



सीएसआईआर-केंद्रीय खाद्य प्रौद्योगिक अनुसंधान संस्थान  
CSIR- CENTRAL FOOD TECHNOLOGICAL RESEARCH INSTITUTE  
मैसूरु / MYSURU-570 020, भारत / INDIA

(Constituent Laboratory of CSIR, New Delhi (Ministry of Science & Technology)  
An ISO 9001:2008, ISO 14001:2004 & ISO 17025:2005, NABL Accredited Laboratory

**Corrigendum: Tender for Biocompatible UHPLC with Photo Diode Array detector (PDA or DAD), Refractive Index Detector (RID) and Fluorescence Detector for Qualitative & Quantitative analysis of food samples**

**Corrigendum Title: Revised Technical Specifications based on PBC**

**Tender Ref: CFTRI/52357/24-25 Date: 20-12-2024**

**Tender ID: 2024\_CSIR\_220585\_1**

The revised final specifications based on the deliberations in Pre Bid Conference held on 06-01-2025 @ 12. 00A.M is uploaded herewith.

All the prospective bidders are requested to take cognizance of the revised specifications and submit their bids accordingly on or before 03.00 p.m. on 27-01-2025.

**All other tender terms and conditions of tender remain unaltered.**

**Controller of Stores & Purchase  
CSIR-CFTRI, Mysore  
Dt. 16-01-2025**

# Revised Technical Specification based on PBC

Biocompatible UHPLC with Photo Diode Array detector (PDA or DAD), Refractive Index Detector (RID) and Fluorescence Detector for Qualitative & Quantitative analysis of food samples

## (1) Binary Gradient Pump

- (1a) Flow Rate: 0.001 to 2.0 mL/min or better
- (1b) Maximum Operating Pressure:  $\geq 18000$  psi or better for entire system
- (1c) Flow Accuracy:  $\pm 1$  % or better
- (1d) Flow Precision:  $\leq 0.075$  % RSD or better
- (1e) Composition range: 0 to 100 %
- (1f) Composition precision:  $\leq 0.5$  % RSD
- (1g) Gradient profile: Linear
- (1h) Solvent Channels: 2 or more
- (1i) Inbuilt Degasser Channels: 2 or more.

## (2) Auto Sampler with Cooling Facility

- (2a) Sample Capacity: Autosampler should support for multiple sample vial and tray formats  
Multi Sample racks,  $\geq 96$ , 1-1.5/1.5-2 mL fused recovery vials/micro vials, 200 nos., 96 well plates – 10nos.
- (2b) Injection Volume Range: 0.1  $\mu$ L to 20  $\mu$ L, with precision of  $\pm 1$  % or better
- (2c) Cooling Temperature Range: 4 °C to 40 °C or better
- (2d) Carryover: Minimal,  $\leq 0.0025\%$  or better

## (3) Column Oven

- (3a) Temperature range: 10 to 85°C or better
- (3b) Temperature precision:  $\pm 0.1$ °C or better
- (3c) No. of columns accommodated:  $\geq 2$  or more
- (3d) Safety feature: Leak sensor etc.

#### **(4) Photo Diode Array Detector**

- (4a) Wavelength Range: 190 nm to 800 nm or better
- (4b) Wavelength Accuracy:  $\pm 1$  nm or better
- (4c) Spectral Resolution or similar measure:  $\leq 1.4$  nm or better
- (4d) PDA Elements:  $\geq 512$  diodes or more
- (4e) Slit width or similar measure:  $\leq 1.4$  nm or better
- (4f) Data Rate:  $\geq 80$  Hz or more
- (4g) Linearity:  $\geq 2.0$  AU (Absorbance Units) or better
- (4h) Drift:  $< 0.001$  AU per hour or better
- (4i) Flow Cell: Biocompatible

#### **(5) Refractive Index Detector (RID)**

- (5a) Measurement Range: 1 to 1.75 RIU (Refractive Index Units)
- (5b) Temperature Control: 30 °C to 55 °C
- (5c) Noise Level:  $\leq 2.5 \times 10^{-9}$  RIU
- (5d) Drift:  $\leq 2 \times 10^{-7}$  RIU/h or better

#### **(6) Fluorescence Detector (FLD)**

- (6a) Measurement Range: Excitation 200 to 800 nm, and Emission 220 to 800 nm.
- (6b) Wavelength Accuracy:  $\pm 3$  nm or better
- (6c) Wavelength Repeatability:  $\pm 0.2$  nm or better
- (6d) Sensitivity (S/N):  $\geq 500$  for Raman
- (6e) Cell: Biocompatible

#### **(7) Software for Data Acquisition, Analysis and Storage**

- (7a) The Software to control all modules of UHPLC, qualitative & quantitative processing, calibration, report creation, etc.
- (7b) The software must come with System Suitability facility for automatic checking Detector noise and drift, Resolution, Signal to Noise ratio, Peak Tailing, Peak Purity, Plate count etc.

