

## 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 Ref: CFTRI/52364/25-26 Date: 21-10-2025

Tender ID: 2025\_CSIR\_252954\_1

The revised and final specifications for supply of Color Measuring Instrument based on the deliberations in Pre Bid Conference held on 03-11-2025 @ 02. 00P.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 24-11-2025.

All other terms and conditions of tender enquiry document remain unaltered.

Controller of Stores & Purchase

CSIR-CFTRI, Mysore

Dt. 07-11-2025

## Specifications for Color measuring system

- 1. Dual Beam Spectrophotometer for color measurement of food products in both Reflectance as well as in Transmittance mode complete with all accessories like Quartz materials, viz. sample cup and Cells for measurement of food samples like solids, Powder, paste, slurries, liquids(Transparent), Translucent sample, Films, etc.
- 2. Should provide CIE/BIS/ASTM Specified wavelength range to 360 to 740nm
- 3. Should provide Calibration standards certified traceable to NIST USA/ NPL UK/ NPL India/NIST Japan
- 4. Should provide a calibrated diagnostic green tile for ISO validation
- 5. Should provide a large Transmission and Reflectance shelf capable of reading up to 50 mm cells
- 6. Reflectance with variable apertures Top port
- 7. Wavelength Resolution  $\leq 10 \text{ nm}$
- 8. Effective Bandwidth: ≤ 10 nm
- 9. Sphere 152 mm with high performance Spectraflect coating
- 10. Photometric Resolution: 0.01 %
- 11. Geometry: d/8 deg reflectance and d/0 regular transmission
- 12. Light source: pulsed Xenon lamp filtered to approximate D65
- 13. Automatic Specular included or Excluded
- 14. Viewing aperture in Reflectance mode [Specular Component Included (SCI) & Specular Component Excluded (SCE)]
- 15. Large area view: 19 mm to 30 mm measurement area and 25 mm to 36 mm illumination area
- 16. Small area view: 3 mm to 6mm measurement area and 6 mm to 9.5 mm illumination area
- 17. Measurement time: < 5 sec
- 18. Quality Control Software to interface with computer
- 19. Inter Instrument Agreement: within Less than or equal to 0.15 ΔE\* CIE L\*a\*b\* on BCRA Tile
- 20. Repeatability: Less than or equal to 0.04 ΔE\* CIE L\*a\*b\* on white tile
- 21. Color Space
- 22. CIE L\*a\*b\*, CIE L\*C\*h, Hunter Lab, CIE Yxy, CIE XYZ, and color differences in these spaces, CIE Whiteness Index, Yellowness Index Gardner scale, Haze/ APHA Scale.
- 23. Illumination: A. C. D65, etc.
- 24. Standard Observer: 2°, 10°, etc.
- 25. Haze measurement in Transmittance mode
- 26. Spectral data at all wavelength 360-740nm at intervals of 10 nm (In Software)
- 27. Computer specifications: Branded Computer HP/Dell/Lenovo/Samsung/Asus/Acer or equivalent. I7 processor, 14th generation, 14700, 32 GB DDR 5 RAM, 1TB SSD MS Windows 11 OS, Latest MS Office 21-inch LED Full HD Monitor
- 28. HP/Brother/Samsung MFP LaserJet Printer with duplex b/w Printer with photocopying and scanning facility

## Eligibility Criteria and General Compliance

- 1. A point wise compliance statement as per the specifications must be submitted along with the offer. All eligibility conditions should be verifiable.
- 2. Original Equipment Manufacturers (OEM) or its subsidiary in India, or authorized dealers in India for OEM can quote for this instrument. If the Authorized Vendor of the OEM is quoting, then an official letter on the Letter Head to be attached from the OEM/Authorized

Distributor of OEM, 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. Warranty: Minimum comprehensive for one year from the date of satisfactory installation.

- 4. 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.
- 5. 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 Five Spectrophotometer for Color Measuring in any Government Research Organizations such as CSIR, ICMR, ICAR, IISc, DRDO, IITs, BARC etc. in India.
- 6. 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.
- 7. All future software upgrades done by OEM consequent to MS Windows OS upgrades, to be provided free-of-cost, during the life-time of the instrument.
- 8. Number of service engineer(s) employed by them who is/are competent to service the equipment being quoted with their locations in India.
- 9. Service to be provided as and when the request is logged
- 10. All consumables for trouble free operation should be supplied including Calibrated tile, Sample cup (cuvette), Port plates (of various size), etc.
- 11. 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.
- 12. To provide relevant published application notes and methods for food analysis by the OEM.