Monday, May 10, 2010
Opening Plenary Session
Vista
Sponsored by Wellington Laboratories

8:30	Opening Remarks	Ray Clement, MOE Teresa Switzer, Kinectrics Inc. Enviro*Analysis* 2010 Co-Chairs
9:00	New Developments In SPME and Related Techniques For Environmental Laboratory Analysis and On-Site Monitoring (Abstract 1)	Prof. J. Pawliszyn Univeristy of Waterloo
9:45	Persistent Organic Pollutant Analysis – What Level of Sensitivity and Selectivity Do We Need? (Abstract 2)	Prof. J. de Boer VU University Institute for Environmental Studies
10:30	Coffee – Sponsored by LECO *Vista Foyer*	
11:00	The Caledon Award	Ray Clement
11:10	Normalization of Retention Information in Comprehensive Two-Dimensional Gas Chromatography (GCXGC): Challenges and Opportunities (Abstract 3)	Prof. J. M. D. Dimandja Spelman College
11:55	Lunch – Sponsored by Agilent *Vista*	

Monday Afternoon, May 10, 2010

Time	Ontario Drinking Water: Regulatory & Technical Issues *Dundas* Organized by: Ray Clement, MOE Session Chair: Joseph Odumeru	Industrial Applications *Ontario* Organized by: Teresa Switzer, Kinectrics Inc. / Graeme Spiers, Laurentian University Session Chair: Graeme Spiers
13:20	[4] Working Together to Protect Drinking Water *Cammy L. Moodie*	[10] Determining Nickel Speciation in Workplace Aerosols Using X-Ray Near-Edge Structure Spectroscopy *Lisa Van Loon, Mike Dutton, Graeme Spiers*
14:00	[5] Beyond Accreditation - Vigilance Paramount to Safety *Barry Ali, Rania Farag-Clement, Sathi Selliah, Dallas Takeuchi, Dan Toner and Mike Ogilvie*	[11] Using Spectroscopy to Assess the Success of Biosolids Covers as a Mine Reclamation Strategy *Christine Cousins*
14:20	[6] Wellhead protection using background fluorescence analysis (BFA) and fluorescent dye-tracing (FDT) techniques to address the preferential ground water flow issue *Martin H. Otz*	[12] Fingerprinting of Unknown Materials by Complementary Techniques of FTIR and GC/MS *Alina Sims and John M. Carron*
14:40	Refreshments/Posters/Exhibitor Viewing – Sponsored by LECO *Mississauga Ballroom*	
15:40	[7] "New Approaches for New Problems" *Ray Novokowsky*	[13] A New Approach To The Determination of Oil and Grease In Water and Wastes *D. Solomon, R. Lerner, Y. Stambula, R. Hazan, S. Rintoul, C. Wibby and I. B. Brenner*
16:20	[8] Contamination of bottled waters caused by leaching of As, Pb, Sb, Th, and Zn from glass and PET *William Shotyk*	[14] Does Litter Type Effect the Movement of Metals through Contaminated Soils - a Column Study *Kendra Driscoll and Graeme Spiers*
16:40	[9] A reliable sampling procedure for total Mercury study in snow/ice from High Arctic *Jiancheng Zheng, Pierre Pelchat, Judy Vaive, David Bass, William Shotyk, and Michael Krachler*	

Monday Afternoon, May 10, 2010 (Cont.)

