

The
2007
European Winter
Plasma Conference


Taormina



2007 European Winter Conference on Plasma Spectrochemistry

18 - 23 February 2007

Taormina, Italy

Poster Sessions

21 February 2007



and



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
Joint Research Centre

itu
Institute for
Transuranium
Elements

Poster Session Wednesday 21 Feb 2007

WedPo1. (IN)STABILITY OF As(GS)₃

K. Blümlein, A. Raab, J. Feldmann, Department of Chemistry, University of Aberdeen, Meston Building, Meston Walk, Aberdeen AB24 3UE, Scotland
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WedPo2. ARSENIC SPECIATION IN EDIBLE As-ACCUMULATING GASTROPODS BY LC-ICP-MS AND ESI-MS-MS

Federica Aureli, Silvia Ciardullo, Ettore Coni, Dario Luchetti, Andrea raggi, Giovanna Rufo, Francesco Cubadda
National Centre for Food Quality and Risk Assessment, Istituto Superiore di Sanità, Viale Regina Elena 299, 00161 Rome, Italy
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WedPo3. SPECIATION OF TRACE ELEMENTAL SPECIES USING GC-ICP-MS AND GC-ICP-SF-MS

Shona McSheehy, Julian Wills, Hans-Juergen Schlueter, Torsten Lindemann, Meike Hamester
Thermo Fisher Scientific (Bremen), Hanna-Kunath-Strasse 11, 28199, Germany.
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WedPo4. CHROMIUM SPECIATION IN NATURAL WATERS USING HPLC COUPLED TO THE XSERIES^{II} ICP-MS.

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WedPo5. CHROMIUM SPECIATION IN SOILS AND SEDIMENTS BY HPLC-ICP-MS,

Ruth E. Wolf, Jean M. Morrison, and Martin B. Goldhaber, U.S. Geological Survey, Mineral Resources Program, Box 25046, MS 964D, Denver Federal Center, Denver, Colorado, USA 80225
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WedPo6. Cr SPECIATION IN YEAST USING LC SF-ICP-MS

Lu Yang, Zoltán Mester and Ralph E. Sturgeon
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WedPo7. DEVELOPMENT OF A METHOD FOR THE DETERMINATION OF HEXAVALENT CHROMIUM (Cr^(VI)) IN FOODS

J. Lewis, S. Peres-Duran. M. Baxter, Central Science Laboratory, Sand Hutton, York, United Kingdom, YO41 1LZ.
j.lewis@csl.gov.uk

WedPo8. CHROMIUM SPECIATION IN PHARMACEUTICAL, NUTRACEUTICAL AND BIOLOGICAL MATRICES

Kirk E. Lokits, Douglas D. Richardson and Joseph A. Caruso
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WedPo9. VALIDATION OF A METHOD OF COUPLED LC-ICP-MS FOR THE SPECIATION OF CHROMIUM IN DRINKING AND SURFACE WATER USED IN A DRINKING WATER COMPANY

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WedPo10. PLATINUM SPECIATION IN THE ENVIRONMENT: EXIGENCIES OF ANALYTICAL METHODS

Alexander Standler¹, Gunda Koellensperger², Wolfgang Buchberger¹, **Stephan Hann**²

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² BOKU – University of Natural Resources and Applied Life Science, Department of Chemistry, Division of Analytical Chemistry, s, Muthgasse 18, 1190 Vienna, Austria

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WedPo11. A MOLECULAR INVESTIGATION IN THE INTERACTION OF ARSENIC UPON SELENIUM WITHIN THE *Chlorophytum Comosum* (SPIDER PLANT)

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WedPo12. CHEMICAL SPECIATION AND BIOAVAILABILITY OF MERCURY IN CONTAMINATED SOILS FROM VAL BASENTO (ITALY)

G.M. Beone, I. Cattani, S. Spalla, M. Trevisan, A.A.M. Del Re, R. Boccelli

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WedPo13. ULTRA-SENSITIVE DIRECT DETERMINATION OF RARE EARTH ELEMENTS IN TIBET ICE CORE SAMPLES BY ICP-SFMS USING A DESOLVATION SYSTEM (ARIDUS II, CETAC).

