

Session 1: Challenges and Innovations in RM Production

1. **On-line Process Control of Moisture in Reference Materials Using AOTF-NIR**, Jean Charoud-Got, Albert Oostra, Paul De Vos, Andrea Bau, Vikram Kestens, Alexander Bernreuther, Katharina Teipel, and Håkan Emteborg, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements (IRMM), Geel, Belgium*
2. **CRM Storage Building**, Andrée Lamberty, G. Kerckhove, and Hendrik Emons, *Institute for Reference Materials and Measurements (IRMM), Geel, Belgium*
3. **Certification of a Maize Powder for its Mass Fraction of a Stacked GMO Event**, Stefanie Trapmann, Philippe Corbisier, and Heinz Schimmel, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements (IRMM), Geel, Belgium*
4. **Certification and Stability Measurements of Mercury Species in NIST Fresh Frozen Standard Reference Materials**, W. Clay Davis, Steven J. Christopher, and Michele M. Schantz, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
5. **Measurement of the Surface Properties of Bacillus Spores: Implications for Producing Reference Materials**, Jayne B. Morrow, Jamie L. Almeida, and Kenneth D. Cole, *Biochemical Science Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
6. **Preparation of a New Bovine Liver Benchmark SRM**, Rolf Zeisler, Mark P. Cronise, Curtis N. Fales, William D. James, Elizabeth A. Mackey, and Rabia O. Spatz, *Analytical Chemistry Division and Measurement Services Division, National Institute of Standards and Technology, Gaithersburg, MD, USA; Elemental Analysis Laboratory, Texas A&M University, College Station, TX, USA*

Session 2: Advances in Analytical Techniques and RM Development

7. **Does DNA Extraction Method Affect GM Quantification?** Corbisier, W., Broothaerts, S., Gioria, H., Schimmel, M., Burns, K., Emslie, S., Furui, M., Holden, H.-H., Kim, M., Kawaharasaki, D., and Sin, J. Wang, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium; Bio-Molecular Innovation, LGC, Middlesex, UK; National Measurement Institute, Pymble, NSW, Australia; National Food Research Institute, GM Analytical Evaluation Team, Tsukuba, Ibaraki, Japan; Bioprocess Measurement Group, National Institute of Standards and Technology, Gaithersburg, MD, USA; Korean Research Institute of Standards and Science, Daejeon, Republic of Korea; National Institute of Advanced Industrial Science and Technology, Institute for Biological Resource and Function, Tsukuba, Ibaraki, Japan; Hong Kong Government Laboratory Kowloon, Hong Kong; National Research Center for Certified Reference Materials, Beijing, P.R. China*
8. **An Isotope Dilution LC/MS/MS Method for the Quantification of Amino Acids**, David M. Bunk, Matthew J. Vergne, and Michael J. Welch, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*

