

No. MPCB/TB-92(Pt-XIII)/2025-2026/49

Dated Shillong the, 16th April 2025**QUOTATION NOTICE**

Sealed quotations accompanied by non-refundable fee of Rs 1000/- (Rupees one thousand) only, by Demand Draft pledged in favour of the Member Secretary, Meghalaya State Pollution Control Board are hereby invited from reputed manufactures or their authorized suppliers/or agents for supply of the following equipments/instruments conforming to the specified technical specifications. The last date for receipt of quotations is on the 21th May 2025, upto 1:00PM.

Sl.No	Name of the Equipment/Instrument	Make
1.	Respirable Dust Sampler	Imported/Indigenous
2.	PM2.5 Fine Particulate Sampler	Imported/Indigenous

The quotations received will be opened by the undersigned on the same date and hour in presence of the suppliers or their authorized representatives, who likes to be present, if any.

The general Terms & Conditions of supply and the tentative technical specifications of the equipment / instruments are attached as Annexure-I and Annexure-II respectively.

(Dr. G.H. CHYRMANG, MFS)
MEMBER SECRETARY
MSPCB, SHILLONG

No. MPCB/TB- TB-92(Pt-XIII)/2025-2026/49-A

Dated Shillong the, 16th April 2025

Copy to:

1. The Chairman, MSPCB, Shillong, for favour of information.
2. The Notice Board, MSPCB, Shillong.
3. Board's website.

MEMBER SECRETARY
MSPCB, SHILLONG

Annexure-I

DETAILED PARTICULARS, TERMS AND CONDITIONS

GENERAL TERMS & CONDITIONS OF QUOTATION:

1. The Detailed Specification of the Equipment/instruments including Brand name, Make, Model etc should be clearly indicated in the Quotation.
2. The rates quoted should be inclusive of taxes and shall remain firm and fixed.
3. Taxes shall be paid as applicable.
4. No packing, forwarding, handling, insurance, delivery charges, etc. will be paid.
5. Delivery of the items including installation / commissioning should be made within 1 (one) month from the date of issue of the Supply Order.
6. The items should be delivered to the Member Secretary, Meghalaya State Pollution Control Board, Shillong – 793014 and receipt obtained thereon. No claims shall be entertained if items are delivered to any unauthorized person.
7. The Instrument with all its accessories is to be installed and commissioned at the Laboratory.
8. The supplier should provide on-site demonstration of the equipment. Authorized Calibration Certificate shall be provided during installation
9. Calibration facility should be made available and should be done at site as and when required.
10. Warranty/Guarantee period for each instrument should be at least for a period of 2(two) years
11. The supplier /dealer will have to replace the defective materials / items, if found, free of cost and other charges during warranty period. Free maintenance during the warranty period, prompt after sale service including technical support and availability of spares and consumables as and when required.
12. In case the quotation is being submitted by authorized agent/dealer of the principal manufacturing company, the authorized sales agency/ dealership certificate from the principal manufacturer should be furnished along with the quotation. Quotations without this authorization certificate will be rejected.
13. Payment shall be made only after receipt of items in full and good condition as per specifications and successful installation and commissioning of the equipment to the full satisfaction of the Board.
14. The supplier (if a non-tribal) should possess a valid Trading License issued by a competent authority.
15. In case of any dispute between the supplier and the consignee, the matter should be referred to the Chairman, Meghalaya State Pollution Control Board, Shillong – 7930104, whose decision shall be final and binding on all concerned.


