

Stores and Purchase

File No. PUR/IICT/4953/83/26-27/EQPT

Dtd-09/06/2026

Minutes of T&PC for approval of modifications of technical specifications post pre bid meeting

This office conducted a **PRE BID MEETING** on **02/06/2026** for the procurement of **CHNSO Analyzer** with the participation of members from **Technical Sub Committee(TPC)** and **Technical and Purchase Committee (T&PC)**.

The indenter along with other committee members, addressed the queries raised by **M/s Elementar India Pvt Ltd** who participated offline.

The **Minutes of the pre bid meeting**, incorporating the suggested modifications provided by the Indenting Officer and duly approved by the committee members, is attached herewith for ready reference.

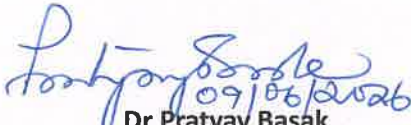
Taking into consideration of above recommendation given by **I/O and TSC**, **TPC** recommends uploading the revised technical specification.



COSP/SPO 09/06/26


COFA/FAO 9/6/26

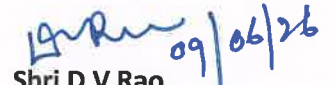

COA/AO 09/06



IO/PL/CHAIR


Dr Pratyay Basak
(Member)


Dr Sreepriya V
(Member)


Dr Jithender Reddy
(Member)


Shri D V Rao
(Member)


Dr N Lingajiah
(Chairperson)

Minutes of Pre-Bid Conference (PBC) held on 02/06/2026 for proposed procurement of "Supply, installation and commissioning of "CHNSO Analyzer"

Chairpersons / Members of the Technical Sub Committee (TSC) present during PBC including domain experts present during PBC:-

1. Dr. N.Lingaiah, Chairman
2. Dr.PratyayBasak, Member
3. Dr.G.Jithender Reddy, Member
4. Sri. D. Venkateswara Rao, Member
5. Dr.SreepriyaVedantam, Member
6. IO Dr. A. Gangagni Rao

Representatives of the following firm attended the PBC:

1. M/s Elementar India Pvt Ltd.,

The following points were discussed during the PBC:

Query raised by M/s. Elementar India Pvt Ltd., , and response of CSIR-IICT:

Query-1: No query
Response:

Query raised by Chairperson Dr N Lingaiah, and response of firm's representative:

Query-1: Regarding detectors Chairperson raised whether both TCD and IR detectors are necessary for CHNS analysis

Response: for healthy competition from different suppliers both the detectors are mentioned in specifications. As per ASTM D 4239 both TCD and IR detectors are required.

Query-2: As per specifications 2 sets are high purity of helium or argon as carrier gas was mentioned, chairperson suggested to remove argon gas and mention only helium

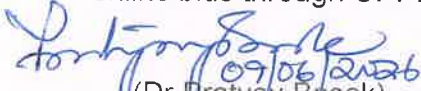
Response: Firm representative accepted the suggestion.

Points clarified by CSIR-IICT Team during PBC:

The representatives of the participating firm/further informed that they do not have any issue or suggestion with respect to other points of tendered specifications and



related requirements given in the tender document. Participating bidders have been informed that points raised by them during PBC will be examined by CSIR-IICT's **Technical Sub Committee (TSC)/Technical team** constituted for the purpose of procurement of said equipment and **post PBC changes** in tendered specifications and requirements to be agreed after due consideration of the same by TSC, **if any**, will be uploaded in **CPPP** as part of **revised/amended tendered specifications** along with CSIR-IICT website www.iict.res.in on or before _____. All bidders are requested kindly to take a note of the changes, if any, in tendered specifications subsequent to **PBC** held today, i.e. 02/06/2026 before they start submitting their online bids through CPPP.

