



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)