Time	Air Analysis *Cawthra* Organized by: Ray Clement, MOE Session Chair: Gary Hunt
13:20	[15] Air Monitoring - The Matrix,The Media, and The Method!!!! *Gary T Hunt*
14:00	[16] Source Apportionment of Aromatic Hydrocarbons in an Urban-industrial Airshed *B. E. McCarry, U.M. Sofowote, L.M. Allan and C.H. Marvin*
14:20	[17] Temporal Variations and Source Apportionment of Polycyclic Aromatic Hydrocarbons (PAH) Collected at a Remote Site in Yukon, Canada *U. M. Sofowote, A. Rastogi, B. E. McCarry, H. Hung, J. N. Westgate, P. DeLuca*
14:40	Refreshments – Sponsored by LECO / Posters – Sponsored by Bruker /Exhibitor Viewing *Mississauga Ballroom*
15:40	[18] Measurement of Odorous Organics in Air *Cecilia Chan*
16:00	[19] Trends of natural source perchlorate in Arctic snow *Vasile I. Furdui and Frank Tomassini*

Tuesday Morning, May 11, 2010

Plenary: Prof. Howard Ceri, University of Calgary
8:30 - 9:15
Vista

Time	Chromatography – Sponsored by Restek *Dundas* Organized by: F. Dorman, Penn State U. Session Chair: Frank Dorman	Microbiology – Sponsored by VWR *Cawthra* Organized by: R. Schop, S. Weir, A. Irwin-Abbey, MOE Session Chairs: Rhonda Schop & Susan Weir
09:20	[20] Designing New GC Stationary Phases for Multi-Pesticide Testing *Sky Countryman, Jim Archer, Kory Kelly, and Doug Silva*	[25] Microscopic Examination of Activated Sludge as a Tool in the Monitoring of Wastewater Treatment *Carol Dunn*
09:40	[21] Determining Endocrine Disrupting Hormones In Water Utilizing Solid Phase Extraction (SPE) *Michael Ebitson*	[26] Bioremediation of chlorin-ated solvents in the lab vs. in the field: the Enrichment Paradox *Laura Hug*
10:00	Coffee – Sponsored by LECO/Posters – Sponsored by Bruker/Exhibitor Viewing *Mississauga Ballroom*	
10:40	[22] High Resolution and Ultrahigh Resolution Mass Spectrometry *Vincent Y. Taguchi, Robert Nieckarz, Stefan Krolik, Ray E. Clement and Robert Williams*	Coliform 649! *Michael Brodsky*
11:00	[23] PCDD/F Screening For Environmental and Food Safety Analysis Using Highly Selective Triple Quadrupole GC-MS/MS *Hans-Joachim Huebschmann, Dirk Krumwiede*	[27] The value of Bioassays in Environmental and Food Analyses *Joseph Odumeru*
11:20	[24] Fast GC in Environmental Analysis *Katherine Stenerson, Leonard Sidisky, Greg Baney, and Michael Buchanan*	Direct Measure of Total and Viable Cell Concentra-tions of Specific Patho- gens in Water Networks Using NASA's Nanotech Biosensor *Garry Palmateer*
11:40	Lunch – Sponsored by CALA *Vista*	

Tuesday Morning, May 11, 2010 (Cont.)