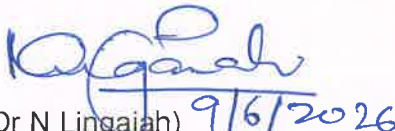

(Dr. Pratyay Basak)
Member


(Dr. Jithender Reddy)
Member


(Dr. Sreepriya Vedantam)
Member


(Sri. D. Venkateswara Rao)
Member


(Dr. A. Gangagni Rao)
IO


(Dr. N. Lingaiah)
Chairperson



The following changes has been made in the tendered specification subsequent to PBC held on 02/06/2026

S. No.	Existing Specifications	Revised/Amended Specifications
1	In S.No 6 carrier gas was specified as Helium or Argon	It should be noted as Helium

All the other tender terms remains unchanged. Bidders may please submit their bids accordingly.

Baibajoo

REVISED TECHNICAL SPECIFICATIONS

Specifications for Macro CHNS and O Analyser for Biomass & Biofuel

Fully automatic Computer controlled macro sample analyser for measurement of C, H, N, S and O. C H N S analysis should be possible by analysing single sample.

1. Furnace Alignment:

Dual-furnace system with high-temperature combustion furnace (1200 °C or more) for CHNS & O. The furnace should be automatically aligned with the combustion tube and equipped with temperature control and safety protection.

2. Measurement Principle

Method: High-temperature combustion followed by gas separation and quantification using carrier gas flow and chromatographic separation.

Detector: High-sensitivity Thermal Conductivity Detector (TCD)/Infra red IR for simultaneous CHNS analysis and TCD detector for oxygen analysis

Standards Compliance: Should comply with recognized international standards such as:

ASTM D5373 / ASTM D5291 – Carbon, Hydrogen, Nitrogen in solid fuels

ASTM D4239 – Sulphur determination; ASTM D5622 – Oxygen determination

3. Measurement Range & Accuracy

Carbon 0.1–100 mg or better

Hydrogen 0.1–15 mg or better

Nitrogen 0.1–100 mg or better

Sulphur 0.1–15 mg or better

Oxygen 0.1– 5 mg or better

Detection Limit: $\leq 0.005\%$ (50 ppm) or better for sulphur and other elements.

Accuracy: Relative Standard Deviation (RSD)/SD $\leq 0.2\%$ or better with high reproducibility for biomass and biofuel samples.

4. Sample Requirements

Sample Type: Solid, liquid, or semi-solid samples including biomass, biochar, coal, agricultural residues, biofuels, and organic materials.

Sample Weight: 50–1000 mg biomass sample with 70-80% carbon content.

5. Instrument Features

Auto Loader: Automatic sample loader with at least 50 sample positions for continuous unattended operation.

6. Calibration

Automatic and manual calibration using certified reference materials (CRMs) with multi-point calibration capability.

Gas Supply: 2 sets of High-purity Helium (carrier gas) and Oxygen (combustion gas) which can be refilled along with 2 stage regulators.

8. Power & Environmental Conditions

Power Supply: 220 V AC, 50/60 Hz, power consumption 1.5 - 5 kW.

Operating Temperature: 15–35 °C, relative humidity up to 80% (non-condensing).

Analysis Time: Typical <15 minutes per sample.

9. PC for Data Storage and Processing

Software: Windows 11–based analysis software capable for Data acquisition and processing, Elemental calculation, Calibration management, Report generation.

Computer system with: Windows 11 OS, MS Office 2021 or latest (lifetime license), Intel i5 13th Gen or latest processor, 16 GB RAM (expandable to 32 GB), 512 GB SSD + 1 TB HDD, 22" monitor or larger, Mouse and keyboard, Built-in Ethernet and Wi-Fi 6, Multiple USB ports, Laser printer

10. Accessories

Semi microbalance: Integrated or external analytical microbalance with 0.01 mg precision.

Capacity: 120 g or higher.

Additional accessories: Consumables: Consumables for minimum 2000 samples must be supplied for analysis in C H N S and 2000 for Oxygen along with machine

11. Warranty

Warranty Period: Minimum 2 years comprehensive warranty covering parts, and software support.

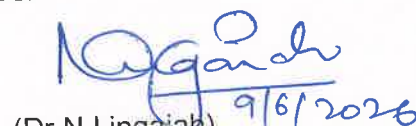

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