9. **Unique Standard Additions Calibration Method for Certification of Trace Elements in SRM 1598a Inorganic Constituents in Bovine Serum**, Steven J. Christopher, Rolf L. Zeisler, and Gregory C. Turk, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
10. **Development of Atomic Spectrometric Analytical Methods Utilizing Biological Reference Materials**, Milan Ihnat, *Agriculture and Agri-Food Canada, Summerland, British Columbia, Canada*
11. **Reporting Values and Uncertainties for Certified Reference Materials Used in ICP and ICPMS Analysis**, Nimi Kocherlakota and Ralph H. Obenauf, *Spex CertiPrep, Metuchen, NJ, USA*
12. **Development of Zeolite Materials for Environment Protection and Restoration**, Valery Nesterenko, *Belarusian National Technical University, Minsk, Republic of Belarus*
13. **Development and Performance of a New Set of Eight Geochemical Reference Materials**, Rufino Lozano and Juan Pablo Bernal, *Universidad Nacional Autónoma de México, Ciudad Universitaria, México*
14. **Alternative Procedure to Determine Radionuclide Concentrations for Marine Sediment Dating**, Daniel Palacios, Juan Alfonso, Laszlo Sajo-Bohus, Karla Pérez, and Milagros Trujillo, *Universidad Simon Bolivar and Instituto Venezolano de Investigaciones Cientificas, Caracas, Venezuela*
15. **Contribution of INAA for the Certification of Candidate Geological Reference Materials**, Elisabete A. De Nadai Fernandes, Juan Pablo Bernal, Rufino Lozano, Márcio Arruda Bacchi, Cláudio Luiz Gonzaga, and Fábio Sileno Tagliaferro, *Centro de Energia Nuclear na Agricultura, Universidade de São Paulo, SP, Brazil; Departamento de Geoquímica, Instituto de Geología, Universidad Nacional Autónoma de México, Ciudad Universitaria, Mexico, D.F., Mexico*
16. **Reference Reagents for Genetic Testing: Development of Plasmid Based Mutation Detection Reagents by NGRL (Wessex)**, Helen E. White, Victoria J. Durston, Gemma L. Potts, John F. Harvey, Ross Hawkins, Glyn Stacey, and Nicholas C.P. Cross, *National Genetics Reference Laboratory (Wessex), Salisbury District Hospital, Salisbury, UK; National Institute for Biological Standards and Control, Potters Bar, Hertfordshire UK*
17. **Determination of the Effective Purities of Acidimetric Standards by Precise Coulometric Titration and Gravimetric Titration**, Toshiaki Asakai, Hisao Hara, and Mariko Murayama, *National Institute of Technology and Evaluation, Tokyo, Japan*
18. **Genomic DNA Based Reference Materials for Diagnosis of Fragile X Syndrome**, E. Gillaspy, J. Rice, A. O'Grady, R. Elles, D. Barton, R. Hawkins, G. Stacey, and N. Cross, *National Genetics Reference Laboratory, St Mary's Hospital, Manchester UK; National Centre for Medical Genetics, Our Lady's Hospital for Sick Children, Dublin, Ireland; National Institute for Biological Standards and Control, Potters Bar, UK; National Genetics Reference Laboratory (Wessex), Salisbury District Hospital, Salisbury, UK*
19. **A Recombinant Genomic DNA Approach to the Production of Human Genetic Reference Materials**, Emily Liefoghe and Ross Hawkins, *National Institute for Biological Standards and Control, Hertfordshire, UK*

Session 3: RMs for Human Health

20. **Development of a New Frozen Urine SRM for Arsenic Speciation**, Lee L. Yu, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
21. **Development of a Standard Reference Material for Metabolites in Human Plasma (Metabolomics)**, Karen W. Phinney, Lane C. Sander, Katherine E. Sharpless, Michael J. Welch, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
22. **Development of a Standard Reference Material for Vitamin D in Human Serum**, Karen W. Phinney, Bryant C. Nelson, and Lane C. Sander, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
23. **Development of a Method for Microarray Scanner Validation**, Mary B. Satterfield, Katrice Lippa, John Lu, and Marc Salit, *Biochemical Science Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
24. **Certification of Cadmium in Biological and Environmental Reference Materials from ppt to ppm Levels**, Karen E. Murphy, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
25. **Development of Reference Methods for Hormones in Serum**, Susan Tai and Michael J. Welch, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
26. **Mass Spectrometry Studies on the Reproducibility of Protein Digestion**, Matthew J. Vergne, David M. Bunk, and Michael J. Welch, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
27. **Development of a Method for Measurement of Ischemia-modified Albumin**, Eric L. Kilpatrick, David M. Bunk, and Michael J. Welch, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
28. **Development of Reference Materials for Proteomic Biomarker Discovery for Early Cancer Detection**, David M. Bunk, Peter E. Barker, Lori J. Sokoll, and Daniel W. Chan, *Analytical Chemistry Division and Biochemical Sciences Division, National Institute of Standards and Technology, Gaithersburg, MD, USA; Department of Pathology, Johns Hopkins Medical Institutions, Baltimore, MD, USA; Early Detection Research Network, National Cancer Institute, Rockville, MD, USA*
29. **Biological Standards and Working Reagents for HIV/AIDS**, Harvey Holmes and Paul Matejtschu, *Division of Retrovirology, National Institute for Biological Standards and Control, Hertfordshire, UK*