MEMBER SECRETARY
MSPCB, SHILLONG

Annexure-II

TENTATIVE TECHNICAL SPECIFICATIONS OF EQUIPMENT/INSTRUMENT

1. Respirable Dust Sampler

Parameters	Technical Specifications
Flow Rate	0.8 to 1.4 cubic meters per minute free flow with flow stabilization by constant Electronic Feedback flow control device with auto shut off feature if flow rate drops by 15% as per BIS standard IS 5182 – Part 23
Design Compliance	Equipment should conform to design as per BIS standard IS: 5182-part- 23-2006. This should be certified by a Govt approved Lab/Department
Suction pump/Blower	Brush less motor capable of giving flow up to 1.6 cubic meters per minute (free flow)
Size Selective Inlet and Particle Size	Cyclonic flow for cut off particle greater than 10 µm as per design of CSIR-NEERI. Particles of 10 microns and below collected on filter media
Filter holder	Designed to accept any standard glass fiber filter of 20.3 cm x 25.4 cm made out of fine finished Aluminium casting with Rubber gasket
Housing	Sturdy Aluminium cabinet to house Blower, Filter holder assembly, time totalizer, Programmable timer, Flow controller & flow measurement device. Cabinet must be made of sturdy Aluminium to take care of harsh weather conditions.
Sampling time	24 hours (Flexible to set any interval of time)
Time Totalizer	0 to 9999.99 hours. Time-totalizer circuit detects blower stoppage due to any reason.
Automatic Sampling	24 hour programmable timer to automatically shut-off the system after pre-set time intervals.
Power Supply	230 ± 10 V AC; 50 Hz ± 3% AC Mains
Gaseous Sampling Attachment	
Flow Rate	0 - 2 LPM (Least count 0.05 LPM)
Flow Control	Four inlet and one outlet manifold with built in needle valves and fitted with Silica Gel Tubes with locking facility for flow control of each inlet for running all types of impingers viz. Fritted, Midget and Muenke
Sampling Train	4 Nos. of 35 ml Borosilicate glass midget impingers kept in ice tray
Top Loading Orifice Calibration unit (Optional)	Top Loading Orifice Calibration unit with resistance plates, U-tube manometer and barometer (as per USEPA design) to fit on the filter support plate of the sampler
Instrument Performance Criteria	Instrument should have been in use with CPCB / 8-10 SPCB's for at least 5 years. Satisfactory performance reports from them must be provided. No adverse reports from these authorities should be against the instrument.
Calibration Certificate	A Certificate with NABL Logo should be provided to ensure reliability of Calibration
Manufacturer's Credibility	Manufacturer should be an Indian manufacturer with minimum 15 years of experience in manufacturing of air quality monitoring /sampling instruments in India. It should have adequate production capacity & supplied at least 300/350 Samplers per year to ensure consistency of the product. It should also have annual turnover of at least 5 crore in last 3 financial years.
After Sales Service Support	Manufacturer must have After Sales Service Support facilities available in NE India to ensure prompt maintenance support

2. PM2.5 Sampler

Parameters	Technical Specifications
Sampler	Manual Filter Based Sampler (filter diameter 47 mm) as per sampler design & performance criteria as mentioned at Section A, B, C & D in the document
Flow rate	1 m ³ /hour (16.7 lpm) controlled by a suitable Flow Controller. The Flow Performance criteria should comply with BIS method 5182 (Part 24) 2019 Accuracy \pm 2% of the reading.
Size Selective Inlets	Should have opposed jet impaction for PM10 cut-off and WINS impactor/VSCC for PM2.5 collection on filter paper
Height of the Inlet	The height of the inlet should be between 2 ± 0.2 m from the base of the sampler and the sampler should stand alone firmly at erected position
Time Totalizer	Operates only during operation of the pump, display time with a resolution of one second
Vacuum pump	Suitable pump with brushless motor for providing the designed flow rate, Pulsating pump should have built-in pulse dampeners.
Flowrate Control	Sampler should maintain designed volumetric flow rate (16.7 LPM) at inlet incorporating dynamic volumetric corrections with respect to temperature and barometric pressure. Necessary compensation of volumetric flow rate due to compensating pressure drop across the filter should also be ensured. Ambient temperature, barometric pressure during sampling must be displayed and recorded. Flow rate should be measured at least at 30 seconds interval and averaged over 5 minutes. The flow rate shall not vary more than 5% from the specified flow of 16.7 lpm.
Data Management	Memory-based recording for flowrate and total volume over five minutes should be downloadable to a computer through a suitable port and USB drive. Current/last logged data should be displayed. Logged data should have cloud connectivity and data of last sampling ten days must be available for crosschecking. Data management requirements (other) & ready reference as mentioned in the document Sections C & D.
Power Supply	A stabilized power supply through suitable voltage stabilizer having display of input and output voltage should ensure an output voltage within 230 ± 10 V, AC 50 Hz.
Supply of Accessories	Manufacturer's standard operation kit must include all required, fittings and accessories for the operation of sampler. Accessories to be supplied with each unit should include Leak check unit-1No., Filter cassettes-2Nos, Filter Cassette Holder- 1No., Blunt Tip Forceps-1No., Filter Carrier-3Nos., Silicon Grease 10gm-1 box, Impaction Oil - 100 ml-1 bottle, One Set of O-rings and Cleaning Brush.
Documents	Operation and maintenance manual of sampler, along with data transfer protocols used with their technical description for data management and data transfer.
Certificates	Calibration certificates issued by the manufacturer with references used for Flowrate, Temperature, Barometric Pressure and Time Totalizer should be supplied with each instrument. A satisfactory performance check certificate as mentioned in section B (para 2) is provided along-with all the data-sets recorded in the system for data management etc.
Validation	Preliminary test report/validation issued by NPL to be submitted for respective make

and model.