Plenary: Prof. Howard Ceri, University of Calgary
8:30 - 9:15
Vista

Time	Applied Spectroscopy, in honour of Dr Chuni Lal Chakrabarti – Sponsored by CSASS *Ontario* Organized by: Teresa Switzer, Kinectrics Inc. / Graeme Spiers, Laurentian University Session Chair: Graeme Spiers	Sample Preparation *Erin Mills* Organized by: Teresa Switzer, Kinectrics Inc. / Ray Clement, MOE Session Chair: Christine Cousins
09:20	[28] UV Photochemical Alkylation and Vapor Generation for Enhanced Sample Introduction Efficiency *Ralph Sturgeon*	[32] A new approach to the decomposition of complex geological and related refractory samples for multielement analysis using microwave fusion and dual viewed ICP-AES *Brenner, Isaac (Joe), Tina, Barclay, David, Barnard, Michael T., Dr. Collins, Michael*
09:40		[33] Fractionation of Mn, Co, Ni, Cu, Zn and Pb in aqueous solution containing humic substance using paper-based DGT sampler *Eduardo de Ameida, Virgílio. F. Nascimento Filho, Amauri A. Menegário, Roberto Naves Domingos and Wellington de Oliveira*
10:00	Coffee – Sponsored by LECO/Posters – Sponsored by Bruker/Exhibitor Viewing *Mississauga Ballroom*	
10:40	[29] Assessment of Microbial Ore Dissolution Efficiency by Plasma Spectrometry *Aimee Williamson, Stephen Hall and Graeme Spiers*	[34] Evaluation of Automated SPE using Disks and Cartridges for Pesticide Analysis *David E. Knowles, Bruce E. Richter, Brian C. Dorich, Richard E. Carlson, Eric S. Francis*
11:00	[30] Postage stamp size, battery-operated micro- and nano-plasmas on polymeric chips *Scott Weagent and Vassili Karanassios*	[35] History and Evolution of a Novel Sample Concentrator *Ray Novokowsky*
11:20	[31] Combination of a multimode sample introduction system with a pre-evaporation tube for the simultaneous determination of hydride-forming and other elements by inductively coupled plasma spectrometry: method optimization and application to environmental analysis *Alemayehu Asfaw and Diane Beauchemin*	[36] The Determination of Trace Metals in Waste Oil by Microwave Digestion and Inductively Coupled Plasma Optical Emission Spectrometry *Peter Drouin, Rusty Moody, Shanti Mathews, Jill Simons, Michelle Rush*
11:40	Lunch – Sponsored by CALA *Vista*	

Tuesday Afternoon, May 11, 2010

Time	Chromatography – Sponsored by Restek *Dundas* Organized by: F. Dorman, Penn State U. Session Chair: Jack Cochran	Microbiology – Sponsored by VWR *Cawthra* Organized by: R. Schop, S. Weir, A. Irwin-Abbey, MOE Session Chairs: Ann-Marie Irwin Abbey & Susan Weir
13:20	[37] Consumable-Free Thermal Modula- tors for GCxGC - From Development to Applications *T. Górecki, O. Panić, C. McNeish, A. H. Goldstein, D. R. Worton, N. M. Kriesberg, S. V. Hering*	[45] Algal blooms in Ontario lakes *Jennifer Winter, Lynda Nakamoto and Kaoru Utsumi*
13:40	[38] Large Volume Injection for Gas Chromatography Using a Commercially Available Unmodified Splitless Injector *Jack Cochran, Michelle Misselwitz, Jason Thomas, Gary Stidsen*	[46] Impact of agroecosystems on soil microbial communities *Kari Dunfield*
14:00	[39] Kinetex Core-Shell Technology: Ultra-High Performance on Any LC System *Philip Koerner, Tim Kuss*	
14:20	[40] Development and Use of a Molecular Modeling Approach for Prediction of Novel Gas Chromatographic Stationary Phases *Frank L. Dorman, Paul D. Schettler, Mike Wittrig, Roy Lautamo, Jack Cochran, Jason Thomas, Angela Smith, Suzanne Gardner, Anna Bloom, and Sarah Federle*	
14:40	Refreshments – Sponsored by LECO / Posters – Sponsored by Bruker /Exhibitor Viewing *Mississauga Ballroom*	
15:40	[41] New Innovations in Valve Technology *Gordon McFarlane*	[47] Tracking fecal water pollution sources based on host specificity of *Bacteroidales* *Dae-Young Lee, Susan C. Weir, Todd Howell, Janis Thomas, Hung Lee, Jack T. Trevors*
16:00	[42] The Use of Thermal Desorption for a range of Consumer Safety Concerns! *Stephen D. Wesson, Thomas Wampler, Gary Deger*	[48] Thermophilic Campylobacters and Lake Ontario Beaches *Izhar U. H. Khan, Eva K. Nowak and Thomas A. Edge*
16:20	[43] Needle Trap Devices For On Site and Laboratory *In-Yong Eom, Ying Gong and Dietmar Hein, Janusz Pawliszyn*	
16:40	[44] The Use of Adsorbents for In-cell cleanup of Environmental Samples *David E. Knowles, Bruce. E. Richter, Brian C. Dorich, Brett J Murphy and Richard E. Carlson*	

Tuesday Afternoon, May 11, 2010 (Cont.)

