



IMEKO TC-8, TC-23, Tc-24

Three-day Conference Metrological traceability in the globalisation age

Paris (France), 6 – 8 April 2011

Scientific Programme

Wednesday April 6th (morning)

KEYNOTE LECTURE: Humberto Brandi (INMETRO - Brazil)

Session 1: **Development of metrological tools, such as reference materials, reference methods, calibration, PT schemes**

CONVENOR: Humberto Brandi (INMETRO - Brazil)

Wednesday April 6th (afternoon)

Session 2: **New needs for traceability**

CONVENOR: Michela Segà (INRIM – Italy)

INVITED SPEAKER: JongOh Choi (KRISS – Korea)

Thursday April 7th (morning)

Session 3: **Metrological traceability of environmental measurements**

CONVENOR: Carlo Ferrero (INRIM – Italy)

INVITED SPEAKER: Jean Poulleau (INERIS – France)

Thursday April 7th (afternoon)

Session 4: **Metrological traceability of chemical measurements in food and nutrition sector**

CONVENOR: Isabel Castanheira (INSA – Portugal)

INVITED SPEAKER: Laurie Besley (NMIA – Australia)

Thursday April 7th (17:30-19:00)

TC8, TC23, TC24 Meetings

Thursday April 7th (evening)

Conference dinner

Friday April 8th (morning)

Session 5: **Metrological traceability of measurements in health sector**

CONVENOR: Paola Fiscaro (LNE – France)

INVITED SPEAKER: Max Feinberg (INRA – France)

Wednesday, April 6th 2011

9:00 – 9:15 Welcome address and practical information
Sophie Vaslin-Reimann (LNE – France)

9:15 – 10:00 Keynote lecture by Humberto Brandi “Standards Supporting Sustainability Requirements”
Director of Scientific and Industrial Metrology at INMETRO, Brazil

First session: Development of metrological tools, such as reference materials, reference methods, calibration, PT schemes

10:00-11:00 “Development of a General SI-traceable procedure for the certification of organic standards by LC-oxidation-IRMS with post-column isotope dilution analysis”
J.I. Garcia Alonso, S. Cueto Diaz and J. Ruiz Encinar (University of Oviedo - Spain)

“Key role of metrological traceability - enriched isotope spike CRMs”
Wang Jun, Lu Hai, Wei Chao and Zhou Tao (National Institute of Metrology - China)

11:00- 11:30 Coffee break & poster session

11:30-13:00 “The use of certified reference material in a proficiency testing programme on Metallic Contaminants in food”
Ching-hang Wong and Wang-Wah WONG (HKSAR - China)

“Certification of reference materials for ginsenoside Rb1”
Jun Liu and Gaixiang Yang (NIM – China)

“Importance of certified reference materials for environmental analysis”
Eliane Cristina Pires do Rego, Evelyn de F. Guimarães, Laura A. Neves Valente, Janaína M. Rodrigues, José Daniel Figueroa Villar and Valnei Smarçaro da Cunha (INMETRO - Brazil)

13:00-14:30 Lunch

Second session: New needs for traceability

14:30-16:00 “Are we measuring or testing in chemical analysis?”
Invited speaker: JongOh Choi (KRISS – Korea)

“Globalising partition-wide comparisons”
Giampaolo Eugenio d'Errico (INRIM – Italy)

“Improving comparability of analytical results with practical software for estimating measurement uncertainty”
Teemu Näykki, Atte Virtanen and Ivo Leito (MIKES-SYKE - Finland)

16:00–16:30 Tea break & poster session

16:30–18:00 “Interlaboratory comparisons in Italy to verify the accreditation on extensometer calibration”
Carlo Ferrero, Adelina Leka, Luciano Bianchi (INRIM – Italy)

"Metrology for Biofuels"
Paola Fiscaro, Sophie Vaslin-Reimann (LNE - Paris)

"A comparative study of BTEX detection effectiveness of returnable PET bottle investigation equipment"
Carlos H.B. Bizarri, Reinaldo da Silva, Plínio Martinho, Igor Macedo and Carolina Andrade (SENAI – Brazil)

Thursday, April 7th 2011

Third session: Metrological traceability of environmental measurements

9:00–10:30 Title to be defined
Invited speaker: Jean Poulleau (INERIS – France)

"Analysis of the diffusion rate uncertainty in a dynamic generator of traceable climate gas mixtures for global air quality monitoring"
Alessia Demichelis, Guido Sassi and MariaPaola Sassi (INRIM - Italy)

"Study of the long term stability of secondary ozone analysers"
Guido Sassi, Laura Revel, Ettore Malgeri, MariaPaola Sassi (INRIM - Italy)

10:30-11:00 Coffee break & poster session

11:00-12:30 "Metrological traceability in PAHs measurements"
Michela Segà, Valter Maurino, Francesca Rolle (INRIM – Italy)

"Metrological characterization and traceability of in situ probes for continuous water quality monitoring: a case study"
Nathalie Guigues, R. Champion, J. Lachenal and E. Hance (LNE – France)

The usefulness of assignation of reference values in inter laboratories comparisons: French demonstrations in the field of environmental survey"
Sophie Lardy-Fontan, J. Cabillic, M. Peignaux, C. Stumpf, B. Lepot, E. Leoz, C. Miede and B. Lalere (LNE – France)

12:30-14:00 Lunch

Fourth session: Metrological traceability of chemical measurements in food and nutrition sector

14:00-15:30 "The Important Role for National Metrology Institutes or National Reference Laboratories in Supporting the Quality of Food Products"
Invited speaker: Laurie Besley (NMIA - Australia)

