

## International Conference on Isotopic and Nuclear Analytical Techniques for Health and Environment

Vienna, Austria 10–13 June 2003

# PROGRAMME

IAEA-CN-103

## **IAEA SECRETARIAT:**

Scientific Secretaries:	G.V. Iyengar
	M. Rossbach
	P. De Regge
<b>Conference Services:</b>	E. Janisch

## LOCATION OF THE CONFERENCE:

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

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

# SCIENTIFIC COMMITTEE, DEPARTMENT OF NUCLEAR SCIENCES AND APPLICATIONS (IAEA):

	<ul> <li>A. Ambrus</li> <li>P. De Regge</li> <li>A. Diallo</li> <li>S.W. Fowler</li> <li>M. Rossbach</li> <li>G.V. Iyengar</li> </ul>
Working language:	English
Resolutions:	No resolutions may be submitted for consideration on any subject, and no votes will be taken.

## TIMETABLE

#### Monday, 9 June 2003

## Tuesday, 10 June 2003

08:00	Registration	
09:00	Opening of the Confe	erence
09:30	Session 1	Isotopic and Nuclear Techniques (General)
11:00	Coffee break	
11:20	Session 1 (cont.)	
12:20	Lunch break	
14:00	Session 2	Metrology and Quality Assurance in Nuclear Measurements
15:30	Coffee break	
15:50	Session 2 (cont.)	
16:50	Session 3	Poster Session
18:00	Reception	

#### Wednesday, 11 June 2003

08:40	Session 4	Nuclear Analytical Techniques for Environmental Monitoring
10:00	Coffee break	
10:20	Session 5	Radioecology
12:10	Lunch break	
14:00	Session 6	Environmental Monitoring
15:40	Coffee break	
16:00	Session 6 (cont.)	
16:40	Session 7	Radiological Safety of Food and Water

#### Thursday, 12 June 2003

09:00	Session 8	Methodological Aspects of Stable Isotope Techniques in Health and Environment
10:40	Coffee break	
11:00	Session 8 (cont.)	
12:40	Lunch break	
14:00	Session 9	Applications of Isotopic Techniques in Health and Environment
15:50	Coffee break	
16:10	Session 9 (cont.)	

#### Friday, 13 June 2003

09:00	Session 10	New Developments in Nuclear Analytical and Radiochemical Techniques
10:40	Coffee break	
11:00	Session 11	Marine Environment and Radioecology
13:00	Lunch break	
14:30	Session 12	Human Capacity Development Needs in the Areas of AQCS,
		Radiochemistry and Nutrition
	Round Table and Ger	neral Discussion
16:30	Closing of the Confe	rence

## **Display of posters:** Tuesday to Friday, 10–13 June 2003

Commercial exhibits will be shown in the common area on the 4<sup>th</sup> floor of the C tower from Tuesday to Friday, 10–13 June 2003.

## MONDAY, 9 JUNE 2003

## TUESDAY, 10 JUNE 2003

08:00	Registration
09:00	<b>Opening of the Conference:</b>
	Senior Official, WHO
	W. Burkart, Deputy Director General, IAEA

## 09:30–12:20 SESSION 1: ISOTOPIC AND NUCLEAR TECHNIQUES (GENERAL)

Chairpersons: Zhifang Chai, China M.A. Menezes, Brazil

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
123 Invited	C. Tuniz	Australia	Advanced nuclear techniques for health and environment
083	<b>A.H. Love</b> J.R. Hunt J.P. Knezovich	USA	Improving tritium exposure reconstruction using accelerator mass spectrometry
039	<b>S. Kumar</b> V.S. Raju	India	Application of nuclear microprobe techniques in the analysis of biological materials
095	R. Acharva A.G. Nair <b>A.V.R. Reddy</b> S.B. Manohar	India	Instrumental neutron activation analysis of biological materials using research reactors at BARC
11:00 - 11:20	Coffee break		
025	<b>X. Lin</b> R. Henkelmann	Germany	The internal comparator method in INAA
074	<b>I.E. Stamatelatos</b> K. Kasviki S. Green M. Gainey J. Kalef-Ezra A. Beddoe	Greece UK Greece UK	Development of a prompt gamma neutron activation analysis facility for small animal in vivo body composition studies using Am-Be source
125	<b>S.A. Bamford</b> D. Wegrzynek E. Chinea-Cano A. Markowicz	IAEA	Applications of X ray fluorescence techniques for the determination of hazardous and essential trace elements in environmental and biological materials
12:20 - 14:00	Lunch break		

