QUOTATION INVITATION NOTICE

Department of Chemistry, University of Kerala, Kariavattom, Thiruvananthapuram-695581

Email: chem12uniker@gmail.com , chemistry@keralauniversity.ac.in

No. DC/ST/Eq/11/2026-27 dated 25/11/2026

Sealed tenders are invited from the authorized dealers for the purchase of **Class II Type A2 Biosafety Cabinet** for the **International Inter University Centre for Sensing and Imaging(IIUCIS)**, Department of Chemistry, University of Kerala, Kariavattom, Thiruvananthapuram-695581

Last date of submission of Quotation-10/12/2026

Technical Specification of Biosafety Cabinet

The Class II Type A2 Biosafety Cabinet is required for the safe handling, preparation, and loading of biological samples and assay components used in microfluidic device fabrication and testing. This should include enzymes, antibodies, antigens, assay reagents, and biological specimens. It should provide a sterile, HEPA/ULPA-filtered working environment while protecting laboratory personnel from exposure to potentially hazardous biological materials and preventing sample contamination. It should primarily support the preparation and assembly of biological microfluidic assays under controlled biosafety conditions.

Technical Specifications

Sl. No.	Parameter	Specification
Dimension and construction		
1.	Cabinet class	Class II
2.	Subtype	Type A2
3.	Vertical Laminar Flow	Yes
4.	Installation	Floor-mounted
5.	Overall Dimension (W × D × H)	600–1400 mm x 450–900 mm x 900–1500 mm
6.	Inner Chamber Dimension	600 -1,200 × 450 -750 × 450 -750 mm minimum ±5%

7.	Worktop height	750 mm ± 50mm
8.	Outer body	Precoated sheet, SS304 or SS316L Stainless steel or better Powder- coated steel
9.	Internal body	Precoated sheet, SS304 or SS316L Stainless steel or better Corrosion – resistant SS304/SS316L or better
10.	Work surface Area	Removable, Single – piece SS 304 stainless steel, segmented SS 304 stainless steel, single -piece SS 316L stainless steel, segmented SSS316L stainless steel or higher Two part, perforated front and non perforated working zone
11.	Front sash	Tempered/laminated transparent UV-protected safety glass Polycarbonate/toughened glass
12.	Sash movement	Vertical sliding, counter balanced UV-protected front window
13.	Spill management	Removable tray drain pan
14.	Support stand	Floor mounted Height adjustable fixed stand
15.	Vacuum Service Valve	Should have a service valve for vacuum
Airflow and filtration performance		
16.	Vertical laminar flow	Required
17.	Inflow velocity	0.51m/s ± 0.03m/s 80 – 110 ± 5fpm
18.	Downflow velocity	0.25 m/s and 0.50 m/s (approx. **50 to 100 fpm**)
19.	Air distribution	70% recirculation and 30% exhaust
20.	Calibration of air flow	Should have option for easily calibration of airflow to different room conditions
21.	Supply air filtration	**HEPA filter** H14 grade or **ULPA filter**
22.	Exhaust filtration &	HEPA filter (H14 grade) or equivalent ULPA filter that

	Filter efficiency & classification	traps **99.99% to 99.999%** of particles down to 0.5 microns or lower**.**
23.	Pre-filter	Down to approximately 10 microns
24.	Air pressurization	Statically and dynamically balanced
25.	Cleanliness	Class 100 clean air Class 5 or better
26.	Plenum	Negative-pressure plenums
27.	Ducting	Thimble connection (O1)
28.	BSL suitability	BSL-2
Control system and safety features		
29.	Controller	Microprocessor- controlled circuitry or motor controller
30.	Regulator	Should have motor voltage regulator
31.	Digital display	LCD/touchscreen of 10inch or better
32.	Real-time display	• In/down flow velocity • Airflow volume • Static pressure • Negative pressure, accumulative running time of fan and UV lamp • Left lifetime of filter
33.	Pressure monitoring for inflow and downflow	Differential pressure sensor or pressure gauge
34.	Automatic airflow compensation	Yes
35.	Dual DC blowers	Required for inflow and exhaust
36.	Audible and visual alarms	• Filter replacement warning • Pressure drop • For low inflow and down flow • Door opening and other critical parameters
37.	Sash position monitoring	• Indicator/buzzer if the window is opened above the recommended level
38.	Filter life monitoring	Filter life indicator or Remaining filter life and replacement warning
39.	Lamp	• Should have fluorescent lamp and UV lamp • Should be placed in such a way that the light should not be in direct view of user.
40.	UV-sash interlock	Should have interlocking between UV and sash opening for safety.