30. **Production of Primary Genetic Reference Materials**, Elaine Gray, Malcolm Hawkins, Ed Byrne, Ross Hawkins, Paul Metcalfe, Rob Elles, Nick Cross, David Barton, Steve Kitchen, Mike Makris, and Paul Matejschuk, *National Institute for Biological Standards and Control, Hertfordshire UK; National Genetic Reference Laboratory Manchester and Wessex, UK; National Centre for Medical Genetics, Dublin, Ireland; United Kingdom National External Quality Assessment Service for Blood Coagulation, Hallamshire Hospital, Sheffield, UK*
31. **Reference Laboratory Measurement Services for Laboratory Medicine and *in vitro* Diagnostic Measurement Services**, Stephanie Maniguet and Robert Ian Wielgosz, *Bureau International des Poids et Mesures, Sèvres, France*
32. **Determination of Serum Creatinine by Liquid Chromatography Isotope Dilution-Mass Spectrometry**, Can Quan, Jun Liu, Bei Xu, and Liqing Wu, *National Research Center for Certified Reference Materials, Beijing, P.R. China*
33. **Human Urine Certified Reference Material CZ 6010: Creatinine and Toluene Metabolites Hippuric Acid and o-Cresol and Benzene Metabolite - Phenol**, Ilona Šperlingová, Ludmila Dabrowská, Vladimír Stránský, Jan Kučera, and Miloň Tichý, *National Institute of Public Health & Nuclear Physics Institute, Prague, Czech Republic*

Session 4 : RMs for Environmental Monitoring

34. **Particulate Reference Materials for Evaluating Quantitative Analytical Methods for Beryllium**, Aleksandr B. Stefaniak, Christopher A. Brink, Robert M. Dickerson, Gregory A. Day, Michael J. Brisson, Ronald C. Scripsick, and Mark D. Hoover, *National Institute for Occupational Safety and Health, Morgantown, WV, USA; Los Alamos National Laboratory, Los Alamos, NM, USA; Washington Savannah River Company, Savannah River Site, Aiken, SC, USA*
35. **Development of a Certified Calibration Standard for the Determination of Mineral Oil Hydrocarbons Using Gas Chromatography**, Matthias Koch, Roland Becker, Hans-Gerhard Buge, Stefanie Pötz, and Irene Nehls, *Federal Institute for Materials Research and Testing (BAM), Berlin, Germany*
36. **Development and Validation of a Certified Reference Material – A Simulated Polluted Sandy Soil Preparation and Certification Investigation**, Zhen Xu, Connie R. Hayes, and Theodore C. Rains, *High Purity Standards, Charleston, SC, USA*
37. **Application of Standard Reference Gas Mixtures in Environmental Monitoring**, Wen Tian, Qian Wang, Tao Liu, Ning Li, and Zhongxiang Wu, *Institute for Reference Materials of State Environmental Protection Administration, Beijing, P.R. China*
38. **Determination of Polybrominated Diphenyl Ethers in Mussel Tissue and Sediment Standard Reference Materials**, Dianne L. Poster, Heather M. Stapleton, Jennifer M. Keller, John R. Kucklick, and Michele M. Schantz, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*