Giulio Cozzi, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, I-30123 Venice, Italy; Carlo Barbante, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, I-30123 Venice, Italy; Paolo Gabrielli, Institute for the Dynamics of Environmental Processes-CNR, Dorsoduro 2137, I-30123 Venice, Italy; Claudio Bettinelli, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, I-30123 Venice, Clara Turetta, Institute for the Dynamics of Environmental Processes-CNR, Dorsoduro 2137, I-30123 Venice, Italy; Alexandrine Marteel, University of Siena, Department of Geological Sciences, Via del Laterino 8, 53100 Siena, Italy; Claude Boutron, Laboratoire de Glaciologie et Géophysique de l'Environnement du CNRS 54, rue Molière, B.P. 96, 38402 St Martin d'Herès cedex, France; Paolo Cescon, Institute for the Dynamics of Environmental Processes-CNR, Dorsoduro 2137, I-30123 Venice, Italy

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WedPo14. SIZE FRACTIONATED CHARACTERISATION OF URBAN AEROSOLS: USE OF ELECTRIC LOW PRESSURE IMPACT COLLECTION WITH IC AND ICP-MS
R. Xie, A. Cox, C. McLeod, Centre for Analytical Sciences, University of Sheffield, Sheffield S3 7HF, UK

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M. Schofield, P. Collins and D. Anderson

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WedPo15. A NEW SAMPLE TREATMENT PROTOCOL FOR ORGANOTIN COMPOUNDS SPECIATION: IMPRINTED POLYMERS + FOCUSED ULTRASONICATION

Riansares Muñoz Olivas, Mercedes Gallego-Gallegos and Carmen Cámara.

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WedPo16. METAL DISTRIBUTION AND SPECIATION ON NATURAL COLLOIDS BY FFF-UV-MALLS-ICP-MS

S. Dubascoux, J. Herroult, **G. Lespes**, I. Le Hecho, Martine Potin-Gautier, Laboratoire de Chimie Analytique Bio-Inorganique et Environnement, UMR CNRS 5034, Avenue de l'Université, 64000 PAU, France

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WedPo17. OPTIMIZATION OF THE METHOD FOR THE DETERMINATION OF MERCURY IN ENVIRONMENTAL MATERIALS BY ICP-MS

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WedPo18. HEADSPACE SPME-GC-ICPMS COUPLING FOR SPECIATION OF VOLATILE SELENIUM.

Maïté Bueno, Hugues Preud'Homme, Florence Pannier

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WedPo19. IN-LINE PRECONCENTRATION HPLC-ICP-MS DETERMINATION OF MERCURY IN THE VENICE LAGOON.

W. R.L. Cairns, Institute for the Dynamics of Environmental Processes (CNR), Dorsoduro 2137, 30123 Venice, Italy. **M. Ranaldo**, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, 30123 Venice, Italy. **C. Turetta**, Institute for the Dynamics of Environmental Processes (CNR), Dorsoduro 2137, 30123 Venice, Italy. **G. Capodaglio**, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, 30123 Venice, Italy. **P. Cescon**, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, 30123 Venice, Italy and Institute for the Dynamics of Environmental Processes (CNR), Dorsoduro 2137, 30123 Venice, Italy. **C. Barbante**, University of Venice Ca' Foscari, Department of Environmental Sciences, Dorsoduro 2137, 30123 Venice, Italy.

WedPo20. SPECIATION IN NATURAL ORGANIC MATTER BY COUPLING ON-LINE COLUMN POLYACRYLAMIDE GEL ELECTROPHORESIS - ICP-MS

J. R. Castillo, J. M. Mir

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WedPo21. A STUDY OF THE INTERCONVERSION OF METHYLATED ARSENIC OXIDES TO METHYLATED ARSENIC SULFIDES IN SOLUTIONS CONTAINING FREE SULFIDE.