Time	Applied Spectroscopy, in honour of Dr Chuni Lal Chakrabarti – Sponsored by CSASS *Ontario* Organized by: Teresa Switzer, Kinectrics Inc. / Graeme Spiers, Laurentian University Session Chair: Ralph Sturgeon
13:20	[49] A new approach to the quantification of B and B isotope ratios using a Second-Generation Focal-Plane Faraday Strip Array Detector (FPFSAD) Coupled to an Inductively Coupled Plasma Mattauch-Herzog Geometry Mass spectrograph (ICP-MHMS) *Isaac (Joe). B Brenner, Gregory D. Schilling, Arnon Rubinstein, Steven J. Ray, Roger P. Sperline, M. Bonner Denton, Charles J. Barinaga, David W. Koppenaal, and Gary M. Hieftje*
14:00	[50] Validating the Quantification of Metal Content in Biosolids using ICP –MS *Christine Cousins*
14:20	[51] Recent Developments in ICP-MS Technology for environmental analysis *Luc Dionne*
14:40	Refreshments – Sponsored by LECO / Posters – Sponsored by Bruker /Exhibitor Viewing *Mississauga Ballroom*
15:40	[52] NexION 300; the Next Generation of Inductively Coupled Plasma Mass Spectrometry from PerkinElmer *Kaveh Kahen, Hamid Badiei, Aaron Hineman*
16:20	[53] Micro- and nano-samples by ICP-AES and ICP-MS *Abdulkareem Mohammad, John Pough, Gareth Penman, David Campbell, Cameron McLeod, Vassili Karanassios*

Tuesday Afternoon, May 11, 2010
Dedicated Poster Session
2:40-3:40 PM
Mississauga Ballroom

Authors are asked to set up their posters between noon and 2:00 PM on Monday,
to stand by their posters during the designated poster session on Tuesday from 2:40 - 3:40 pm,
and to take down their posters at 4:00 PM on Tuesday. Posters left in the ballroom after 4:00 PM Tuesday will be discarded!
Poster abstracts appear at the back of this program.

Poster #	Title/Authors
1	Towards A 'Cook Book' Method For Dioxin Analysis Focant JF, Shirkhan H, Patterson Jr DG
2	One Step Automated Extraction and Concentration Tom Hall
3	Identifying Pharmaceuticals and Personal Care Products in Water, Biosolids and Solids Tom Hall
4	An Automated High Throughput Sample Fractionation Method for the Determination of PAHs, MADEP-EPH, TNRCC Method 1005-1006 Tom Hall
5	Chromium speciation at trace level using hyphenated ion exchange chromatography and inductively coupled plasma mass spectrometry with collision/reaction interface Liyan Xing and Diane Beauchemin
6	Chemical Analysis and Quality Control for Heavy Metals Digestion and ICP/MS Analyses of Olives and Citrus Leaves Maryam M. Mostafa
7	Interferences in ICP-MS Analysis and How to Deal With Them Jill Simmons, Alla Kryukova, Qianli Xie and Rusty Moody
8	Towards the reduction of matrix effects in inductively coupled plasma mass spectrometry: the use of argon-nitrogen mixed-gas plasma Christian Agatemor; Diane Beauchemin
9	Fast GC in Environmental Analysis Katherine Stenerson, Leonard Sidisky, Greg Baney, and Michael Buchanan
10	Purge & Trap Volatiles: Adsorbent Choices, Trap Selection, Fast GC, and Troubleshooting Leonard Sidisky, William Betz, Jamie Brown, Katherine Stenerson, Robert Shirey, and Michael Buchanan
11	Designing New GC Stationary Phases for Multi-Pesticide Testing Sky Countryman, Jim Archer, Kory Kelly, and Doug Silva
12	Solid-phase extraction of bisphenol using carbon nanotube extraction devices Jenna Davies, Robert Burk
13	Lanthanium and lanthanides determined in atmospheric particulate matter collected at selected sites within the Canadian National Air Pollution Surveillance network: a case study Valbona Celo, Ewa Dabek-Zlotorzynska, Jiujiang Zhao and Irina Okonskaia