39. **Development of a New House Dust Standard Reference Material for the Determination of Organic Contaminants**, Dianne L. Poster, Michele M. Schantz, Jennifer M. Keller, John R. Kucklick, Barbara J. Porter, Heather M. Stapleton, Stacy S. Vander Pol, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*
40. **Determination of Polychlorinated Biphenyls (PCBs) in a River Sediment Standard Reference Material**, Dianne L. Poster, John R. Kucklick, and Michele M. Schantz, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*
41. **Microheterogeneity Evaluation of Polycyclic Aromatic Hydrocarbons in Particulate Standard Reference Materials**, Katrice A. Lippa and Michele M. Schantz, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
42. **Development of Human Serum and Human Milk SRMs for Organic Contaminants**, Michele M. Schantz, Jennifer M. Keller, John R. Kucklick, Donald G. Patterson, Jr., Dianne L. Poster, Katherine E. Sharpless, Andreas Sjödin, Wayman E. Turner, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA; Centers for Disease Control and Prevention, Atlanta, GA, USA*
43. **Recertification of Diesel Particulate, Coal Tar, and Cod Liver Oil SRMs**, Michele M. Schantz, Jennifer M. Keller, John R. Kucklick, Dianne L. Poster, Katherine E. Sharpless, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*
44. **New Solution SRMs for Organic Constituents**, Michele M. Schantz, John R. Kucklick, Dianne L. Poster, Lane C. Sander, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA and National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*
45. **Development of a 0.1 $\mu\text{mol/mol}$ Propane in Air SRM for Automobile Exhaust Testing for New Low Emission Requirements**, George Rhoderick, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
46. **Organohalogen Contaminant Measurements in NIST Human Serum SRM 1589a: Method Development and Re-certification**, Jennifer M. Keller, Bob Swarthout, Brianna Carlson, Heather Stapleton, John R. Kucklick, and Michele Schantz, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA; College of Charleston, Charleston, SC, USA; National Oceanic and Atmospheric Administration, Oceans and Human Health Initiative, Charleston, SC, USA; Duke University, Durham, NC, USA*
47. **Value Assignment of Selected SRMs for Polychlorinated Naphthalene and Coplanar PCB Congeners**, John R. Kucklick, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*

48. **Recertification of SRM 1945 Organics in Whale Blubber**, John R. Kucklick, Michele M. Schantz, and Dianne L. Poster, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
49. **Development of a Murre (*Uria spp.*) Egg Control Material**, Stacy S. Vander Pol, Michael B. Ellisor, Rebecca S. Pugh, Paul R. Becker, Dianne L. Poster, Michele M. Schantz, Bryan J. Wakeford, David G. Roseneau, and Kristin S. Simac, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA; Canadian Wildlife Service, National Wildlife Research Centre, Carleton University, Ottawa, Canada; U.S. Geological Survey, Alaska Science Center, Anchorage, AK, USA; U.S. Fish and Wildlife Service, Alaska Maritime National Wildlife Refuge, Homer, AK, USA*
50. **Method Development for Measurement of Butyltins Species in Natural Matrix Reference Materials and NIST QC Materials**, David Point, W. Clay Davis, Steven J. Christopher, Olivier F.X. Donard, Gregory C. Turk, and David Barclay, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD USA; Laboratoire de Chimie Analytique BioInorganique et Environnement-UMR, Pau-France; CEM Corporation, Matthews, NC, USA*
51. **Emerging Contaminants in Environmental Standard Reference Materials**, Aaron M. Peck, John R. Kucklick, and Michele M. Schantz, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
52. **New Gas Standards for Calibrating Instrumentation Used for Measuring Emissions from Next Generation Low Emission Vehicles**, William J. Thorn III, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD USA*
53. **Quality Assurance in PAH Analysis**, Ofelia Bercaru, Franz Ulberth, and Hendrik Emons, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium*
54. **Environmental Reference Materials from IRMM**, Hendrik Emons, Andrea Held, and Franz Ulberth, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium*
55. **Certified Reference Materials for RoHS Testing**, Thomas Peter Josef Linsinger, Andrée Lamberty, Gert Roebben, and Andrea Held, *Institute for Reference Materials and Measurements, Geel, Belgium*
56. **Preparation of Two Certified Reference Materials for Controlling the Level of Solvent Yellow 124 (Euromarker) in Gas Oil**, Håkan Emteborg, Thomas Peter Josef Linsinger, Ger Koomen, Albert Oostra, Paul De Vos, and Jean Charoud-Got, *Institute for Reference Materials and Measurements, European Commission, Joint Research Centre, Geel, Belgium; Dutch Customs Laboratory, Amsterdam, The Netherlands*