S. D. Conklin*, M. W. Fricke*, P. A. Creed, J. T. Creed, U.S. Environmental Protection Agency, National Exposure Research Laboratory, 26 W. Martin Luther King Drive, Cincinnati, OH 45268

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WedPo22. DETERMINATION OF ARSENOSUGARS IN MARINE ALGAE

Shizuko Hirata and Hideki Toshimitsu

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WedPo23. TOWARDS THE COMPLETE CHARACTERISATION OF THE WATER-SOLUBLE Se-FRACTION OF SELENISED YEAST

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WedPo24. HIGH PERFORMANCE LIQUID CHROMATOGRAPHY HYPHENATED TO INDUCTIVELY COUPLED PLASMA-MASS SPECTROMETRY FOR SPECIATION ANALYSIS OF MERCURY IN MATERNAL AND NEWBORN RATS AFTER PRENATAL AND POSTNATAL EXPOSED TO LOW DOSE OF METHYLMERCURY

Weiyue Feng¹, Meng. Wang^{1,2}, Yu Zhang³, Junwen Shi^{1,2}, Bai. Li¹, Hong Ouyang¹, Zhifang Chai¹

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WedPo25. ARSENIC ACCUMULATION AND SPECIATION IN FRESHWATER FISH LIVING IN ARSENIC-CONTAMINATED WATERS

Patcharin Jankong, Cherif Chalhoub, Norbert Kienzl, Walter Goessler, **Kevin Francesconi**, and Pornsawan Visoottiviseth, Department of Biology, Faculty of Science, Mahidol University, Rama VI Rd, Bangkok 10400, Thailand, and Institute of Chemistry, Analytical Chemistry, Karl-Franzens University Graz, Universitaetsplatz 1, 8010 Graz, Austria.

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WedPo26. SPECIATION OF URANYL CITRATE BY ION-EXCHANGE MONOLITHIC COLUMN CHROMATOGRAPHY COUPLED WITH ICPMS AND ISOTOPE DILUTION

V. Geertsen, F. Chartier, H. Isnard, J. Petit

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WedPo27. CHARACTERIZATION OF METALS BOUND TO PHENOLIC COMPOUNDS IN OLIVE OIL BY REVERSED-PHASE HPLC-UV-FLD-ICPMS

A. Arias-Borrego, T. García-Barrera, J.L. Gómez-Ariza

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WedPo28. ARSENIC SPECIATION IN URINE AND BLOOD OF SEALS (*Phoca vitulina*) USING HPLC-ICP-MS

S. Griesel,¹ K. Sundl², D. Proefrock¹, W. Goessler², A. Prange¹

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WedPo29. SILMUTANEOUS DETERMINATION OF NINE ARSENIC SPECIES BY HIGH PERFORMANCE LIQUID CHROMATOGRAPHY / INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY

V. Dufailly, L. Noël, **T. Guérin**, Agence Française de Sécurité Sanitaire des Aliments, Laboratoire d'Etudes et de Recherches sur la Qualité des Aliments et les Procédés agro-alimentaires, Unité Contaminants Inorganiques et Minéraux de l'Environnement, 23, Av. du Général de Gaulle, Maisons-Alfort, France, F-94706.

J-M. Frémy, Agence Française de Sécurité Sanitaire des Aliments, Direction de l'Evaluation des Risques Nutritionnels et Sanitaires, Unité d'Evaluation des Risques Physico-Chimiques, 27-31, Av. du Général Leclerc, Maisons-Alfort, France, F-94701.

D. Beauchemin, Queen's University, Department of Chemistry, 90 Bader Lane, Ontario, Kingston, Canada, ON K7L 3N6.

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WedPo30. EVALUATION OF BIOTRANSFORMATION OF SELENIUM IN Se-ENRICHED YOGURT BY HPLC-ICP-MS

A. Alzate, **A.M. Gutiérrez-Carreras**, M.C. Pérez-Conde, B. Cañas, S. Pérez-Munguía*, H. Hernández-Mendoza, C. Cámara. Departamento de Química Analítica, Facultad de Ciencias Químicas, Universidad Complutense, Ciudad Universitaria, 28040, Madrid, Spain.

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WedPo31. PRECONCENTRATION OF TRACE ELEMENTS USING 4-PHENYLTHIOSEMICARBAZIDE FUNCTIONALIZED AMBERLITE XAD-4 AND FL-ICP-MS DETECTION

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^b School of Earth, Ocean and Environmental Sciences, University of Plymouth, Drake Circus, Plymouth. PL4 8AA, UK.

