

IAEA Secretariat:

Scientific Secretary: M. Gröning, IAEA
Conference Services: R. Perricos, IAEA

Location of the Conference:

International Atomic Energy Agency
Vienna International Centre (VIC)
Building C, 4th floor
IAEA Boardroom
Wagramer Strasse 5
A-1400 Vienna, Austria

Telephone: (+43 1) 2600 21330 or 21336
Fax: (+43 1) 2600 29325

Working Language: English

Resolutions: No resolutions may be submitted for consideration on any subject; no votes will be taken.

TIMETABLE

Tuesday, 24 August 2004

10:00-16:00 Registration

Wednesday, 25 August 2004

08:00	Registration	
09:15-09:30	Opening Address	
09:30-10:30	Session 1	Metrology and General Laboratory Quality Assurance
10:30-11:00	Coffee Break	
11:00-12:30	Session 1 (cont'd)	Metrology and General Laboratory Quality Assurance
12:30-14:00	Lunch Break	
14:00-15:30	Session 2	Environmental Tritium Analysis
15:30-16:00	Coffee Break	
16:00-18:00	Session 2 (cont'd)	Environmental Tritium Analysis
18:30	Reception	

Thursday, 26 August 2004

08:30-10:30	Session 3	Radionuclides and Water Chemistry
10:30-11:00	Coffee Break	
11:00-12:30	Session 3 (cont'd)	Radionuclides and Water Chemistry
12:30-14:00	Lunch Break	
14:00-15:30	Session 4	Stable Isotope Analysis
15:30-16:00	Coffee Break	
16:00-17:00	Session 4 (cont'd)	Stable Isotope Analysis
17:00-18:00	Poster Session	

Friday, 27 August 2004

09:00-10:30	Session 5	Stable Isotope Methodology
10:30-11:00	Coffee Break	
11:00-12:30	Session 5 (cont'd)	Stable Isotope Methodology
12:30-14:00	Lunch Break	
14:00-15:30	Session 6	Stable Isotope Quality Assurance
15:30-16:30	Session 7	Concluding Session
16:30-16:40	Closing of the Symposium	
16:45	Visit to the IAEA Isotope Hydrology Laboratory PC Software Demonstrations	

TUESDAY, 24 AUGUST 2004**10:00-16:00** **Registration****WEDNESDAY, 25 AUGUST 2004****08:00** **Registration****09:15-09:30** **Opening Address:**
W. Burkart
Deputy Director General
Department of Nuclear Sciences and
Applications, IAEA**09:30-12:30** **SESSION 1:**
METROLOGY AND GENERAL
LABORATORY QUALITY ASSURANCE**Chairperson:** **R.I. Wielgosz, BIPM**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
1	R.I. Wielgosz	BIPM	Metrology and the CIPM-MRA and its relevance for analytical laboratories
2	A. Fajgelj	IAEA	Practical aspects of quality system implementation in laboratories performing isotopic measurements
<hr/> 10:30-11:00 Coffee Break			
3	O.R. Loesener Diaz	UNIDO	Laboratory accreditation in developing economies
4	A.O. Suckow	IAEA	How databases and laboratory management systems contribute to quality assurance
5	T.B. Coplen	USA	Laboratory information management system (LIMS) – announcement of a practical training session on its use
<hr/> 12:30-14:00 Lunch Break			

WEDNESDAY, 25 AUGUST 2004**14:00-18:00 SESSION 2:
ENVIRONMENTAL TRITIUM ANALYSIS****Chairperson: K. Rozanski, Poland**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
6	U. Morgenstern	New Zealand	Low-level tritium measurement of environmental waters using electrolytic enrichment and liquid scintillation spectrometry
7	J. Sültenfuß W. Roether	Germany	Analysis of He- and Ne-isotope in water
8	W. Krause	Germany	Intercomparison analyses of radioactivity organized by the German Federal Institute of Hydrology (BFG)
<hr/> 15:30–16:00 Coffee Break			
9	K. Rozanski M. Gröning	Poland IAEA	Quality assurance in environmental tritium laboratories: risk of contamination from artificial tritium sources
10	R. Tesch	Austria	Quality assurance and control, simply a must
11	L. Pujol-Teres M. F. Díaz-Teijeiro L. Araguás-Araguás	Spain	Assessment of the low-level liquid scintillation tritium laboratory at CEDEX, Madrid
12	Z. Rocha M.G. Martins Linhares F.S. Carvalhaes Neto R.M. Mingote	Brazil	The tritium laboratory at CDTN, Brazil: construction and operation
<hr/> 18:30 RECEPTION			