#### 14:00–16:50 SESSION 2: METROLOGY AND QUALITY ASSURANCE IN NUCLEAR MEASUREMENTS

	A. Annaumar, Islam	ne republic of fran	
No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
155 Invited	R. Greenberg	USA	Intrinsic quality assurance aspects of neutron activation analysis
037	<b>H. Polkowska-Motrenko</b> B. Danko R. Dybczyński	Poland	Metrological assessment of the high accuracy RNAA method of Co determination in biological materials
046	<b>R. Broda</b> K. Maletka	Poland	The TDCR method as an important tool in radionuclide metrology
115	P. Arikan O. Acar R. Acar G.A. Aycik M.A. Cetiner H. Demirel N. Efe T. Golge R. Gurellier R. Kirmaz S. Tulumen H. Yucel A. Zararsiz Y. Agus	Turkey	Analytical quality assurance/quality control of nuclear techniques within RER/2/004
15:30 - 15:50	Coffee break		
108	<b>F. Groppi</b> M. Bonardi C. Birattari C.H.S. Mainardi E. Menapace	Italy	A competitive method for simultaneous deuteron-cyclotron production of no- carrier-added Cu-64 and Ga-67, 66 for applications in PET radiodiagnostic and metabolic therapy of tumours
062	M. Antczak <b>Z. Kasztovsky</b> A. Antczak L. Sajó-Bohus	Venezuela Hungary Venezuela	Provenance study of Amerindian ceramic figurines with PGNAA
026	X. Lin D. Alber <b>R. Henkelmann</b>	Germany	Elemental contents in Napoleon's hairs cut before and after his death: did Napoleon die from arsenic poisoning?

#### Chairpersons: E. Cortés Toro, Chile A. Ahmadiniar, Islamic Republic of Iran

#### 16:50–18:00 SESSION 3: POSTER SESSION

18:00-19:30 Reception

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## WEDNESDAY, 11 JUNE 2003

#### 08:40–10:00 SESSION 4: NUCLEAR ANALYTICAL TECHNIQUES FOR ENVIRONMENTAL MONITORING

#### Chairpersons: P. Bode, Netherlands B. Nyarko, Ghana

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
106	<b>M.D. Tshiashala</b> G. Erdtmann	Dem. Rep. of the Congo Germany	Instrumental neutron activation analysis in geochemistry. Emphasis on spectral and uranium fission product interferences
023	<b>T. Hashimoto</b> Y. Uezu	Japan	Simultaneous determination of radionuclides separable into natural decay series using time interval analysis (TIA)
056	D.Zaichick N. Dogadkin <b>V. Zaichick</b>	Russian Federation	INAA applications in the assessment of minor and trace element contents in the soil of Moscow's park
128	<b>V. Levenets</b> V. Lapshin	Ukraine	Use of PIXE, PIGE, XRF for the decision of ecological problems in the NSC KIPT
10:00 - 10:20	Coffee break		

Chairpersons: G. Voigt, IAEA R. Rusconi, Italy			
<i>No. of Paper</i> <i>IAEA-CN-103/</i>	Author(s)	Designating Member State/Organization	Title of Paper
156 Invited	B.J. Howard	UK	The relevance of speciation to the environmental behaviour of radionuclides
086	<b>T.K. Ikäheimonen</b> S. Klemola E. Ilus	Finland	Behaviour of gamma emitters, Sr-90 and transuranic elements in forest environment
127	<b>I.Sh. Normatov</b> U. Mirsaidov	Tajikistan	The affectivity of applying new isotope methods and radiation biogeocenology in defining the migration and space allocation of radionuclides
032	<b>Nguyen Hao Quang</b> D.N. Dang V. Pham T.N. Vu	Vietnam	Use tracer technique to investigate the dependence of soil-top plant transfer factor of Sr and Cs on the type of soils
076	B. Smodis	IAEA	Investigation of trace element atmospheric pollution by nuclear analytical techniques at a global scale: harmonized approaches supported by the IAEA
12:10 - 14:00	Lunch break		