"The activity of chemical metrology division of INMETRO to ensure the traceability of measurements results in food sector"
Valnei Smarçaro da Cunha, Janaina M. Rodrigues, Fernando G.M. Violante, Raquel Bandeira, Thais Uekane (INMETRO – Brazil)

"Target uncertainty and method sensibility for food risk assessment"
Guido Sassi (INRIM - Italy)

15:30–16:00 Tea break & poster session

16:00–17:30 "EuroFIR eSearch - a valuable tool for design of food frequency questionnaires and quantification of nutrient intake: the contribution metrology"
Pedro Camacho, Ana Sofia de Matos, Beatriz Goulao, Lino Mendes, Mark Roe, Paul Finglas, Isabel Castanheira (INSA – Portugal)

"Comparison study and certification of bovine meat reference materials for quality control"
Laura Regalado-Contreras, Claudia M. Salazar and Yoshito Mitani (CENAM - Mexico)

"Reference materials for food flavour analysis"
Rosanna Gatti, Gioavanna Zappa and Claudia Zoani (ENEA – Italy)

Friday, April 8th 2011

9:00–10:30 Greetings by Jean Luc Laurent, General Director of LNE, France

Fifth session: Metrological traceability of measurements in health sector

9:00–10:30 Metrological concerns in dietary risk assessment
Invited speaker: Max Feinberg : (INRA – France)

"Traceability in biological measurements"
Maria Paola Sassi, Guido Sassi and Paola Porcedda (INRIM – Italy)

"Method Development for the accurate quantification of genomic DNA"
Pierre Olivier Fraise, Olga Leclerc, Guillaume Labarraque, Paola Fiscaro and Caroline Oster (LNE – France)

10:30–11:00 Coffee break & poster session

11:00–12:00 "Development of reference methods for the measurement of biomarkers"
Vincent Delatour, Béatrice Lalere and Sophie Vaslin-Reimann (LNE – France)

"Analysis of standards used to check medical devices"
Jerzy Sladek, Andrzej Ryniewicz, Marek Kowalski, Adam Gaska (Cracow University of Technology - Poland)

12:00–13:30 Lunch & conference closure

Poster sessions

Wed 6th 11:00-11:30, 16:00-16:30; Thu 7th 10:30-11:00, 15:30-16:00; Fri 8th 10:30-11:00, 15:30-16:00

New needs for traceability

“Inter-laboratory comparison at 100 GO and 1TO level to verify the reliability of the traceability transfer from INRIM in the field of high dc resistance”

Flavio Galliana, Pier Paolo Capra, E. Gasparotto; INRIM, Italy

“Two alternative approaches for traceability demonstration in post-soviet countries”

Kuzmenko, S. Pronenko; SE “Ukrmetrteststandard”, Ukraine

“Data Comparison of Fuel Dispenser Testing”

Weifu Wu, Wenmin Liu, Jiqian Xiao; Weifang Institute of Metrology and Testing, China

Metrological traceability of environmental measurements

“Study of the long term stability of secondary ozone analysers”

Guido Sassi, Laura Revel, Ettore Mageri, Mariapaola Sassi; INRIM, Italy

“In-situ inter-laboratory comparisons on physico-chemical parameters: a collaborative study”

R. Champion¹; J-P. Ghestem², B. Lepot³; ¹ LNE, France, ² BRGM, France, ³ INERIS, France

“Uncertainty Evaluation of Hydrogen Chloride and Hydrochloric Acid Testing in the Air of Workplace”

Weifu Wu, Jianghai Qiu, Wenmin Liu, Dongling Chen; Weifang Institute of Metrology and Testing, China

“Metrology of Environmental Pollutants: Stability of NO₂ and SO₂ mixtures”

Tânia Farinha¹, Florbela A. Dias¹, Eduarda Filipe¹, Margarida C. Santos²; ¹ IPQ, Portugal, ² Instituto Superior Técnico, Portugal

Metrological traceability of chemical measurements in food and nutrition sector

“Arsenic content in fish and associated measurement uncertainty as a metrological parameter for Total Diet Studies”

Inês Coelho¹, Ana Sofia Matos², Sandra Gueifão¹, Rui Santos³, Isabel Castanheira¹; ¹ Departamento de Alimentação e Nutrição, INSA, Portugal, ² UNIDEMI, Universidade Nova de Lisboa, Portugal, ³ LNEG, Portugal

“A proposal to guarantee metrological traceability in determination of heavy metals contents in cork stoppers by ICP-MS”

Sandra Gueifão, Catarina André, Inês Coelho, Isabel Castanheira; Department of Food and Nutrition, National Institute of Health Dr. Ricardo Jorge (INSA), Portugal

“Application and Development of Chemical Metrology in Food Analysis in China”

Lijun Cao, Dongling Chen, Aimei Wu”; Weifang Institute of Metrology and Testing, China

Metrological traceability of measurements in health sector

“Analysis of chosen characteristics of kinematical errors of moving modules of the computed tomograph in aspect of traceability in medical measurements”

Jerzy Sladek, Andrzej Ryniewicz, Marek Kowalski, Adam Gaska; Cracow University of Technology, Poland

“Evaluation of the level of traceability in measurement of articulometric data of temporomandibular joints using intraoral registration for articulator and condylograph cadiax compact”

Andrzej Ryniewicz¹, Jolanta Loster², Aneta Wieczorek², Wojciech Ryniewicz², Anna M. Ryniewicz^{2,3}; ¹ Cracow University of Technology, Poland, ² Jagiellonian University, Poland, ³ AGH University of Science and Technology, Poland