Poster #	Title/Authors
14	Using Bonded Silica Solid Phase Microextraction Fibers as a Screening Tool for Pharmaceuticals and Personal Care Products in Drinking Water Carmen Santasania, Katherine Stenerson, Robert Shirey, Craig Aurand, and Michael Buchanan
15	Benefits of Radial Passive Samplers Jamie Desorcie, Kristen Schultz, and Michael Buchanan
16	Microwave-assisted extraction of Vasicine from *Adhatoda vasica* Linn. as an alternative to conventional extraction techniques Nilesh Joshi , Bhalerao Khairnar, Suhas Pednekar, Sasikumar Menon
17	Quantification of Cryptosporidium and Giardia in Environmental Samples Ann-Marie Irwin Abbey and Susan Weir
18	Biofilm formation by E. coli, coliforms and resident flora isolated from drinking water distribution systems confers resistance to residual chlorine disinfection Monika Schwering & Dr. Howard Ceri
19	Multi-Dimensional GC/GCMS Gordon MacFarlane; Analytical Flow Products
20	Complementary FTIR and GC/MS Approach to Identifying an Unknown Waste Sample Alina Sims and John M.Carron
21	The use of Thermal Desorption/Extraction to screen "Imported Drywall" and a new screening technique for Formaldehyde by GC/MS *Stephen D. Wesson, Thomas Wampler, Gary Deger*
22	Analysis of Anionic Artificial Sweeteners in the Environment by IC/ESI/MS/MS *Susan Brown, Dale Van Stempvoort, Jim Roy and Greg Bickerton*
23	High performance liquid chromatography mass spectrometric method development and validation for the determination of the flame retardant tetrabromobisphenol A bis(2,3-dibromopropyl ether) *Benjamin de Jourdan, Jeff Small, Derek Muir and Keith Solomon*

Wednesday Morning, May 12, 2010

Plenary: "From Selenospecies in Plants to Metalloprotein Biomarkers for Hemorrhagic Stroke" [54]
Prof. Joseph A. Caruso
8:30 - 9:15
Vista

Time	Forensic Environmental Toxicology *Ontario* Organized by: D. Poirier & T. Watson-Leung, MOE Session Chairs: Dave Poirier & Trudy Watson-Leung	Pesticides & Emerging Contaminants – Sponsored by Agilent *Dundas* Organized by: Paul Yang & Eric Reiner Session Chairs: Paul Yang & Eric Reiner
09:20	[55] The Use of Toxicity Testing in Environmental Compliance in Ontario – Some Case Studies *David Poirier*	[59] Real-Time Determination of Organosilicon Compounds in Biogas Using API-MS/MS Techniques *Koffi Badjagbo, Mehran Alaee, Serge Moore, Sébastien Sauvé*
10:00	Coffee – Sponsored by LECO *Vista Foyer*	
10:40	[56] pH Stabilization – New Toxicity Techniques to Support the Federal Municipal Wastewater Treatment Plant Regulations *Richard Chong-Kit and David Poirier*	[60] Multi-residue Pesticide Analysis Using QuEChERS Sample Preparation and Liquid Chromatography/Tandem Mass Spectrometry Analysis – Current Development and Future Trends *Paul Yang, Jon Wong, Kai Zhang*
11:00	[57] The Secret's in the Sauce: The Effects of Varying Environmental Conditions on Mine Effluent Constituent Toxicity to Coldwater Fish *Dana Moore*	[61] Investigation of Athabasca Oil Sands Process Water by High Field Fourier Transform Ion Cyclotron Resonance Mass Spectrometry *Mark P. Barrow, Matthias Witt, John V. Headley, Kerry M. Peru, and Michael L. Easterling*
11:20	[58] Environmental Toxicology or: How I Learned to Stop Worrying and Love Mesocosms *Benjamin de Jourdan, Mark Hanson, Derek Muir and Keith Solomon[1]*	Potential of APGC for Pesticide Analysis in Food & Environmental Samples *J. Vukovic*
11:40	Lunch – Sponsored by Agilent *Vista*	