THURSDAY, 26 AUGUST 2004**08:30-12:30 SESSION 3:
RADIONUCLIDES AND
WATER CHEMISTRY****Chairperson: H.A.J. Meijer, Netherlands**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
16	B. Abou Zakhem I. Abou Madi	Syrian Arab Republic	Statistical evaluation of low-level tritium measurements in water samples, Isotope Hydrology Laboratory, Syria
17	D.M. Bonotto C.B. Mello P.C.P. Armada A. Silva	Brazil	Gamma spectrometry for characterizing ²²² Rn in waters as an aid to isotope hydrology studies
18	B.Th. Verhagen M.J. Butler M. Mabitsele	South Africa	Further development of the absorption method for preparing CO ₂ samples for radiocarbon analysis by liquid scintillation counting
19	U.K. Sinha H.V. Mohokr S.V. Navada	India	Carbon-14 measurement using carbon dioxide absorption method – our experience

10:30–11:00 Coffee Break

21	B. Obelić N. Horvatinčić I. Krajcar Bronić J. Barešić	Croatia	Quality assurance for ¹⁴ C and ³ H measurements by GPC and LSC counting methods in the Zagreb laboratory
22	R. Petrosius J. Mazeika	Lithuania	Methodical features of ³ H and ¹⁴ C measurements in the laboratory of the Institute of Geology and Geography, Lithuania
23	J. Cui G. Fan Z. Wu D. Guo	China	Interlaboratory comparison campaigns on geothermal water samples using ion chromatography and HR-ICP-MS techniques

12:30–14:00 Lunch Break

THURSDAY, 26 AUGUST 2004**14:00-17:00 SESSION 4:
STABLE ISOTOPE ANALYSIS****Chairperson: R. Gonfiantini, Italy**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
26	K. Russe M. Berglund S. Valkiers	EC	Estimation of uncertainty of carbon isotope ratio measurements in CO ₂ according to the GUM
27	B. Mayer	Canada	Reporting requirements for sulfur isotope measurements on environmental samples
28	T.B. Coplen	USA	Quality assurance and quality control in new stable isotope hydrology laboratories

15:30–16:00 Coffee Break

29	F.W. Guevara	El Salvador	Quality assurance of deuterium and oxygen-18 results using EQ-device at Lageo Stable Isotope Laboratory
30	N. Safsaf M. Ibn Majah H. Marah	Morocco	Management and quality assurance in the hydrology isotopic laboratory – CNESTEN- guide ISO- IEC 17025

THURSDAY, 26 AUGUST 2004**17:00-18:00 POSTER SESSION**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Poster</i>
13P	I.M. Fernández Gómez M. Prendes Alonso G. Rodriguez Castro J. Carrazana Gonzalez E. Capote Ferrera M. Marrero Garcia	Cuba	Assurance of an adequate handling of test items in the laboratory in charge of the tritium analyses in Havana, Cuba
14P	C. Varlam I. Stefanescu M. Varlam A. Enache D. Florescu	Romania	Low-level tritium measurements in environmental water samples by liquid scintillation counting
15P	M. Gröning M. Jaklitsch R. Auer	IAEA	Improvements for tritium enrichment system at IAEA
24P	Z. Pang M. Dargie	IAEA	Improving analytical quality on water chemistry through inter-laboratory comparison
25P	L.-F. Han M. Gröning	IAEA	Simplified CFC sampling method and spread-sheet based CFC data evaluation
40P	J. Zoto	Albania	Measurements of hydrogen, oxygen and carbon isotope ratios by SIRA 10 mass spectrometer and some problems of their quality assurance
41P	E. Aguirre Dueñas	Chile	Good practices in preparation of a new internal laboratory standard in environmental isotopes laboratory of Nuclear Energy Chilean Commission (CCHEN)
42P	M. van Duren	IAEA	Investigation on effects of bottle material on water evaporation and isotopic changes in $\delta^2\text{H}$ and $\delta^{18}\text{O}$ during sample storage
43P	E. Barkan B. Luz	Israel	Absolute ratios $^{17}\text{O}/^{16}\text{O}$ and $^{18}\text{O}/^{16}\text{O}$ in water standards and atmospheric O_2
44P	A. Raponi N. Franchi C. Brun L. D'Amelio	Italy	Italian centre for isotope hydrology operating in accordance with standards UNI CEI EN ISO/IEC 17025