WedPo32. DETERMINATION OF ARSENOSUGARS IN MARINE ALGAE

Shizuko Hirata and Hideki Toshimitsu

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WedPo33. PRELIMINARY STUDY FOR SPECIATION OF TRACE ELEMENTS IN RICE PHLOEM SAP BY SEMI-MICRO SIZE EXCLUSION CHROMATOGRAPHY - ICPMS

K. Inagaki¹, M. Kato², T. Yarita¹, S. Yanagisawa², T. Yoneyama², K. Chiba¹, ¹Environmental Standards Section, National Metrology Institute of Japan (NMIJ), AIST, Tsukuba central 3-10, Umezono1-1-1, Tsukuba, Ibaraki, 305-8563, Japan, ² Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, University of Tokyo, Bunkyo-ku, Tokyo, 113-8657, Japan.

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WedPo34. SPECIATION ANALYSIS OF SELENOPROTEINS IN HUMAN BLOOD

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WedPo35. IN-VIVO DISTRIBUTION STUDY ABOUT GOLD NANOPARTICLES BY ICPMS

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WedPo36. CE-DAD-ICP-MS AS TOOL FOR ENVIRONMENTAL SPECIATION ANALYSIS

B. Kuczewski¹, R. A. Buda², G. Knapp¹,

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²University Mainz, Institute for Nuclear Chemistry, Fritz-Straßmann-Weg 2, D-55099 Mainz, Germany

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WedPo37. SPECIATION ANALYSIS FOR IODINE IN GROUND WATER USING HIGH PERFORMANCE LIQUID CHROMATOGRAPHY-INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY (HPLC-ICPMS)

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WedPo38. DETERMINATION OF As, Cd, Ni AND Pb IN PM₁₀ PARTICULATE MATTER.

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WedPo39. DETERMINATION OF TRACE ELEMENTS IN ATMOSPHERIC PARTICLES PM_{2.5} COLLECTED IN QUARTZ AND GLASS FIBER FILTERS USING ICP-MS.

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WedPo40. DEVELOPMENT AND APPLICATION OF AN ULTRATRACE METHOD FOR THE SPECIATION OF ORGANOTIN COMPOUNDS IN NATURAL CRYOGENIC HOMOGENIZED BIOLOGICAL MATERIALS

David Point¹, W. Clay Davis¹, Steven J. Christopher¹, Michael B. Ellisor¹, Rebecca S. Pugh¹, Paul R. Becker¹, Olivier F.X. Donard², Barbara J. Porter³ and Stephen A. Wise³. ¹ National Institute of Standards and Technology, Analytical Chemistry Division, Hollings Marine Laboratory, 331 Fort Johnson Road Charleston, SC, USA, 29412. ² Laboratoire de Chimie Analytique BioInorganique et Environnement, UMR 5034, 2av Pdt Angot, Hélioparc Pau Pyrenees, Pau, France, 64053. ³ National Institute of Standards and Technology, Analytical Chemistry Division, 100 Bureau Drive Stop 8392, Gaithersburg, MD, USA, 20899

WedPo41. ELEMENTAL STUDY OF THE REMAINS OF AGNÈS SOREL (1422-1450) BY ICP-OES SUPPORTS THE THESIS OF A DEATH CAUSED BY MERCURY INTOXICATION

Joël Poupon¹, P. Charlier², S. Vélasquez³, L. Brun², 1. Laboratoire de Toxicologie biologique, Hôpital Lariboisière, Paris, France, 75010 ; 2. Laboratoire de Paléopathologie Humaine, Service de Médecine Légale, Hôpital Universitaire R. Poincaré, 92380 Garches, France ; 3. HORIBA Jobin Yvon, 16-18, rue du canal, Longjumeau, France, 91165.

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WedPo42. NOVELTY IN SPECIES SPECIFIC - UNSPECIFIC ISOTOPIC DILUTION APPLIED HERE TO ORGANO-TINS & -MERCURY SPECIATION IN BLOOD SAMPLE AND BIOLOGICAL TISSUE BY GC-MS AND GC-ICPMS

H. Preud'Homme, P. Rodríguez-González, R. Lobinski, Laboratoire de Chimie Analytique Bio-Inorganique et Environnement, Université de Pau et des Pays de l'Adour, UMR CNRS 5034, Hélioparc Pau Pyrénées, 2 Avenue du Président Pierre Angot, 64053 PAU Cedex, FRANCE.