57. **Preparation of Three Certified Reference Materials for Sulfur in Petrol**, Håkan Emteborg, Jean Charoud-Got, Gerard Kramer, Albert Oostra, Paul De Vos, Andrea Bau, and Thomas Peter Josef Linsinger, *Institute for Reference Materials and Measurements, European Commission, Joint Research Centre, Geel, Belgium*
58. **A Survey of Results from Recent Interlaboratory Comparison Exercises for Trace Elements in Marine Mammals Using NIST Quality Control Materials**, Steven J. Christopher, Elizabeth A. Mackey, Barbara J. Porter, Paul R. Becker, Teri Rowles, Michael Ellisor, and Rebecca S. Pugh, *National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA and Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Silver Spring, MD, USA*
59. **The Certification of SRM 2731 [20 µmol/mole H₂S/N₂] Using Two Independent Methods**, Walter R. Miller Jr., *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
60. **Developing Traceability in Gaseous Mercury Emissions Monitoring**, G. D. Mitchell and W. D. Dorko, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
61. **Certification of Methylmercury in Cod Muscle Tissue Candidate Reference Material by Species-specific Isotope Dilution Mass Spectrometric Analysis**, Kazumi Inagaki, Takayoshi Kuroiwa, Tomohiro Narukawa, Takashi Yarita, Akiko Takatsu, Kensaku Okamoto, and Koichi Chiba, *National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan*
62. **Certification of Butyltins and Phenyltins in Marine Sediment Certified Reference Material by Species-specific Isotope Dilution Mass Spectrometric Analysis Using ¹¹⁸Sn-labeled Organotins**, Kazumi Inagaki, Akiko Takatsu, Takuro Watanabe, Yoshie Aoyagi, Takashi Yarita, Kensaku Okamoto, and Koichi Chiba, *National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, Tsukuba, Japan*
63. **Certification of Polychlorinated Biphenyls and Organochlorine Pesticides in Marine Sediment Reference Materials**, Takashi Yarita, Masahiko Numata, Yoshie Aoyagi, Akiko Takatsu, and Kensaku Okamoto, *National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology, Tsukuba, Ibaraki, Japan*
64. **Feasibility Study for Certified Reference Materials for Organic Components in Sewage Sludge (SLUDGESUPPORT)**, Mikael Krysell, Roland Becker, Jan Willem Wegener, David Benanou, Oddvar Ringstad, Stefan van Leeuwen, and Heather Leslie, *Eurofins A/S, Denmark; Federal Institute for Materials Research and Testing, Germany; Institute for Environmental Studies, Free University, The Netherlands; Anjou Recherche, France; SINTEF Applied Chemistry, Norway; Netherlands Institute for Fisheries Research; The Netherlands*
65. **Scientific Prospect of a Certified Reference Material for Study on the Urban Dust in China**, Zijie Sun, Masataka Nishikawa, Zhongxiang Wu, Ikuko Mori, and Sumito Matoba, *Institute for Reference Materials of State Environmental Protection Administration, Beijing, P.R. China; National Institute for Environmental Studies, Tsukuba, Japan*