Wednesday Morning, May 12, 2010 (Cont.)

Plenary: "From Selenospecies in Plants to Metalloprotein Biomarkers for Hemorrhagic Stroke" [54]
Prof. Joseph A. Caruso
8:30 - 9:15
Vista

Time	Speciation / Metallomics – Sponsored by Perkin Elmer *Erin Mills* Organized by: Teresa Switzer, Kinectrics Inc. / Graeme Spiers, Laurentian University Session Chairs: Joe Brenner
09:20	[62] We Are What We Breathe - An Examination of Potential Bioavailability of Metals in Aerosols *Wijdan Malik*
09:40	[63] Sequential Determination of Total Tungsten and Tungstate Ion by IC-ICP-MS *Marcin Pawlak and Barry Joyce*
10:00	Coffee – Sponsored by LECO *Vista Foyer*
10:40	[64] Determination of seven arsenic species in seafood by ion exchange chromatography coupled to inductively coupled plasma – mass spectrometry following microwave assisted extraction: Method validation and dietary exposure *Axelle Leufroy, Laurent Noël, V. Sirot, J-C Leblanc, Diane Beauchemin, and Thierry Guérin*
11:00	[65] Determination of Antimony and its Species in OECD 203 Matrix *Ruiping Wang, Barry Joyce, Marcin Pawlak*
11:20	[66] Metallomics approaches by LC-ICPMS and LC-MS/MS for Zn and Zn-binding proteins in macrophage *Qilin Chan, Michael S. Winters, George S. Deepe, and Joseph A. Caruso*
11:40	Lunch – Sponsored by Agilent *Vista*

Wednesday Afternoon, May 12, 2010

Time	Forensic Environmental Toxicology *Ontario* Organized by: D. Poirier & T. Watson-Leung, MOE Session Chairs: Dave Poirier & Trudy Watson-Leung	Pesticides & Emerging Contaminants – Sponsored by Agilent *Dundas* Organized by: Paul Yang & Eric Reiner Session Chairs: Paul Yang & Eric Reiner
13:20	[67] Next generation biodiversity analysis *Mehrdad Hajibabaei*	[72] New Developments in LC/MS/MS, GC/MS, and GC/MS/MS Methods for the Analysis of Pesticide and their Degradation Products for Atmospheric and Surface Water Studies in the Canadian Prairie and Lower Fraser Valley Agricultural Regions of Western Canada *Renata Raina, Michele Etter, Patricia Hall, Lina Sun, Dani Xu, Erika Smith, Nicole Fergus*
13:40		[73] LC-MS Screening with a new high-resolution mass spectrometer *Jim Kapron*
14:00	[68] Exploring Sources of Human Fluorochemical Contamination: Is it in the Popcorn or the Packaging? *Jessica C. D'eon and Scott A. Mabury*	[74] Dioxin Screening by Gas Chromatography-Fourier Transform Mass Spectrometry *Vince Taguchi, Robert Nieckarz, Ray Clement, Stefan Krolik and Robert Williams*
14:20	[69] Investigation of the sediment contamination of an inland lake; Field and laboratory assessments of bioaccumulation *Jordana L Van Geest, Steve Petro, Emily Awad, David Poirier*	[75] Analysis of Anionic Artificial Sweeteners in the Environment by IC/ESI/MS/MS *Susan Brown, Dale Van Stempvoort, Jim Roy and Greg Bickerton*
14:40	Refreshments – Sponsored by LECO *Vista Foyer*	
15:20	[70] Toxicity Reduction Evaluations (TREs) as a Tool for Investigation of Cause – A Mining Case Study *L. J. Novak and K. E. Holtze*	[76] Compounds Structurally Related to Dechlorane Plus in Sediment and Biota from Lake Ontario *Ed Sverko, Eric J. Reiner, Gregg T. Tomy, Robert McCrindle, Li Shen, Gilles Arsenault, Donna Zaruk, Karen A. MacPherson, Chris H. Marvin, Paul A. Helm, Brian E. McCarry*
15:40	[71] Integrating Weight-of-Evidence Approaches in Identifying, Tracking and Eliminating Sources of PCB Contamination Within Great Lakes Watersheds *N. Benoit and R. Day*	[77] Tributary Inputs of Halogenated Norbornene Flame retardants to the Great Lakes: Dechloranes 602, 603, 604 and Dechlorane Plus *L.Shen E.J. Reiner K.A MacPherson, T.M. Kolic, D. A. Burniston, P.A. Helm, L.A. Richman, B. Hill, I.D. Brindle, C.H. Marvin*
16:00		Exploring human and environmental fluorochemical contamination *J. D'eon and S. Mabury*