## 14:00–16:40 SESSION 6: ENVIRONMENTAL MONITORING

## Chairpersons: T. Hashimoto, Japan V. Zaichick, Russian Federation

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
096	<b>A. Khater</b> M.S. El Tahawy	Egypt	Environmental monitoring of radioactivity levels in Qarun Lake
055	<b>J. Bieringer</b> C. Schlosser	Germany	Monitoring of ground level air in the framework of trace analysis: methods and results
057	<b>R. Ladygiene</b> G. Morkūnas L. Pilkytė	Lithuania	Regulatory and scientific aspects of environmental studies
060	L. Biro <b>C. Garlea</b> I. Garlea N. Heredea C. Kelerman	Romania	Multiple techniques used for radiological characterization of the Magurele Fortress- Battery 14-15, Romania
072	<b>A. Ďurecová</b> D. Bursová F. Ďurec	Slovakia	Naturally occurring radionuclides in thermal swimming pools of the Slovak Republic
15:40 - 16:00	Coffee break		
085	<b>M.V. El May</b> N. Chahed S. Mtimet	Tunisia	Air radon concentrations in Tunisia - a preliminary study
110	A. Srivastava	Germany	An overview of indoor radon study carried out in dwellings of India and Bangladesh during the last decade (1990-2000)

## 16:40–18:00 SESSION 7: RADIOLOGICAL SAFETY OF FOOD AND WATER

	R. Ladygiene, Li		
No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
136	<b>E. Cortés Toro</b> N. Gras	Chile	Improving food safety with accurate analysis by laboratories participating in proficiency testing programmes
089	<b>W.S. Pereira</b> D.A. Py Junior	Brazil	Monitoring of Ra-226 and Ra-228 in manioc (Manioht utilissima) and its flour in uranium mining in Caetite - tropical area in Brazil
070	<b>R. Rusconi</b> M. Forte S. Bellinzona R. Gallini G. Sgorbati	Italy	Assessment of drinking water radioactivity content by liquid scintillation counting: set up of high sensitivity and emergency procedures
119	<b>U. Repinc</b> L. Benedik R. Jakopič	Slovenia	Sr-90 in various food and foodstuffs

#### Chairpersons: J. Bieringer, Germany R. Ladygiene, Lithuania

## THURSDAY, 12 JUNE 2003

#### 09:00–12:40 SESSION 8: METHODOLOGICAL ASPECTS OF STABLE ISOTOPE TECHNIQUES IN HEALTH AND ENVIRONMENT

#### Chairpersons: J.J. Kehayias, USA M. Chiba, Japan

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
157 Invited	S.K. Aggarwal	India	Mass spectrometry for nutritional and environmental applications: Recent advances
158 Invited	J. Boccio	Argentina	Isotopic techniques to diagnose infection: with special reference to Helicobacter pylori.
019	J.J. Kehayias	USA	Use of D-T produced fast neutrons for in vivo body composition analysis: a reference method for nutritional assessment in the elderly
142	G.V. Iyengar	IAEA	IAEA's contributions to advances in nutritional and environmental metrology
10:40 - 11:00	Coffee break		
159 Invited	Warren Lee	China	Prevention and care of osteoporosis in the elderly — nutritional perspectives and isotopic tools
160 Invited	M.G.V. Mannar	Canada	Nutrient fortification of foods evaluated by isotopic techniques
041	<b>Z. Latif</b> M.A. Tasneem M. Ali M.I. Sajjad W.A. Coward	Pakistan	Glucose tolerance by <sup>13</sup> CO <sub>2</sub> breath test- methodology and utilization
028	<b>M. Chiba</b> A. Shinohara Y. Inaba	Japan	Utilization of stable isotope, <sup>26</sup> Mg, for investigating the cause of sudden death
12:40 - 14:00	Lunch break		