66. **Production and Certification of Beryllium on a Filter Media**, Amy R. Adams, Elodie E. Rolando, Zhen Xu, and Theodore C. Rains, *High Purity Standards, Charleston, SC, USA*
67. **Trace and Ultratrace Elements in Reference Sample of Lake Baikal Water**, Ludmila Paradina, Alexander Suturin, and Valery Lozhkin, *Limnological Institute and Institute of Geochemistry, Siberian Branch, Russian Academy of Sciences, Irkutsk, Russia*
68. **Mineral Oil Content in Sediments and Soils: ERM-CC015a - a Certified Reference Material for Quality Assurance**, Roland Becker, Hans-Gerhard Buge, Wolfram Bremser, and Irene Nehls, *Federal Institute for Materials Research and Testing, Berlin, Germany*
69. **The Preparation and Certification of Aqueous Sodium Fluoride Solutions**, Marcellé Archer and Betty-Jayne de Vos, *Council for Scientific and Industrial Research, National Metrology Institute, Pretoria, South Africa*
70. **The Preparation and Certification of Aqueous Ethanol Solutions**, Marcellé Archer, Betty-Jayne de Vos, and Ria Visser, *Council for Scientific and Industrial Research, National Metrology Institute, Pretoria, South Africa*
71. **Development of Metrology for pH Measurement in Thailand**, Bunthoon Laongsri, Cheerapa Boonyakong, Nongluck Tangpaisarnkul, and Chainarong Cherdchu, *National Institute of Metrology, Thailand*
72. **Homogeneity Testing of Biological Reference Materials Using Solubilization with Formic Acid and ICP-MS Determination**, Scott Willie, *Institute for National Measurement Standards, National Research Council Canada, Ottawa, Ontario, Canada*
73. **Mercury in Fish: Studies on Certified Reference Material Production**, Jorge E. de S. Sarkis, João C. Ulrich, Vera M. L. Ponçano, Terezinha E. M. de Carvalho, and Olívio P. de Oliveira Júnior, *Instituto de Pesquisas Energéticas e Nucleares, SP, Brasil, Instituto de Pesquisas Tecnológicas do Estado de São Paulo, SP, Brasil*

Session 5: RMs for Food Safety and Quality

74. **Effect of γ -Irradiation on Standards and Tissue Reference Materials for Domoic Acid, Okadaic Acid, Dinophysistoxin-2, and Azaspiracid-1, -2 and -3, Pectenotoxin-2 and Yessotoxin**, Pearse McCarron, Michiel Kotterman, Jacob de Boer, Nils Rehmman, and Philipp Hess, *Marine Institute, Galway, Ireland; Netherlands Institute for Fisheries Research, IJmuiden, The Netherlands*
75. **Use of In-House Reference Material for the Quality Assurance in the Analysis of Veterinary Drugs**, M. Stoyke, P. Gowik, C. Stachel, F. Hamann, R. Hackenberg, and A. Möller, *Federal Office of Consumer Protection and Food Safety (BVL), European and National Laboratory for Residues, Berlin, Germany*
76. **Preparation and Characterization of the Reference Material Oxytetracycline in Bovine Muscle**, Detlef Bohm, Frank Hamann, Manfred Stoyke, Rudolf Hackenberg and Petra Gowik, *Federal Office of Consumer Protection and Food Safety (BVL) European and National Laboratory for Residues, Berlin, Germany*