FRIDAY, 27 AUGUST 2004**09:00-12:30** **SESSION 5:
STABLE ISOTOPE METHODOLOGY****Chairperson:** **T.B. Coplen, USA**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
31	W.A. Brand	Germany	Maintaining high precision of isotope ratio analysis over extended periods of time
32	M. Gehre	Germany	Routine employment of the high temperature pyrolysis technology – an overview
33	C. Huber M. Leuenberger	Switzerland	New on-line technique for fast high precision measurements of oxygen and hydrogen isotope ratio on water and ice
10:30–11:00	Coffee Break		
34	M. P. Verma	Mexico	Salt effect on the CO ₂ -H ₂ O isotopic exchange equilibration: preliminary results
35	S. Tonarini M. Pennisi R. Gonfiantini	Italy	Boron isotope determinations in waters and other geological materials: analytical difficulties and inter-calibration of measurements
36	H.A.J. Meijer	Netherlands	A day in the lab: Quality assurance from a physics' perspective
12:30-14:00	Lunch Break		

FRIDAY, 27 AUGUST 2004**14:00-15:30 SESSION 6:
STABLE ISOTOPE QUALITY ASSURANCE****Chairperson: B. Mayer, Canada**

<i>No of Paper IAEA-CN-119-</i>	<i>Name</i>	<i>Designating Member State/Organization</i>	<i>Title of Paper</i>
37	S. Kilani	Jordan	Practices of WAJ laboratories in adopting ISO/IEC 17025 requirements for stable isotope analysis
38	J.Y. Lee O. Abe	Japan	Management for daily analyses of various stable isotope samples of water at HyARC, Nagoya University, Japan
39	H. Förstel M. Boner	Germany	Standards for multi-element IRMS within a single run

**15:30-16:30 SESSION 7:
CONCLUDING SESSION****Chairperson: M. Gröning, IAEA**

Conclusions and Recommendations

16:30-16:40 CLOSING OF SYMPOSIUM**16:45 Visit to the IAEA
Isotope Hydrology Laboratory
PC Software Demonstrations**

PARTICIPATION IN IAEA SCIENTIFIC MEETINGS

Governments of Member States and those organizations whose activities are relevant to the meeting subject matter are invited to designate participants in IAEA scientific conferences and symposia. In addition, the IAEA itself may invite a limited number of scientists as invited speakers. Only participants designated or invited in this way are entitled to present papers and take part in the discussions.

Representatives of the press, radio, television or other information media and members of the public, the latter as "observers", may also be authorized to attend, but without the right to take part in the proceedings.

Scientists interested in participating in any of the IAEA meetings should request information from the Government authorities of their own countries, in most cases the Ministry of Foreign Affairs or national atomic energy authority.

PUBLICATIONS

Proceedings

The proceedings of the symposium containing the refereed presentations and posters delivered at the meeting, as well as the findings and recommendations, will be published by the Agency as soon as possible after the symposium.

Orders

No registration fee is charged to participants but they are encouraged to order for themselves or on behalf of their supporting organization at least one copy of the proceedings. These can be obtained at the special price of €40 representing half the estimated sales price provided that they are ordered and paid for during the meeting at the Conference Desk.

Other IAEA Publications

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<http://www-pub.iaea.org/MTCD/publications/publications.asp>

AGENCY PUBLICATIONS RELATED TO THE SUBJECT OF THE CONFERENCE

STI/DOC/10/210	Stable Isotope Hydrology: Deuterium and Oxygen-18 in the Water Cycle	1981
STI/DOC/10/91/2	Guidebook on Nuclear Techniques in Hydrology. 1983 Edition	1983
STI/PUB/650	Isotope Hydrology 1983. Proceedings of a symposium held in Vienna, 12-16 September 1983	1983
STI/PUB/757	Isotope Techniques in Water Resources Evaluation. Proceedings of a Symposium held in Vienna, 30 March – 3 April 1987	1987
STI/PUB/790	Isotope Techniques in the Study of the Hydrology of Fractured and Fissured Rocks. Proceedings of an Advisory Group Meeting held in Vienna, 17-21 November 1986	1989
STI/PUB/875	Isotope Techniques in Water Resources Development 1991. Proceedings of a Symposium held in Vienna, 11-15 March 1991	1992
STI/DOC/10/331	Statistical Treatment of Data on Environmental Isotopes in Precipitation	1992
STI/PUB/859	Isotopes of Noble Gases as Tracers in Environmental Studies. Proceedings of a Consultants' Meeting held in Vienna, 29 May – 2 June 1989	1992
STI/PUB/908	Isotope Techniques in the Study of Past and Current Environmental Changes in the Hydrosphere and the Atmosphere. Proceedings of a Symposium held in Vienna, 19-23 April 1993	1993
STI/PUB/970	Isotopes in Water Resources Management. Proceedings of a Symposium held in Vienna in cooperation with UNESCO, 20-24 March 1995	1996

