

86th Training Programme of NITUB



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

30 December 2024 – 04 January 2025

Organized by

**Network of Instrument Technical personnel and
User scientists of Bangladesh (NITUB)
&
Atomic Energy Centre, Dhaka (AECD)**

Venue

**Analytical Chemistry Laboratory (ACL)
Chemistry Division, Atomic Energy Centre, Dhaka (AECD)
4, Kazi Nazrul Islam Avenue, Shahbag, Dhaka-1000, Bangladesh**

Programme Committee

Dr. Shamshad B. Quraishi Director Atomic Energy Centre Dhaka (AECD) Dhaka-1000	Convener
Dr. Tasrina Rabia Choudhury Principal Scientific Officer (PSO) Atomic Energy Centre Dhaka (AECD) Dhaka-1000	Member
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Background

Network of Instrument Technical personnel and User scientists of Bangladesh (NITUB) is a voluntary, non-profitable, non-political learned society dedicated to scientific education and research. NITUB is functioning since 1994 with the aim to improve the capability of scientists and technical personnel of Bangladesh to use, maintain and trouble-shoot scientific equipment.

NITUB regularly conducts training programmes on the use, maintenance and trouble-shooting of specific groups of instruments such as AAS, GC, HPLC, UV-VIS&IR, X-ray, NMR etc. NITUB also conducts training programmes on Common Laboratory Equipment and Common Medical Instruments. So far, NITUB has conducted 85 training programmes through which more than 1297 scientists and technical personnel have been trained. NITUB conducts a very important programme, Instrument Repair Programme, throughout the year since 1996 through which more than 2166 non-functioning scientific instruments of different public and private organizations of Bangladesh have already been repaired.

The 68th training programme on the use, maintenance, trouble-shooting and application of Atomic Absorption Spectroscopy (AAS) of NITUB was also held at Bangladesh Atomic Energy Centre, Dhaka (AECD) 4, Kazi Nazrul Islam Avenue, Shahbag, Dhaka-1000, Bangladesh on 21 – 26 July 2018.

NITUB plans to organize another training programme on the use, maintenance, trouble-shooting and application of Atomic Absorption Spectroscopy (AAS). Young faculties / scientists/ graduate students of are welcome to participate in this AAS training programme. The venue of the 86th training programme of NITUB is the Analytical Chemistry Laboratory (ACL), Chemistry Division, AECD. ACL is one of the ten accredited (ISO/IEC 17025:2017) laboratories in Bangladesh.

Training Programme

The 86th training programme of NITUB will consist of theoretical lectures and practical sessions on operation, analytical applications, maintenance and trouble-shooting of AAS. A draft schedule of the training programme is given in this brochure; however, the final programme will be sent later to all selected participants. The training programme will be conducted by university professors, senior scientists and technical experts.

Participants

A maximum of 20 (Twenty) participants will be selected from among the applications. Interested regional and international applicants are welcome to attend the training programme. Applicant having AAS Spectroscopy at his/her working place will get preference to participate in the training.

Registration

Applications to participate in the 86th training programme on AAS should reach the General Secretary of NITUB on or **before 26 December 2024** in the prescribed form given in the circular. Application must be sent through proper channel **along with a training fee of Tk. 10,000/- (taka ten thousand) in the form of a bank draft, pay order or online payment in the NITUB account (Name of the account, NITUB, Account No. 4405734255099, Sonali Bank PLC, Dhaka University Corporate Branch, Dhaka-1000)**. Training fee will include registration, instruction materials, lunch and tea.

Selected participants will be informed (i.e. soft copies of acceptance letters) on or before **28 December 2024** and the training fee of the applicants who could not be accommodated will be refunded within a week.

Tentative Programme

30 December 2024 (Monday)

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

31 December 2024 (Tuesday)

- 0930-1030 - **Lecture 2:** Test, Method and Validation according to International guideline.
- 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*

01 January 2025 (Wednesday)

- 0930-1030 - **Lecture 3:** Arsenic / Mercury determination in environmental samples using AAS
- 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*

02 January 2025 (Thursday)

- 0930-1030 - **Lecture 4:** Quality Assurance/ Quality Control in AAS analysis
- 1030-1100 - Tea
- 1100-1300 - *Lab 6; Group A: Analysis of environmental & biological samples*
Lab 7; Group B: Analysis of essential elements in food
- 1300-1400 - Lunch
- 1400-1530 - *Lab 6 & 7; Continuation*
- 1530-1600 - Tea
- 1600-1700 - *Lab 6 & 7; Continuation*

03 January 2025 (Friday)

- 0930-1030 - **Lecture 5:** Quantifying Uncertainty in Measurement.
- 1030-1100 - Tea
- 1100-1300 - *Lab 8; Group B: Analysis of environmental & biological samples*
Lab 9; Group A: Analysis of essential elements in food
- 1300-1400 - Lunch
- 1400-1530 - *Lab 8 & 9; Continuation*
- 1530-1600 - Tea
- 1600-1700 - *Lab 8 & 9; Continuation*

04 January 2025 (Saturday)

- 0930-1030 - **Lecture 6:** Trouble-shooting in application of AAS analysis
- 1030-1100 - Tea
- 1100-1300 - *Lab 10; Group A: Analysis of soil samples*
Lab 11; Group B: Analysis of geological samples
- 1300-1400 - Lunch
- 1400-1530 - Open Discussion
- 1600-1700 - Closing ceremony and Certificate distribution
- 1700 - Tea



86th Training Programme of NITUB
On the use, maintenance,
Trouble-shooting and Application of Atomic Absorption
Spectroscopy (AAS)
30 December 2024 – 04 January 2025
APPLICATION FORM

Name of the applicant (Block Letter)	
Date of birth	
Academic qualification	
Designation	
Institute/Organization with address	
Phone / cell phone number	
E-mail Address	
Any previous training If yes, please specify	
Date:	Signature of the applicant

Recommendation from the Head of Institution / Organization

Date:	Signature
	Name & Seal