Wednesday Afternoon, May 12, 2010 (Cont.)

Time	Radioisotopes / Inorganics in the Environment *Erin Mills* Organized by: Teresa Switzer, Kinectrics Inc. / Graeme Spiers, Laurentian University Session Chair: Joe Caruso
13:20	[78] Dusts from near and afar: tracing sources using isotopic measurements *Michael E. Ketterer*
14:00	[79] Measuring Trace Metals At The Ultra- Low Concentrations Found In Natural Freshwaters: Facts and Artefacts *William Shotyk*
14:20	[80] On The Digestion of Biological Materials in Our Sleep *G. A. Spiers, T. Maki, C. Cousins, S. Narkhede, and M. Phull*
14:40	Refreshments – Sponsored by LECO *Vista Foyer*
15:40	[81] Overview of Advances in Inductively Coupled Plasma Mass Spectrometry in Geoanalysis and Environmental Studies *Isaac Brenner*
16:20	[82] Use of *Saccharomyces cerevisiae* imobilized in agarose gel as a biding agent in DGT technique for determination of Pb in river waters *Guilherme F. Pescim, Paulo S. Tonello and Amauri A. Menegário*

Short Courses

Date	Course
Sunday May 9 2010	Measuring Trace Metals At The Ultra- Low Concentrations Found In Natural Freshwaters: Facts And Artefacts Prof. Dr. W. Shotyk *Erin Mills*
	Food Safety Management System - Hazards and Risk Assessments. Regulations and Analytical Strategies Dr. Isaac (Joe) Brenner *Ontario*
Wednesday May 12 2010	Everything You Always Wanted To Know About Valves (Free Course) *Cawthra*
	Method Development & Validation Peter Fowlie *Learning Centre HTA*
Thursday May 13 2010	Environmental Toxicology: Testing for Effects & Interpretation of Environmental Data Keith R Solomon (Adjunct Professor) and Jordana Van Geest (PhDC) *Ontario*
	Using Isotopes in the Environmental Sciences: Measurement & Application Michael E. Ketterer *Lakeshore*
	Uncertainty of Measurement Peter Fowlie *Dundas*
	Improving Gas Chromatographic Analyses: Understanding and Optimizing Separations and Injections to Save Time and Money Frank L. Dorman, Jack W. Cochran *Britannia*
Friday May 14 2010	Magnetic sector single and multicollector ICP-MS - Instrumentation and applications in Environmental Analysis Dr. Isaac (Joe) Brenner *Cawthra*