77. **Production and Characterisation of In-House Reference Material at the CRL/NRL for Residues Berlin**, Ada Möller, Frank Hamann, and Petra Gowik, *Federal Office of Consumer Protection and Food Safety (BVL), European and National Reference Laboratory for Residues, Berlin, Germany*
78. **Measurement of Selenomethionine in Wheat Reference Materials by Digestion with Methanesulfonic Acid, Reaction with Cyanogen Bromide, and Analysis by Gas-Chromatography-Isotope Dilution Mass Spectrometry**, Wayne R. Wolf and Robert J. Goldschmidt, *Food Composition Laboratory, Agricultural Research Service, Beltsville, MD, USA*
79. **Effect of Addition of Antibiotics and an Antioxidant on the Stability of Tissue Reference Materials for Domoic Acid, the Amnesic Shellfish Poison**, Pearse McCarron, Stephen Burrell, and Philipp Hess, *Marine Institute, Galway, Ireland*
80. **Preparation of Calibration Solution CRMs for Paralytic Shellfish Poisoning Toxins**, Maurice Laycock, Krista Thomas, John Walter, Dominik Wechsler, Ian Burton, Kelley Reeves, Cheryl Craft, Pat LeBlanc, Shawna MacKinnon, and Michael Quilliam. *Institute for Marine Biosciences, National Research Council of Canada, Halifax, Nova Scotia, Canada*
81. **Certified Reference Materials for Lipophilic Toxins**, Sheila Crain, Kelley Reeves, John Walter, Shawna MacKinnon, Patricia Leblanc, Cheryl Craft, William Hardstaff, and Michael Quilliam, *Institute for Marine Biosciences, National Research Council of Canada, Halifax, Nova Scotia, Canada*
82. **Preparation of a Reference Material for the Determination of Mercury in Fish**, Nuri Gras and Eduardo Cortés, *Chilean Nuclear Energy Commission, Santiago, Chile*
83. **Studies for Producing a Certified Reference Material for Distinguishing Cachaça from Rum**, Daniel R. Cardoso, Luiz G. Andrade-Sobrinho¹, Benedito S. Lima-Neto¹, Vera M. L. Ponçano, Terezinha E. M. de Carvalho, Ieda K. Makiya, and Douglas W. Franco, *Departamento de Química e Física Molecular, Instituto de Química de São Carlos – Universidade de São Paulo, SP, Brasil, Instituto de Pesquisas Tecnológicas do Estado de São Paulo, SP, Brasil*
84. **Certification of Tetramethylurea (TMU), the Internal Standard for Analyzing the D/H Ratio in Wine Ethanol by SNIF-NMR**, Reinhard Zeleny, Franz Ulberth, and Hendrik Emons, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium*
85. **Preparation of Animal Feed with Known and Homogenous Concentrations of Banned Antibiotics and Growth Promoters Characterized by Chemical Analysis**, Alexander Bernreuther, Gerard N. Kramer, Albert Oostra, Paul De Vos, Katharina Teipel, Jean Charoud-Got, Franz Ulberth, and Håkan Emteborg, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium*

Session 6: RMs for Health Products

- 86. Optimization of the Formulation for a Candidate Lyophilized Tetanus Toxoid Reference Preparation**, Paul Matejtschuk, Kiran Malik, Robert Tierney, Ellen Willhelmsen, and Dorothea Sesradic, *National Institute for Biological Standards & Control, Hertfordshire, UK; Statens Seruminstitut, Quality Control Department of Bacterial Vaccines, Copenhagen, Denmark*
- 87. Comparison of LC/MS/MS, LC/UV/Fluorescence, and Isotope Dilution Methods for Determination of Water Soluble Vitamins in Multi-Vitamin Dietary Supplements**, Pei Chen, Wayne R. Wolf, and Renata Atkinson, *Food Composition Laboratory, Agricultural Research Service, Beltsville, MD, USA*
- 88. Determination of Fat-Soluble Vitamins in Recent Dietary Supplement Standard Reference Materials**, Catherine A. Rimmer, Jeanice B. Thomas, Karsten Putzbach, Katherine E. Sharpless, and Lane C. Sander, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
- 89. Development of Ginsenoside Rg1 and Rb1 CRM**, Dal-Ho Kim, Jin-Kyu Chang, Hyun-Joo Shon, Byong-Gu Cho, Sung-Ryong Ko, Kil-Bong Nho, Dae-Sig Jang, Sang-Myung Lee, and Jae-Won Yang, *Korea Research Institute of Standards and Science, Daejeon, Republic of Korea; KT&G Central Research Institute, Daejeon, Republic of Korea*
- 90. Biosynthetic Production of Universally ¹³C Labeled Polyunsaturated Fatty Acids as Reference Materials for Natural Health Products Research**, Anthony J. Windust, Catherine Fraser, Graeme Gardner, and Scott Liang, *Institute for National Measurement Standards, National Research Council, Ottawa, Ontario, Canada; Department of Biochemistry, Carleton University, Ottawa, Canada*