#### 14:00–17.50 SESSION 9: APPLICATIONS OF ISOTOPIC TECHNIQUES IN HEALTH AND ENVIRONMENT

A.G. Gnarid, Islamic Republic of Iran				
No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper	
161 Invited	G.A. Clugston	WHO	Global nutrition issues: a WHO perspective	
120	<b>N. Mokhtar</b> B.Miranda-da-Cruz G.V. Iyengar	IAEA	IAEA initiatives in body composition and breast milk determination: Examples from Ghana and Senegal	
004	<b>Zhifang Chai</b> D.D. Xu W.K. Zhong X.Y. Mao H. Ouyang	China	Study of organohalogens in foodstuffs and environmental samples by neutron activation analysis and related techniques	
034	R. Gross <b>K. Gross</b> G.V. Iyengar	UNICEF Germany IAEA	Nutrient-pollutant interactions and their potential implications on human health	
081	<b>I. Tosun</b> H. Ozcan N. Cetinkaya	Turkey	Use of milk progesterone RIA for the monitoring of artificial insemination of dairy cows in small holder farms in Turkey	
15:50 - 16:10	Coffee break			
088	<b>D.A. Py Junior</b> W. S. Pereira	Brazil	Occupational monitoring programme of uranium concentrate unit in Caetite, Brazil; Bioassay Programme	
101	<b>H.B. Olaniyi</b> I.B. Obioh O.K. Owoade F.S. Oliseh	Nigeria	Assessment of occupational exposure to toxic metals in some paint and secondary iron and steel industries in Lagos, Nigeria using TXRF technique	
103	M.B.A. Vasconcellos M. Horvat M.G.M. Catharino G. Paletti M. Saiki D.I.T. Fávaro R. Baruzzi D.A. Rodrigues	Brazil	Studies on mercury contamination in the Brazilian Amazonic region using neutron activation analysis and atomic absorption spectroscopy	
013	<b>S. Ribeiro Guevara</b> A. Rizzo R. Sánchez M. Arribére	Argentina	Heavy metals inputs in Northern Patagonia lakes from short sediment cores analysis	
116	<b>A.G. Gharib</b> S. Fatoorehchian	Iran, Islam. Rep. of	Intakes of radiologically important trace elements from Iranian daily diets	

## Chairpersons: M.B.A. Vasconcellos, Brazil A.G. Gharib, Islamic Republic of Iran

## FRIDAY, 13 JUNE 2003

#### 09:00–10:40 SESSION 10: NEW DEVELOPMENT IN NUCLEAR ANALYTICAL AND RADIOCHEMICAL TECHNIQUES

## Chairpersons: A.V.R. Reddy, India K. Isaac-Olive, Cuba

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
162 Invited	P. Bode	Netherlands	A future for nuclear analytical techniques? Why not?
063	<b>V.P. Varvaritsa</b> E.R. Kartashev N.R. Kuzelev A.S. Shtan	Russian Federation	The current status and further development of nuclear and isotope analytics in industry (ecological aspects)
146	A.G. Chmielewski	IAEA	Analytical techniques in radiation technologies
075	<b>F. Tzika</b> I.E. Stamatelatos J. Kalef-Ezra P. Bode	Greece Netherlands	Large sample NAA facility at GRR-1 research reactor: design and applications
163	A. Chatt C.S. Bottaro C.K. Jayawickreme J.W. Kiceniuk Y. Shi	Canada	Simultaneous speciation analysis using neutron activation
10:40 - 11:00	Coffee break		

#### 11:00–13.00 SESSION 11: MARINE ENVIRONMENT AND RADIOECOLOGY

No. of Paper IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Paper
140	<b>S.W. Fowler</b> J.L. Teyssié O. Cotret J. Paganelli B. Danis M. Warnau	IAEA	Radiotracer techniques for studying pollutant bioaccumulation in marine organisms
008	<b>H. Suseno</b> H. Umbara	Indonesia	Radioactive monitoring at Jakarta Bay and Muria Coastal Zone in Indonesia
109	<b>M.A. Malek</b> M. Nakahara R. Nakamura	Japan	Uptake, retention and organic/tissue distribution of <sup>137</sup> Cs by Japanese catfish (Silurus asotus linnaeus)
071	<b>C. Gascó</b> M.P. Antón R. García D. Pérez	Spain	Determination of <sup>210</sup> Pb in environmental samples following different procedures
129	T. Akyuz <b>S. Akyuz</b> O. Algan N.M. Mukhamedshina A.A. Mirsagatova	Turkey Uzbekistan	Investigations of some core and surface sediments from the Black Sea by radioisotope excited EDXRF and INAA techniques
149	<b>P.F. Rodríguez-Espinosa</b> V.M.V. Vidal F.V. Vidal	Mexico	Sources of environmental radioactivity in sediments of south of Gulf of Mexico
091	L. Sajo-Bohus D. Palacios J. Castillo J. Bermúdez E. Greaves	Venezuela	Determination of metals and gamma radioactivity in marine algae from the Venezuelan Central Coast
13:00 - 14:30	Lunch break		

