



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 Quaternary Analytical HPLC with PDA, FLD and RID for Qualitative & Quantitative analysis of food samples**

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

**Tender Ref: CFTRI/52356/24-25 Date: 19-12-2024**

**Tender ID: 2024\_CSIR\_220393\_1**

The revised final specifications based on the deliberations in Pre Bid Conference held on 06-01-2025 @ 10. 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

## Specifications for Quaternary Analytical HPLC with PDA, FLD and RID for Qualitative & Quantitative analysis of food samples

### (1) Quaternary Pump

- (1a) Flow Rate: 0.001 to 10 mL/min
- (1b) Maximum Operating Pressure:  $\geq 7000$  psi
- (1c) Flow Accuracy:  $\pm 1$  % or better
- (1d) Flow Precision:  $\leq 0.07$  % RSD at 1 mL/min
- (1e) Composition range: 0 to 100 %
- (1f) Composition precision:  $\leq 0.2$  % RSD
- (1g) Solvent Channels: 4
- (1h) Gradient Formation: Linear

### (2) Degasser

- (2a) Channels: 4, vacuum degasser
- (2b) Flow Rate Compatibility: 0.1 to 10 mL/min per channel

### (3) Auto Sampler with Cooling Facility

- (3a) Sample Capacity: Multi Sample racks,  $\geq 96$  capacity, 1-1.5 mL/1.5-2ml fused recovery vials/micro vials, 200 nos., 96 well plates - 10nos.
- (3b) Injection Volume Range: 0.1  $\mu$ L to 100  $\mu$ L, with precision of  $\pm 1$  %
- (3c) Cooling Temperature Range: 4 °C to 40 °C
- (3d) Carryover:  $\leq 0.0025$ % with caffeine
- (3e) Injection mechanism: Flow through needle(FTN) or similar

### (4) Column Oven

- (4a) Temperature range: 10 to 85°C
- (4b) Temperature precision:  $\pm 0.1$ °C
- (4c) No. of columns accommodated:  $\geq 2$

(4d) Design: Forced air circulation/Peltier

(4e) Safety feature: Leak sensor

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

(5a) Wavelength Range: 190 nm to 800 nm

(5b) Wavelength Accuracy:  $\pm 1$  nm

(5c) Spectral Resolution or similar measure:  $\leq 1.4$  nm

(5d) PDA Elements:  $\geq 512$  diodes

(5e) Slit width: 1.2 nm

(5f) Data Rate:  $\geq 80$  Hz

(5g) Linearity:  $\geq 2.0$  AU (Absorbance Units)

(5h) Drift:  $< 0.001$  au per hour

(5i) Peak purity: Automatic

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

(6a) Excitation wavelength range: 200-800 nm.

(6b) Emission wavelength range: 220-800 nm.

(6c) Data Acquisition:  $\geq 20$  Hz

(6d) Sensitivity or similar measure:  $\geq 500$  for Raman

### **(7) Refractive Index Detector**

(7a) Measurement Range: 1 to 1.75 RIU (Refractive Index Units)

(7b) Temperature Control: 30 °C to 55 °C

(7c) Noise Level:  $\leq 2.5 \times 10^{-9}$  RIU

(7d) Drift:  $\leq 2 \times 10^{-7}$  RIU/hr

(7e) Flow Rate Compatibility: Up to  $\geq 5$  mL/min

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

(8a) Comprehensive software package with features for gradient control, detector integration, peak integration, calibration and report generation

(8b) CFR Part 11 compliance for data integrity in regulated environments

(8c) GLP compliant

#### **(9) PC & Printer**

(9a) A Branded Computer (HP/Dell/Lenovo/Acer/Asus or equivalent) with 14<sup>th</sup> Generation i7 14700, 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

(9b) HP/Brother or equivalent MFP Monochrome Duplex Laser Printer

#### **(10) Warranty**

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

#### **(11) AMC**

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

#### **(12) Analytical Columns**

(12a) Supelco 504971 Discovery<sup>®</sup> C18 HPLC Column, 5 µm particle size, L × I.D. 25 cm × 4.6 mm (1 No.)

(12b) SUPELCOSIL™ 58338 LC-NH<sub>2</sub> HPLC Column, 5 µm particle size, L × I.D. 25 cm × 4.6 mm (1 No.)

(12c) SUPELCOGEL™ 59320-U C610H, 6% Crosslinked HPLC Column, 9 µm particle size, L × I.D. 30 cm × 7.8 mm (1 No.) with SUPELCOGEL™ 59319 H Guard Column, 9 µm particle size, L × I.D. 5 cm × 4.6 mm (1 no.)

(12d) Waters Ultrahydrogel HPLC Column WAT 011525 for polysaccharides 25cm, 7.8mm id, 6µm (1 No.) with Waters Ultrahydrogel Guard Column WAT 011565 6mm X 40mm, 6µm (1 No.).

#### **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 to verify 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 5 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.