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WedPo43. ARSENIC OCCURRENCE IN PLANTS GROWING IN A MINING CONTAMINATED AREA

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WedPo44. ON-LINE PRECONCENTRATION AND SPECIATION OF Sb(III) AND Sb(V) IN URINE USING A FULLY AUTOMATED HG-ICP OES SYSTEM

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WedPo45. DEVELOPMENT OF ANALYTICAL METHODS FOR IODINE SPECIATION IN FRESH WATER USING SEC-ICP-MS

Yuichi TAKAKU, Yoshihito OHTSUKA, Takuma HAYASHI*, and Shun'ichi HISAMATSU
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WedPo46. SPECIATION AND DISTRIBUTION OF SELENIUM IN ALLIUM CEPA L. – DIFFERENT APPROACHES OF IN-VIVO AND IN-VITRO INVESTIGATIONS

Irena A. Wysocka^{1,2}, Ewa Bulska², Małgorzata Wierzbicka³, Kristof Proost⁴, Koen Janssens⁴

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WedPo47. MEASUREMENT OF TRACE ELEMENTS IN MILK SAMPLES BY INDUCTIVELY COUPLED MASS SPECTROMETRY

R. Barski, B.Sampson.

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WedPo48. REFERENCE VALUES FOR INORGANIC ELEMENTS AND ORGANIC COMPOUNDS IN BLOOD, PLASMA AND URINE : THE NEW S.I.V.R. LIST

M. Bettinelli⁽¹⁾, C. Aprea⁽²⁾, A. Perico⁽³⁾, A. Ronchi⁽⁴⁾

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WedPo49. DETERMINATION OF TRACE ELEMENTS IN URINE BY USN-ICP-MS : CRITICAL EVALUATION OF MEASUREMENT UNCERTAINTY

M. Bettinelli⁽¹⁾, P. Apostoli⁽²⁾, E. Gilberti⁽²⁾, C. Bettinelli⁽¹⁾

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WedPo50. PEAK EFFICIENCY COMPARISON OF MICROMIST-100 AND HEN MICRONEBULISERS ON As, Se, Cr SPECIATION BY □HPLC-ICPMS

A.F. Roig-Navarro, A. Castillo, O.J. Pozo.

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WedPo51. ANALYSIS OF PHOSPHOPEPTIDES BY LIQUID CHROMATOGRAPHY COUPLED TO INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY AND TO LC CHIP MASS SPECTROMETRY.

Jenny Ellis, Kevin Kubachka, Kirk Lokits and Joseph A. Caruso

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WedPo52. SIZE FRACTIONATED MEASUREMENTS ON ATMOSPHERIC AEROSOLS IN THE URBAN ENVIRONMENT

KA Jackson, RK Xie, CW McLeod, MJ Schofield¹ and DA Anderson¹

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WedPo53. THE POSSIBLE BIOAVAILABILITY OF SE SPECIES FROM DIETARY SUPPLEMENTS

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WedPo54. ANALYSIS OF SELENIUM INCORPORATION IN SOYBEAN PROTEINS

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WedPo55. DETERMINATION OF 4 PESTICIDES IN VEGETABLES AND FLOWERS BY HPLC-ESI-MS/MS

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WedPo56. ELEMENTAL SPECIATION VIA HPLC-ICP-MS APPLIED THE DETECTION OF CHEMICAL WARFARE AGENT DEGRADATION PRODUCTS IN FOODS.