Session 7: RMs for Qualitative Analysis

- 91. Standards for Genetic Testing**, John P. Jakupciak, *Biochemical Science Division, National Institute of Standards and Technology, Gaithersburg, MD, USA*
- 92. Cloned DNA Sequences as Positive Control Samples for Qualitative PCR**, Sylvia Broeders, Ralf Seyfarth, Andreas Pardigol, and Stefanie Trapmann, *European Commission, Joint Research Centre, Institute for Reference Materials and Measurements, Geel, Belgium; Biolytix AG, Witterswil, Switzerland; Eurofins Scientific Analytics, France*
- 93. ISO Accreditation of Quantitative Microbiological Reference Materials**, Lucy Millican, *BTF Pty Ltd., Sydney, Australia*
- 94. On the Development of Surfactant Reference Materials in BAM**, U. Retter, M. Koch, and I. Nehls, *Federal Institute for Materials Research and Testing, Berlin, Germany*

Session 8: RMs and International Harmonization

- 95. Reassessment of Reference Values for Potassium in IAEA Reference Materials**, Ryszard Bojanowski, Haifa Abdelwahed, and Zbigniew Radecki, *Institute of Oceanology Polish Academy of Sciences, Sopot, Poland; Centre National des Sciences et Technologies Nucleaires, Tunisia; International Atomic Energy Agency, Vienna, Austria*
- 96. WHO International Standards, their Development, Establishment and Role in Assuring Biological Medicines**, Paul Matejtschuk, Elaine Gray, and Adrian Bristow, *National Institute for Biological Standards and Control, Hertfordshire, UK*
- 97. An ISO Guide 34 and ISO 17025 Compliant Quality System for the Production of Matrix Reference Materials**, Thomas Peter Josef Linsinger, Hendrik Emons, Andrée Lamberty, Franz Ulberth, Andrea Held, Stefanie Trapmann, Philippe Corbisier, Håkan Emteborg, Alexander Bernreuther, Marina Ricci, and Marta Dabrio, *Institute for Reference Materials and Measurements, Geel, Belgium*
- 98. Getting it Right with Fluorescence: The Calibration Kit Spectral Fluorescence Standards**, Ute Resch-Genger, Dietmar Pfeifer, Angelika Hoffmann, Katrin Hoffmann, Christian Monte, Monika Spieles, Wolfram Bremser, and Ulrich Panne, *Federal Institute for Materials Research and Testing, Berlin, Germany*
- 99. The European Reference Materials Initiative**, Wolfram Bremser, Amanda Eames, Hendrik Emons, Doris Florian, Heinrich Kipphardt, Thomas Peter Josef Linsinger, John Marriott, Ulrich Panne, Sophie Roulette, Franz Ulberth, and Steve Wood, *Institute for Reference Materials and Measurements, Geel, Belgium; LGC Limited, Teddington, UK; Bundesanstalt für Materialforschung und –prüfung, Berlin, Germany*

Session 9: Applications of RMs

- 100. Certified Reference Materials to Assess Measurement Uncertainty in Charpy Pendulum Impact Tests**, G. Roebben, V. Kestens, A. Dean, T. Linsinger, and A. Lamberty, *Institute for Reference Materials and Measurements, European Commission, Joint Research Centre, Geel, Belgium*
- 101. Evaluation of Quality Control Information on Food Composition Data from Journal Publications**, Kristine Y. Patterson, Seema A. Bhagwat, and Joanne M. Holden, *Nutrient Data Laboratory, Agricultural Research Service, Beltsville, MD, USA*
- 102. The Role of Proficiency Testing Programs Using Certified Reference Materials in Developing Countries**, Afrim Tabaku, *Public Health Institute, Tirana, Albania*
- 103. Aspects Regarding the Present Role and Function of RMs and CRMs in Calibration and Testing Laboratories in Romania**, Prof. Fănel Iacobescu and Dr. Mirella Buzoianu *Romanian Bureau of Legal Metrology, National Institute of Metrology, Bucharest, Romania*
- 104. Performance-based Quality Assurance Programs for the Determination of Organic Species in Air Particulate and Marine Environmental Samples**, Michele M. Schantz, John R. Kucklick, Dianne L. Poster, Barbara J. Porter, Lane C. Sander, and Stephen A. Wise, *Analytical Chemistry Division, National Institute of Standards and Technology, Gaithersburg, MD, USA; National Institute of Standards and Technology, Hollings Marine Laboratory, Charleston, SC, USA*