

**International Atomic Energy Agency  
Technical Cooperation Project RAS/5/078**

**Enhancing Food Safety Laboratory Capabilities and Establishing a Network in Asia to  
Control Veterinary Drug Residues and Related Chemical Contaminants**

**PROSPECTUS**

- Title:** RAS5078 Training course on Basic Maintenance and Troubleshooting of Food Safety Analytical Instrumentation including Effective use of Instrument software
- Place:** Singapore, Singapore
- Date:** 20 - 24 March 2017
- Deadline for nominations:** **20 January 2017**
- Organizers:** The International Atomic Energy Agency (IAEA) in cooperation with the Government of Singapore through The Agri-Food and Veterinary Authority
- Language:** The language of instruction will be English
- Participation:** The training course is open to 2 participants per RAS5078 IAEA Member State counterpart food safety laboratories involved in or keen on use of analytical instrumentation for testing veterinary drug residues and associated contaminants.
- Purpose of Course:** To enable analysts prevent, quickly diagnose/recognize and provide basic solutions to problems associated with commonly used tools for food and environmental safety testing; to enhance analytical skills and usability of selected analytical instrumentation; To facilitate knowledge and experience sharing among RAS5078 laboratory analysts.
- Participants' Qualifications:** Academic training in analytical chemistry, food safety/science, laboratory technology, veterinary medicine/science and related discipline, with experience working in (or analyst is scheduled to work in) food and environmental safety laboratory, operating LC/GC and associated detectors and/or LC/GC-MS/MS.
- Nature of the course:** Lectures, discussion and hands-on exercises on
- Basic maintenance and troubleshooting of analytical instrumentation (e.g. LC/GC and associated detectors; LC/GC-MS/MS) and acquisition of analytical data, for food and environmental safety;
  - Instrument system (e.g. LC/GC and associated detectors; LC/GC-MS/MS) optimization/preparation and calibration;
  - Isolation, correction, and prevention of LC/GC chromatographic problems (including but not limited to mobile phase/gas flow, pump, injection/inlet system, oven, column and detector); separations chemistry;
  - Logical/systematic, cost effective and timesaving ways to prevent common LC/GC; LC/GC-MS/MS hardware/software problems and method failures;
  - Basic maintenance and troubleshooting tools and cases; differential diagnoses for food and environmental safety instrumentation (e.g. LC/GC

and associated detectors; LC/GC-MS/MS);

- Differential diagnosis, and effect of sample preparation (including matrix affects);
- Role of stable isotopes (as Internal analytical standards) and overcoming challenges in their application in sample preparation and data analysis/processing;
- Best practices, real laboratory/life scenarios and instrument basic maintenance and troubleshooting.

**Course Director:** Dr. Paul Chiew King Tiong  
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**Application procedure**

Nominations should be submitted on the standard IAEA application form for training courses. Completed forms should be endorsed by and returned through the established official channels. They must be received by the International Atomic Energy Agency, P.O. Box 100, A-1400, Vienna, not later than **20 January 2017 (attention, RAS5078 PMO and PMA)**. Nominations received after that date or applications which have not been routed through one of the aforementioned channels cannot be considered.

Advance nominations by facsimile (+43-1-26007) or e-mail (Official.Mail@iaea.org) are welcomed. The facsimile/e-mail should contain the following basic information about the candidate(s): name, age, sex, academic qualifications, present position including exact nature of duties carried out, proficiency in English, and full working address (including telephone and fax numbers and e-mail) to enable the IAEA to make preliminary evaluation of the candidates.

**BSITFII/ASITF:**

It is recommended that training course participants complete the courses Basic Security in the Field: Safety, Health and Welfare II (BSITF II) and Advanced Security in the Field (ASITF), prior to travelling to locations where UN security phases are in effect. The aim of these courses is to educate participants on how best to avoid or minimize potential dangers and threats, and to show what individuals can do if they find themselves in insecure situations.

The courses are available on the following UN websites by using Microsoft Internet Explorer:

- BSITF II: <http://dss.un.org/BSITF/>

- ASITF: <http://dss.un.org/ASITF/>

If you have difficulty using the websites, a CD-ROM can be obtained from your IAEA National Liaison Officer, or from IAEA.

Once the candidate has completed the courses and passed the accompanying exams, certificates will be generated automatically and must be printed for submission to the IAEA (either as an e-mail attachment or by fax). Copies of the certificates should be kept by the candidate for his/her records, as they are valid for a period of three years.

**Administrative and financial arrangements:**

Nominating Governments will be informed in due course of the names of the selected candidates and will at that time be given full details on the procedures to be followed with regard to administrative and financial matters.

During their attendance at the course, participants from countries eligible to receive technical assistance will be provided by the IAEA with a stipend

sufficient to cover the cost of their accommodation, food, and minor incidental expenses. The IAEA will also provide the participants with a round-trip air ticket, economy/excursion class, from their home countries to Singapore, Singapore and return. Shipment of accumulated course materials to the participants' home countries is not the responsibility of the IAEA.

The organizers of the course do not accept liability for the payment of any cost or compensation that may arise from damage to or loss of personal property, or from illness, injury, disability or death of a participant while he/she is travelling to and from or attending the course, and it is clearly understood that each Government, in nominating participants, undertakes responsibility for such coverage. Governments would be well advised to take out insurance against these risks