STI/PUB/1024	Isotope Techniques in the Study of Environmental Change. Proceedings of a Symposium held in Vienna, 14-18 April 1997	1998	IAEA-TECDOC-1295	Reference Materials for Microanalytical Nuclear Techniques	2002
IAEA-CSP-2/C	Isotope Techniques in Water Resources Development and Management. CD-ROM Proceedings of a Symposium held in Vienna, 10-14 May 1999	1999	IAEA-TECDOC-1350	Development and Use of Reference Materials and Quality Control Materials	2003
IAEA-CSP-13/P	Study of Environmental Change using Isotope Techniques. CD-ROM Proceedings of a Conference held in Vienna, 23-27 April 2001	2002	IHP-V No.39 Vol.1-6	Environmental Isotopes in the Hydrological Cycle. Principles and Applications. Technical Documents in Hydrology. Six volumes IHP/UNESCO/IAEA	2000
IAEA-CSP-22/CD	Isotopic and Nuclear Techniques for Health and Environment. CD-ROM Proceedings of a Conference held in Vienna, 10-13 June 2003	2004			
IAEA-TECDOC-331	Statistical Treatment of Data on Environmental Isotopes in Precipitation	1992			
IAEA-TECDOC-777	Mathematical Models and their Applications to Isotope Studies in Groundwater Hydrology	1994			
IAEA-TECDOC-825	Reference and Intercomparison Materials for Stable Isotopes of Light Elements	1995			
IAEA-TECDOC-828	Use of Nuclear Techniques in Studying Soil Erosion and Siltation	1995			
IAEA-TECDOC-910	Manual on Mathematical Models in Isotope Hydrology	1996			
IAEA-TECDOC-1046	Application of Isotope Techniques to investigate Groundwater Pollution	1998			
IAEA-TECDOC-1247	New Approaches for Stable Isotope Ratio Measurements	2001			
IAEA-TECDOC-1268	Stable Isotope Measurement Techniques for Atmospheric Greenhouse Gases	2002			
IAEA-TECDOC-1269	Isotope Aided Studies of Atmospheric Carbon Dioxide and Other Greenhouse Gases – Phase II	2002			

FORTHCOMING SCIENTIFIC MEETINGS SCHEDULED BY THE IAEA

2004

International Conference on Nuclear Knowledge Management: Strategies, Information Management and Human Resource Development
7-10 September, Saclay, France

Global Threat Reduction Initiative International Partners' Conference
18-19 September, Vienna, Austria

International Conference on Topical Issues in Nuclear Installation Safety:
Continuous Improvement of Nuclear Safety in a Changing World
18-22 October, Beijing, China

International Conference on Isotopes in Environmental Studies – Aquatic Forum 2004
25-29 October, Monaco

20th IAEA Fusion Energy Conference
1-6 November, Vilamoura, Portugal

RERTR-2004 International Meeting on Reduced Enrichment for Research and Test Reactors
7-12 November, Vienna, Austria

International Symposium on the Disposal of Low-Activity Radioactive Waste
13-17 December, Cordoba, Spain

2005

International Conference on Nuclear Security: Global Directions for the Future
16-18 March, London, UK

International Conference on "Nuclear Power for the 21st Century
April, Paris, France

International Conference on Area Wide Pest Control
9-13 May, Vienna, Austria

International Symposium on Utilization of Accelerators
5-9 June, Dubrovnik, Croatia

International Symposium on Uranium Production and Raw Materials for Nuclear Fuel Cycle – Supply and Demand, Environment, Economy and Energy Security
20-24 June, Vienna, Austria

International Conference on the Safety and Security of Radioactive Sources: Towards a Sustainable Global System of Lifelong Control over Sources
27 June-1 July, Bordeaux, France,

International Conference on the Safety of Radioactive Waste Disposal
3-7 October, Tokyo, Japan

International Symposium on Trends in Radiopharmaceuticals
10-14 October, Vienna, Austria

International Symposium on Characterization and Quality Control of Nuclear Fuel
17-21 October, Vienna, Austria

International Conference on Operational Safety Performance in Nuclear Installations
5-9 December, Vienna, Austria

For information on forthcoming scientific meetings, please consult the IAEA website: <http://www.iaea.org/>