41.	UV timer	UV Light ON time
42.	Electrical requirement	220 - 240V AC power supply operating at 50/60 Hz.
43.	Electrical sockets	Should have Switches & electrical sockets outlets for 5amp power unit Should have power switches for exterior mounted LED/Fluorescent light and/or UV lights Should have interior outlets
44.	Power Circuit Breaker	Should have Main and Outlet Power Circuit Breaker
45.	Gas, air and vacuum fittings	Universal service fittings
46.	Vibration and noise reducing system	Should suit low noise and vibration

Performance

The flawless performance of the Biosafety cabinet has to be demonstrated and certified in accordance with **operation qualification, installation qualification, and performance qualification**.

Warranty of the cabinet:

A comprehensive warranty of minimum of three years from the date of installation should be provided. During the warranty period, there should be two mandatory service visits per year. On-site service with required spares/consumables shall be ensured during the warranty period. **Complaints should be addressed and rectified within 24 hours.**

Schedule of Equipment

Sl. No.	Equipment	Qty	Total rate (%)	GST amount	Total amount(Total rate +GST)
1		1 No			

*Sealed tenders should reach **The Coordinator, International Inter University Centre for Sensing and Imaging,** Department of Chemistry, University of Kerala, Kariavattom, Thiruvananthapuram-695581 on or before 03/12/2026.

General Terms and Conditions:

1. Quotes should be inclusive of cost, freight, taxes etc. and should be delivered at the **International Inter University Centre for Sensing and Imaging,** Department of Chemistry, University of Kerala, Kariavattom.

2. Incomplete & conditional quotations and quotations received after the due date will be summarily rejected without assigning any reasons thereof.
3. The undersigned reserves the right to reject or accept the quotation without assigning any reason.
4. **Installation and Commissioning**: The items shall be installed and commissioned at the **International Inter University Centre for Sensing and Imaging,** Department of Chemistry, University of Kerala, Kariavattom Campus. The supplier should bear all incidental expenses.
5. **Payment:** The University will release the payment only after inspecting the equipment and satisfy that the supply is as per the requirements. The payment will be made after successful completion of the supply and producing invoice in duplicate.
6. **Validity of tender**: Tender submitted shall remain valid at least for 90 days from the date of opening the tender. Validity beyond three months from the date of opening of the tender shall be by mutual consent.
7. The model number, make, and a printed literature of the product shall submit positively.
8. A signed compliance matrix (on specifications and conditions) should be submitted along with the quote.
9. In case of the dispute arises; the decision of University authority shall be final and binding on bidders.
10. General rules relating to the purchase of materials/equipment will also applicable to this quotation.
11. Those who are interested should send their **bid (sealed and signed in each page), , Compliance statement and the technical specification/brochure** in a sealed cover superscribed with **"Quotation for Ref. No: (……) Equipment Name: (……..)"** and addressed to **The Coordinator, International Inter University Centre for Sensing and Imaging, Department of Chemistry, University of Kerala, Kariavattom Campus, Thiruvananthapuram-695581, Kerala** on or before **10/12/2026. The tenders will be opened at the Department of Chemistry at 3.30 PM on the same day in the presence of vendors then present.**

Sd/-

Coordinator
International Inter University Centre
for Sensing and Imaging,
Department of Chemistry
University of Kerala