for bioanalysis using volumetric absorptive microsampling devices, Mitra.** Bioanalysis. 2015;7(15):1821-9

Hematocrit (HCT) | Extraction Studies

Houbart, V., Cobraiville, G., Servais, A.-C., Napp, A., Merville, M.-P., & Fillet, M. **Hepcidin determination in dried blood by microfluidic LC–MS/MS: comparison of DBS and volumetric absorptive microsampling for matrix effect and recovery.** Bioanalysis. 2015 Nov;7(21):2789-99

Peptide Hormone | Mitra Extractions | vs Dried Blood Spots

Spooner, N., Denniff, P., Michielsen, L., De Vries, R., Ji, Q. C., Arnold, M. E., … Rudge, J. B. **A device for dried blood microsampling in quantitative bioanalysis: overcoming the issues associated blood hematocrit.** Bioanalysis. 2015;7(6):653-9

Cross-laboratory Study | Hematocrit (HCT) | vs Dried Blood Spots

Denniff, P., Parry, S., Dopson, W., & Spooner, N. **Quantitative bioanalysis of paracetamol in rats using volumetric absorptive microsampling (VAMS).** J Pharm Biomed Anal. 2015 Apr 10;108:61-9

Small Molecule | Animal Testing | TK Study

Miao, Z., Farnham, J. G., Hanson, G., Podoll, T., Reid, M. J. **Bioanalysis of emixustat (ACU-4429) in whole blood collected with volumetric absorptive microsampling by LC – MS / MS.** Bioanalysis. 2015;7(16):2071-83

Small Molecule | Anticoagulant | Bioanalytical Validation

Luo, Y., Korfmacher, W., Ho, S., Shen, L., Wang, J., Wu, Z., Guo, Y., Snow, G., O'Shea, T. **Evaluation of two blood microsampling approaches for drug discovery PK studies in rats.** Bioanalysis. 2015 Sep; 7(18):2345-2359

Animal Testing | PK Study | vs. Capillary Tubes

Kipper, K., Barker, C., Lonsdale, D., Sharland, M., & Johnston, A. **Evaluation of the Mitra microsampling device for dry sample processing in a pharmacokinetic/pharmacodynamic study of beta-lactams.** 42nd Symposium on HPLC and Related Techniques, 21-25 June 2015, Geneva, Switzerland

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Antimicrobials | Blood Plasma | Stability Studies

2014

Denniff P., & Spooner, N. **Volumetric absorptive microsampling: A dried sample collection technique for quantitative bioanalysis.** Anal. Chem., 2014, 86 (16), pp 8489–8495

Microsampling Technology Validation | Dried Blood

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