#### Chairpersons: S.W. Fowler, IAEA P.F. Rodriquez-Espinosa, Mexico

#### 14:30–16:30 SESSION 12: HUMAN CAPACITY DEVELOPMENT NEEDS IN THE AREAS OF AQCS, RADIOCHEMISTRY AND NUTRITION

ROUND TABLE (Invitees drawn from Conference participants)

GENERAL DISCUSSION

## 16:30–17:00 CLOSING OF THE CONFERENCE

## POSTERS

No. of Poster IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Poster
005P	K. Khan P. Akhter S.D. Orfi H.M. Khan (presented by <b>Z. Latif</b> )	Pakistan	Assessment of natural radionuclide levels in Pakistan foodstuffs and associated radiation doses
007P	<b>J. Paatero</b> A. Virkkula R. Hillamo Y. Viisanen	Finland	Radon-222 in outdoor air in the Finnish arctic
010P	<b>S. Ribeiro Guevara</b> D. Bubach M. Arribére	Argentina	Tracing of mercury sources in Nahuel Huapi National Park, Patagonia, Argentina, using lichens as atmospheric bioindicators
011P	<b>S. Ribeiro Guevara</b> D. Bubach P. Vigliano G. Lippolt M. Arribére	Argentina	Heavy metals bioindication in Northern Patagonia lakes, Argentina, using native mussel Diplodon chilensis
014P	<b>B.J.B. Nyarko</b> , Y. Serfor-Armah E.H.K. Akaho A.W.K. Kyere	Ghana	Biomonitoring of trace-element air pollution in a gold mining area in Ghana using the generalized k0-standardization NAA method
015P	V. Zaichick	Russian Federation	INAA applications in the age dynamics assessment of Ca, Cl, K, Mg, Mn, Na, P, and Sr contents in the cortical bone of human iliac crest
020P	<b>J.J. Kehayias</b> I.E. Stamatelatos C. Sheahan M. O'Neill	USA Greece USA	A field method for assessing body composition by portable XRF bromine analysis: validation against instrumental neutron activation
021P	B. Danko	Poland	High-accuracy method of molybdenum determination in biological materials by RNAA
022P	<b>T. Andjelic</b> P. Vukotic R. Zekic R. Zizic	Serbia and Montenegro	Radioecological situation in Montenegro

<i>No. of Poster</i> <i>IAEA-CN-103/</i>	Author(s)	Designating Member State/Organization	Title of Poster
024P	<b>Y. Uezu</b> J. Koarashi Y. Sanada T. Hashimoto	Japan	Rapid determination of artificial alpha nuclides with long lives using time interval analysis method
029P	V. Valkovic	Croatia	Geochemical environment and its influence on trace elements content of human hair
030P	<b>B. Machaj</b> P. Urbanski	Poland	Influence of aerosol concentration and multivariate data processing on indication of radon progeny concentration in air
031P	<b>P. Urbanski</b> E. Kowalska	Poland	Multivariate techniques in processing data from radiometric experiments
033P	Nguyen Hao Quang Nguyen Quang Long Dinh Thi Bich Lieu Tran Tuyet Mai Nguyen Thi Thu Ha Doan Tuan Anh Dang Duc Nhan Pham Duy Hien	Vietnam	<sup>239-240</sup> Pu and <sup>90</sup> Sr deposition densities in undisturbed surface soil in Vietnam
036P	A. Espinosa A. Aragón B. De la Cruz J. Gutierrez	Spain	Physico-chemical characterization of radioactive particles dispersed in Palomares (Spain) due to a nuclear accident
038P	<b>S. Dragović</b> S. Stanković A. Čučulović	Serbia and Montenegro	Application of nuclear and related analytical techniques in biomonitoring
040P	<b>P.S. Hai</b> N.T. Binh P.D. Hien V.H. Tan	Vietnam	Determination of sedimentation rates and sediment yields using Cs-137 and Pb-210 indicators
042P	<b>A.K.M. Fazlul Hoque</b> M.J. Abedin S.K. Biswas	Bangladesh	Measurement of boron in soil using proton induced gamma emission method
043P	A. Korsak <b>R. Mikolajczak</b> B. Gorska A. Markiewicz E. Zakrzewska	Poland	Evaluation of <sup>99</sup> Tc <sup>m</sup> -UBI and <sup>99</sup> Tc <sup>m</sup> -HYNIC-UBI as potential infection imaging radiopharmaceuticals