(7c) CFR Part 11 compliance for data integrity in regulated environments

(7d) GLP compliant

**(8) PC & Printer**

(8a) A Branded Computer (HP/Dell/Lenovo) with 14<sup>th</sup> Generation i7 14700 or better, 32 GB DDR5 RAM, 512 GB SSD, 4 TB External SATA HDD, Licensed MS Windows 10 OS/Windows 11 OS, additional LAN card, 27-inch FHD LED Monitor

(8b) A branded MFP Monochrome Duplex Laser Printer

**(9) UHPLC Columns:**

**The condition:** The vendor is required to supply their own manufactured UHPLC columns, with a particle size of less than 2  $\mu\text{m}$  and an inner diameter of 2.1 mm, incorporating advanced technological innovations and specialized stationary phase chemistries suitable for analyzing a broad range of food components. These columns should be capable of withstanding pressure 18,000 psi or higher and delivering optimal performance for the analysis of food samples, including carbohydrates, polyphenols, lipids, pesticides, peptides, proteins, vitamins, and other relevant compounds. The columns should be designed to provide high resolution, sensitivity, and reproducibility for complex food matrices.

(9a) Reverse Phase Column C-18 10 cm, 2.1 mm, < 2 $\mu$  (2 No.)

(9b) Reverse Phase Column C-18 5 cm, 2.1 mm, < 2 $\mu$  (2 No.)

(9c) RP-amide Column 5 cm, 2.1 mm, < 2 $\mu$  (2 No.)

(9d) HILIC Column - 5 cm, 2.1 mm, < 2 $\mu$  (2 No.)

(9e) Suitable Size Exclusion Chromatography Column (1 No.)

**(10) Warranty**

(10a) Minimum one year from the date of satisfactory installation

**(11) AMC**

(11a) To quote for five years' post-warranty AMC (Labor only)

## Eligibility Criteria and General Compliance

1. A point wise compliance statement as per the specifications must be submitted along with the offer.
2. Original Equipment Manufacturers (OEM), its subsidiary, and authorized dealers in India can quote for this instrument. If the Authorised Vendor of the OEM is quoting, then an official letter on the Letter Head to be attached from the OEM indicating the Tender Number that the OEM will be completely responsible for the Supply and Service/Repair, etc., during the warranty and post-warranty for a period of 10 years and provide the required spares for minimum of 10 years, from the date of satisfactory installation.
3. The quoted model product catalogues attached along with the tender bid should be available in the Global Public Platform (example in their official website or any other authentic source) and if CSIR-CFTRI requires verifying with the OEM, the complete contact details of the official, who is authorized by the OEM, to be provided, along with their Mobile/Telephone Number. E-Mail ID, Postal Address, etc., in the Technical Bid.
4. The bidder should provide the user list in India, along with the complete contact details including E-Mail ID, Mobile/Telephone No., etc. and the bidder should have installed minimum Fifteen HPLC instrument in any Government Research Organizations such as CSIR, ICMR, ICAR, IISc, IITs, etc. in India.
5. The supplier must submit OEM technical brochures and proper application notes/manuals adequately explaining and confirming the availability of the features in the model of the equipment being quoted.
6. All future software upgrades done by OEM, and also consequent to MS Windows OS upgrades, to be provided free-of-cost, during the life-time of the instrument.
7. All consumables for trouble free operation should be supplied including tubings, end-fittings, sample vials, etc.
8. Perform IQ/OQ tests for all the modules and provide the certificates with suitable traceable standards.
9. On-site training to be provided for operation, maintenance, calibration, application software, method development, data acquisition, post run analysis, qualitative and quantitative analysis, report generation, printing the results and also analyze some food samples at the time of installation.
10. To provide soft copy of all research applications in the area of food science and technology only developed by the OEM.