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WedPo57. CRITICAL EVALUATION OF INTERNAL STANDARDS AND MEASURING CONDITIONS FOR THE SIMULTANEOUS DETERMINATION OF IODINE AND COBALT IN BOVINE SERUM AND URINE

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WedPo58. ANTIMONY SPECIATION IN ASH LEACHATES BY HPLC-ICP-MS

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WedPo59. CHIRAL SPECIATION OF THE PESTICIDE BROMOCYCLEN IN ENVIRONMENTAL SAMPLES BY SPME-ENANTIOSELECTIVE GAS CHROMATOGRAPHY WITH ECD AND ICP-MS DETECTION

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WedPo60. CHARACTERIZATION OF METAL-ANTHOCYANINS COMPLEXES IN WINES BY SEC AND RP-HPLC-ICP-MS

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WedPo61. MICRO-HPLC FOR PROFILING THIO- AND OXO-ARSENOSUGARS IN BROWN ALGAE

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WedPo62. SELENIUM SPEIATION IN SOILS BY HPLC-ICP-MS

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WedPo63. INVESTIGATION OF MONOMETHYLARSENIOUS ACID (MMAs^{III}) IN BRAZILIAN HUMAN URINE BY A COMBINED LIQUID AND GAS CHROMATOGRAPHIC APPROACH

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WedPo64. USE OF MICROCOLUMNS FOR SAMPLE PREPARATION PRIOR TO THE ANALYSIS OF ARSENIC SPECIES BY HPLC-ICP-MS.

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WedPo65. THE INSIGHT INTO BIOACCUMULATION OF PLATINUM BY *ARABIDOPSIS THALIANA* BY ICP AND ESI MS

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WedPo66. SELENIUM-SPECIATION IN SOIL AND PLANT SAMPLES USING ANION-EXCHANGE CHROMATOGRAPHY WITH INDUCTIVELY COUPLED PLASMA MASS SPECTROMETRY

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WedPo67. SPECIATION OF CELL LYSATE FOR SE AND CD SUPPLEMENTED BENIGN AND MALIGNANT PROSTATE TISSUE LINES, RWPE-1 AND RWPE-2.

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WedPo68. ISOCRATIC HPLC SEPARATION OF INORGANIC, METHYL- AND DIMETHYLMERCURY WITH ICPMS AS ELEMENT SELECTIVE DETECTOR

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WedPo69. SIZE FRACTIONATED CHARACTERISATION OF URBAN AEROSOLS: USE OF ELECTRIC LOW PRESSURE IMPACT COLLECTION WITH IC AND ICP-MS

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WedPo70. CHEMICAL SPECIATION OF NICKEL AND MANGANESE IN WELDING FUMES

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WedPo71. FOR THE DETERMINATION OF TRIHALOMETHANES IN DRINKING WATER BY GC-ICP-MS

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WedPo72. IODINE SUPPLEMENTATION IN PREGNANT AND BREAST-FEEDING WOMEN AS FOLLOWED BY ICP-MS

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WedPo73. EVALUATION OF ARSENIC LEVELS IN HAIR OF PEOPLE EXPOSED TO CONTAMINATED DRINKING WATER: ARSENIC LEVELS, SPECIATION AND RELATED HEALTH DISORDERS.

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WedPo74. FAST AND ACCURATE DETERMINATION OF SULPHUR SPECIES IN PETROLEUM PRODUCTS BY SPECIES-SPECIFIC AND SPECIES-UNSPECIFIC GC/ICP-IDMS

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WedPo75. ICP MS DETERMINATION OF COPPER AND ZINC IN NONFAT SOYBEAN POWDER – PARTICIPATION OF THE NATIONAL CENTER OF METROLOGY, BULGARIA IN THE CCQM P64 COMPARISON

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WedPo76. STUDIES ON THE COMPLEXATION OF LANTHANIDES WITH HUMIC ACIDS VIA CE-UV/VIS-ICP-MS

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WedPo77. A ROBUST METHOD FOR DETERMINATION OF PLATINUM GROUP ELEMENTS CONCENTRATIONS (PGE) IN VEGETATION SAMPLES.

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WedPo78. SPECIFIC AND QUANTITATIVE TITANIUM SPECIATION STUDIES IN HUMAN SERUM BY HPLC-ICP-MS AND POST-COLUMN ISOTOPE DILUTION

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WedPo79. ARSENIC SPECIATION WITH NANO-HPLC-PLASMA MASS SPECTROMETRY

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WedPo80. ROUTINE SPECIATED ARSENIC ANALYSIS IN URINE, USING HPLC-ICP-CR/C-MS

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