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044P	Han-Soo Lee H.J. Choi H.S. Kang D. Yu K.M. Lim Y.H. Choi C.W. Lee	Korea, Republic of	Transfer of iodine deposited onto the Chinese cabbage
045P	D. Pawlak J.L. Parus I. Sasinowska <b>R. Mikolajczak</b>	Poland	Determination of chemical and radionuclide impurities in <sup>177</sup> Lu used for labelling of radiopharmaceuticals
047P	<b>K. Maletka</b> R. Broda A. Tadrzak	Poland	Methods of measurements of activity and radionuclide purity in Radioisotope Centre POLATOM
049P	<b>I. Sasinowska</b> W. Piecyk	Poland	Application of ICP-OES (inductively coupled plasma- optical emission spectrometry) in analysis of radioactive preparations
050P	<b>E. Byszewska-Szpocinska</b> A. Markiewicz	Poland	The new RIA kit for the determination of progesterone in cow's milk
051P	<b>M.Ä. Menezes</b> E.C.P. Maia C. Albinati	Brazil	Neutron activation analysis at the service of the worker health: Determination of arsenic
054P	<b>G. Pantelić</b> M. Eremić Savković I. Tanasković V. Vuletić L. Javorina	Serbia and Montenegro	Gammaspectrometric determination of depleted uranium in soil
061P	<b>M. Beyermann</b> T. Bünger	Germany	<sup>226</sup> Ra and <sup>228</sup> Ra in bottled mineral waters in Germany
064P	E.R. Kartashev	Russian Federation	The sensitivity of neutron methods for on-stream analysis of solutions
065P	S.M. Brodsky V.P. Varvaritza S.A. Koloskov N.R. Kuzelev Y.D. Lavrentjev V.J. Nagorny K.I. Shchekin	Russian Federation	XRF analysers and their application in ecology, in mining and processing industries

No. of Poster IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Poster
066P	R. Mikolajczak B. Gorska A. Hubalewska K. Fross A. Staszczak B. Huszno	Poland	Preliminary clinical evaluation of <sup>99</sup> Tc <sup>m</sup> -HYNIC EDDA-TATE in comparison to <sup>111</sup> In- OCTREOSCAN and <sup>131</sup> MIBG
068P	<b>B. Torres</b> P. Mendoza P. Olivera M. Ubillús E. Montoya P. Bedregal	Peru	Quality assurance of analytical results in environmental samples by means of participation in intercomparison round
073P	<b>F. Ďurec</b> T. Hlásny R. Prokešová	Slovakia	Use of geostatistical analysis in radon mapping
077P	T. El Khoukhi R. Cherkaoui A. Senhou A. Couak A. Gaudry S. Ayrault M. Chakir	Morocco France Morocco	Quality control of INAA-k <sub>0</sub> and ICP-MS as bio-monitoring analysis techniques – application to Moroccan atmospheric pollution study
078P	<ul> <li>A. Germanier</li> <li>R.D. Pérez</li> <li>R. Badini</li> <li>M. Ravera</li> <li>M. Rubio</li> <li>J. Piana</li> <li>A.M. Peiretti</li> <li>A. Ávila</li> <li>(presented by J. Boccio)</li> </ul>	Argentina	An XRF study on the pigments in wood carving of Jesuit missions of Argentina
084P	<b>S. Baude</b> F. Pointurier J.C. Millies-Lacroix R. Chiappini	France	Precise uranium isotopic measurements in groundwater around the CEA's Vaujours site
090P	J. Alfonso <b>D. Palacios</b> L. Sajo-Bohus J. Castillo J. Bermúdez	Venezuela	Distribution of gamma emitter radionuclides in coastal sediments near the Venezuelan Atlantic front
093P	<b>T. Viloria</b> L. Sajo-Bohus D. Palacios J. Castillo J. Bermúdez	Venezuela	Gamma radioactivity in sediments of Maracaibo Lake, Venezuela

