

33RD TRAINING PROGRAMME OF NITUB



TRAINING PROGRAMME ON THE USE, MAINTENANCE AND TROUBLE- SHOOTING OF ATOMIC ABSORPTION SPECTROPHOTOMETER (AAS)

03 - 09 June 2008

Organized by

**Network of Instrument Technical personnel and User
scientists of Bangladesh (NITUB)**

Venues

Department of Soil, Water and Environment and Department of
Geology, University of Dhaka

Programme Committee

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Background

To ensure proper use, maintenance and repair of scientific equipment, scientists and technical personnel of Bangladesh launched a network, "Network of Instrument Technical personnel and User scientists of Bangladesh (NITUB)" on 19 July 1994. NITUB is a voluntary, non-profit, non-political learned society dedicated to scientific education and research in Bangladesh.

To fulfill the aims and objectives of NITUB, a large number of training programmes on common laboratory equipment and specific groups of instruments such as AAS, HPLC, UV-VIS, IR and X-ray etc. have been organized. NITUB has already trained more than 380 scientists and technical personnel of Bangladesh through its training programmes. NITUB usually organizes 2/3 training programmes each year. Other than training programmes, NITUB is also conducting Instrument Repair Programme through which non-functioning scientific instruments are being repaired. So far, NITUB has conducted 32 training programmes on various groups of instruments and repaired more than 700 scientific equipment of different educational and research organizations of Bangladesh.

NITUB already has organized four training programmes on the use and maintenance of Atomic Absorption spectrophotometer (AAS) and the last one was organized in 2006. Recently many public and private organizations have installed AAS in their laboratories. Scientists were requesting NITUB to organize another training programme on AAS. The EC of NITUB, therefore, decided that the 33rd training programme of NITUB be on the use and maintenance of AAS.

Training Programme

The AAS training programme will include theoretical lectures and practical training sessions on operation, maintenance and troubleshooting of AAS. A tentative time-table for the training programme is given, however the final programme will be sent later to the selected participants. The training programme will be conducted by university professors, senior scientists and NITUB technical experts.

Participants

A maximum of 14 (Fourteen) participants will be selected from among the applications of scientists and technical personnel of public educational, research institutes and also from private organizations. Young staff member and postgraduate student having AAS facilities at his/her working place will have preference to participate in the training programme. **IFS grantees of South Asia region are welcome to participate in the programme.**

Registration

Applications to participate in the 33rd training programme on AAS should reach the General Secretary of NITUB on or **before 20 May 2008** in the proforma given in the circular. Application must be sent through proper channel **along with a training fee of Tk. 7500/- (taka seven thousand five hundred) in the form of a bank draft or pay order in the name of NITUB.** Training fee will include registration, teaching materials, lunch and tea. Selected participants will be informed by **27 May 2008** and the training fee of the applicants who could not be accommodated will be refunded.

Limited fund is available for IFS grantees of the South Asia region to participate in the programme.

Tentative Programme

03 June 2008(Tuesday)

- 0900-0930 - Registration of the Participants
0930-1100 - Inauguration of AAS Training Programme
1130-1130 - Tea
1130-1230 - *Lecture-1* Basic principle of AAS
1230-1400 - Lunch
1400-1700 - *Lab 1: Instrumentation of AAS*
1700- 1730 - Tea & Discussion

04 June 2008(Wednesday)

- 0900-1030 - *Lecture 2* Sample preparation and standard operating procedure in AAS
1030-1100 - Tea
1100-1300 - *Lab 2: Group A: Quantification of trace metals in water sample by flame technique*
Lab 3: Group B: Measurement & detection of Arsenic in water by HG-AAS technique
1300-1400 - Lunch
1400-1530 - *Lab 2 & 3; Continuation*
1530-1600 - Tea
1600-1700 - *Lab 2 & 3: Continuation*

05 June 2008(Thursday)

- 0900-1030 - *Lecture 3* Quality assurance/ Quality control in AAS analysis
1030-1100 - Tea
1100-1300 - *Lab 4; Group B: Quantification of trace metals in water sample by flame technique*
Lab 5; Group A: Measurement & detection of Arsenic in water by HG-AAS technique
1300-1400 - Lunch
1400-1530 - *Lab 4 & 5; Continuation*
1530-1600 - Tea
1600-1700 - *Lab 4 & 5; Continuation*

06 June 2008(Friday) - Free day

07 June 2008(Saturday)

- 0900-1030 - *Lecture 4* Graphite furnace technique in trace element analysis
1030-1100 - Tea
1100-1300 - *Lab 6; Group A: Analysis of arsenic in environmental & biological samples*
Lab 7; Group B: Analysis of essential elements in environmental & biological samples
1300-1400 - Lunch
1400-1530 - *Lab 6 & 7; Continuation*
1530-1600 - Tea
1600-1700 - *Lab 6 & 7; Continuation*

08 June 2008(Sunday)

- 0900-1030 - *Lecture 5* Hydride generation technique in trace elements analysis
1030-1100 - Tea
1100-1300 - *Lab 8; Group B: Analysis of arsenic in environmental & biological samples*
Lab 9; Group A: Analysis of essential elements in environmental & biological samples
1300-1400 - Lunch
1400-1530 - *Lab 6 & 7; Continuation*
1530-1600 - Tea
1600-1700 - *Lab 6 & 7; Continuation*

09 June 2008(Monday)

- 0900-1030 - *Lecture 6* Application of AAS in environmental & biological sample
1030-1100 - Tea
1100-1200 - *Lecture 7: Instrumental trouble-shooting & maintenance of AAS*
1200-1300 - Lab 8; Group A & B: Individual problem solving
1300-1400 - Lunch
1400-1530 - Open Discussion
1600-1700 - Closing ceremony and Certificate distribution
1530-1600 - Tea