

# 81st TRAINING PROGRAMME OF NITUB



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

**24, 26–30 December 2022**

## *Organized by*

**Network of Instrument Technical personnel and User scientists of  
Bangladesh (NITUB).  
&  
Bangladesh Council of Scientific and Industrial Research (BCSIR).**

## *Venue*

**Institute of National Analytical Research and Service (INARS),  
BCSIR.  
Dr. Qudrat-E-Khuda Road, Dhanmondi, Dhaka-1205.**

## *Programme Committee*

Shamim Ahmed Director INARS, BCSIR, Dhaka	Convener
Md. Ahedul Akbor Principal Scientific Officer (PSO) INARS, BCSIR, Dhaka	Member
Md. Abu Bakar Siddique Senior Scientific Officer (SSO) INARS, BCSIR, Dhaka	Member
Md. Tanvir Uddin Instrument Engineer, NITUB, Dhaka	Member Secretary

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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 80 training programmes through which more than 1130 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 1800 non-functioning scientific instruments of different public and private organizations of Bangladesh have already been repaired.

NITUB has been conducting its activities hands-on so that scientists and technical personnel get direct exposure to instrumentation which help them to use their instruments more effectively. However, due to COVID-19 pandemic NITUB had to arrange its activities virtually for almost last two years. As COVID -19 pandemic situation has improved significantly in Bangladesh, the EC of NITUB has decided to start NITUB programmes again off-line i.e. hands-on programmes. The 81<sup>st</sup> training programme of NITUB would be on the use, maintenance, trouble-shooting and application of Atomic Absorption Spectroscopy (AAS).

## *Training Programme*

The 81<sup>st</sup> 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 of young faculty members, graduate students, scientists and technical personnel of public and private educational institutes, pharmaceuticals and research organizations. 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 81<sup>st</sup> training programme on AAS should reach the General Secretary of NITUB on or **before 20 December 2022** 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 or pay order in the name of “NITUB” (Sonali Bank Limited, Dhaka University Branch, Account No. 4405734255099)**. Training fee will include registration, teaching materials, lunch and tea.

Selected participants will be informed (i.e. soft copies of acceptance letters) on or before **22 December 2022** and the training fee of the applicants who could not be accommodated will be refunded within a week.

## Tentative Programme

### 24 December 2022 (Saturday)

- 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

### 25 December 2022 – Holyday (Christmas).

### 26 December 2022 (Monday)

- 0930-1030 - **Lecture 2:** Sample preparation & 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*

### 27 December 2022 (Tuesday)

- 0930-1030 - **Lecture 3:** Arsenic determination in environmental samples in 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*

### 28 December 2022 (Wednesday)

- 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*

### 29 December 2022 (Thursday)

- 0930-1030 - **Lecture 5:** Instrumental trouble-shooting & maintenance of AAS
- 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*

### 30 December 2022 (Friday)

- 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



**81<sup>st</sup> Training Programme of NITUB**  
**On the use, maintenance,**  
**Trouble-shooting and Application of Atomic Absorption**  
**Spectroscopy (AAS)**  
**24, 26-30 December 2022**  
**APPLICATION FORM**

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

**Recommendation from the Head of Institution / Organization**

<b>Date:</b>	<b>Signature</b>
	<b>Name &amp; Seal</b>