No. of Poster IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Poster
100P	<b>H.B. Olaniyi</b> I.B. Obioh F.S. Oliseh O.K. Owoade	Nigeria	Determination of atmospheric concentration of toxic metals along urban motorways in two Nigerian cities using TXRF technique
102P	C. Gascó A. Komosa A. Álvarez N. Navarro M.P. Antón	Spain Poland Spain	Sequential leaching extraction of <sup>239,240</sup> Pu, <sup>238</sup> Pu, <sup>241</sup> Pu and <sup>241</sup> Am from a mud sample: an intercomparison study
104P	<b>H. Yücel</b> M. Atif Çetiner Ş. Turhan A. Demírbas	Turkey	Prompt gamma neutron activation analysis of boron in samples by using an Am-Be isotopic neutron source
107P	<b>A. Ahmadiniar</b> A. Rahighi A. Emamjomeh	Iran, Islam. Rep. of	Measurement of nitrogen in explosive using nuclear techniques in Iran
112P	S.K. Aliyeva	Azerbaijan	Radionuclide analysis by gamma-ray spectrograms of environmental samples
117P	A.G. Gharib	Iran, Islam. Rep. of	Newer trace element measurements by RNAA and AAS
118P	V. Stibilj L. Pograjc C. Hlastan Ribič D. Pokorn P.Smrkolj A. Čibej Z. Trkov	Slovenia	Se and I content in military total diet
121P	<b>J. Lehto</b> T. Jaakkola I. Outola M. Tillander R. Pehrman	Finland	Behaviour of radioactive cesium in northern boreal forest ecosystems
122P	R.C. Hood M. Khan A. Haque M. Khadir J.P. Bonetto L. Mayr M. Heiling.	IAEA	Carbon sequestration and estimated carbon credit values as measured using <sup>13</sup> C labelling and analysis by an optical breath test analyser
130P	<b>S. Topcuoğlu</b> Ç. Kırbaşoğlu A. Köse	Turkey	The transfer of radiocesium from fallout and artificially contaminated soil to tea and black cabbage leaves

No. of Poster IAEA-CN-103/	Author(s)	Designating Member State/Organization	Title of Poster
133P	<b>G.A. Aycik</b> M. Paul A. Sandstrom J. Paul	Turkey Sweden	Leaching of radioactive isotopes from ash
135P	<b>N. Çelebi</b> A. Fişne G. Ökten	Turkey	Risk assessment of radon exposure in Zonguldak bitumious coal basin, Turkey
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143P	<b>M.J. Mangala</b> K.A. Korier D.M. Maina A.M. Kinyua	Kenya	Determination of trace elements in mineral water samples using total reflection X ray fluorescence (TXRF)
147P	<b>K. Isaac-Olive</b> A. Chatt	Cuba Canada	Determination of iodine species in cow milk by preconcentration epithermal neutron activation analysis
153P	<b>B. Kozlowska</b> T. Streil D. Dawczynski	Poland Germany Poland	Natural radioactivity measurement in spring waters by the use of a SARAD U/Ra- disc method
166P	V.V. Berezkin V.Z. Zavelev S.A. Koloskov N.R. Kuzelev V.U. Rodionov A.S. Shtan <b>K.I. Shchekin</b> L.D. Soshin I.O. Tomashevsky	Russian Federation	New technology of diagnostic and control of a thyroid disease treatment using <i>in vivo</i> X ray fluorescent analysis

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169P	<b>R. Wierzchnicki</b> M. Derda A. Mikołajczuk	Poland	Stable isotope composition of food from different regions of Poland
170P	<b>R. Pestotnik</b> P. Križan S. Korpar A. Stanovnik	Slovenia	Fast method for measuring the <sup>90</sup> Sr Activity with Cherenkov Radiation in Silica Aerogel
172P	<b>S.B. Sarmani</b> M.P. Abdullah A.M. Bobaker	Malaysia	Comparison of liquid-liquid extraction and solid phase extraction for manganese in water analysed by neutron activation analysis
173P	S.S. Ismail	Austria	Irradiation counting system for analysing large samples by short-time activation analysis
174P	<b>J. Palige</b> A. Dobrowolski A. Owczarczyk A.G. Chmielewski	Poland IAEA	Radiotracers and CFD methods for wastewater treatment apparatus investigation
183P	<b>A. Jalil</b> M.M. Rahman M. Mazibur Rahman A. Koddus	Bangladesh	Soil to plant transfer factor for radiocesium by field measurement
186P	N. Civici	Albania	Determination of elemental composition and probable sources of atmospheric aerosol in Tirana by EDXRF analysis
187P	<b>A. Baeza</b> J. Guillén S. Hernández	Spain	Importance of the speciation of radionuclides for the calculation of transfer coefficients: application to soil- fungus transfer
189P	<b>F. Baumgaertner</b> W. Donhaerl	Germany	Organically bound tritium, OBT: its true constitution

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## 2004

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