Any changes in model or declared components of the equipment require revalidation by NPL.

Submission of a preliminary test report/validation from NPL as per the set criteria of NPL is mandatory on or before 30th September 2023.

Section A: Sampler Design Criteria

Impactors of the sampler shall be designed as per specifications mentioned in Appendix L of 40 CFR part 50 Appendix L as defined in BIS 5182 part 24 and tolerances to be followed as specified for PM10 and PM2.5 impactor in L14 & L21.

The Material of Construction for the impactor assembly shall be strictly anodised aluminium only. Sampler Body must be of two parts for ease of transport and fabricated by lightweight rust-free metal. The door must open up to 180 degrees and be fitted with a master lock and key. A soft handle with metallic holder and lock should be provided on the machine for ease of handling.

The connectors shall be leak proof, preferably push fit type with engraved groove for gaskets at male parts.

Filter cassette loading mechanism and filter holder assembly shall be designed in user-friendly way and sufficient space must be provided to ensure proper handling of filter while loading and unloading it in the sampler.

Pressure drop across the filter should be monitored during sampling and whenever it reaches above 200 mm of Hg, the sampler shall stop automatically with an error message recorded.

Provision is required to limit the temperature rise of the sample filter from insulation & internal heat dissipation. The rise should not be more than 5-degree C above the ambient temperature during the sampling duration. The temperature error message should be recorded if temperature rise is more than 5 degrees C.

Section B: Sampler Performance criteria

The coefficient of variation (CV) in sample flow rate (taken at every 30 seconds) should be calculated and if the %CV (in 24 hours of operation) is found more than 4% error message should be displayed and recorded.

Satisfactory performance check (the variation in PM2.5 concentrations against sampler fitted with certified impactors should be within $\pm 10\%$) for a minimum of five samples should be undertaken for every sampler manufactured and a certificate for satisfactory performance to be provided.

Section C: Data management requirements (other)

The 5 minutes recording of the average Flow rate, Barometric Pressure, Ambient Temperature, Filter Temperature with the date and time stamp should be available with the sampler.

The software should be able to collect the flow sensor status every 30 seconds and display on the screen and compare it with the set flow (i.e., 16.7 LPM). Deviation should not be more than $\pm 5\%$ of the set value (16.7 LPM).

The software should have the capability to compare the recorded 5 minutes' average flow data with the set value of 16.7 lpm. If the deviation is more than 10% of set value for 6 consecutive readings, instrument must be automatically switched off with an error message.

Average flow should be derived by the cumulative volume data recorded (collected by integration of flow data at desired intervals) divided by the ON-Time of machine.

Meghalaya State Pollution Control Board

Forests & Environment Department, Government of Meghalaya

'ARDEN' Lumpyngngad, Shillong - 793014

Website : <http://megspcb.gov.in>



Instrument Performance Criteria	Instrument should have been in use with CPCB / 8-10 SPCB's for at least 5 years. Satisfactory performance reports from them must be provided. No adverse reports from these authorities should be against the instrument.
Calibration Certificate	A Certificate with NABL Logo should be provided to ensure reliability of Calibration
Manufacturer's Credibility	Manufacturer should be an Indian manufacturer with minimum 15 years of experience in manufacturing of air quality monitoring /sampling instruments in India. It should have adequate production capacity & supplied at least 300/350 Samplers per year to ensure consistency of the product. It should also have annual turnover of at least 5 crore in last 3 financial years.
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Section D: The Data Management requirements – ready reference						
Parameters	Availability				Format & resolutions	
	Anytime on display	End Period of download	Visual Display on screen	Data Output in download	Digital Reading	Units
Flow Rate, 30 Seconds interval	Required	Not Required	Required	Not Required	XX.X	L/min
Flow rate, average for the sample period	Not Required	Required	Required	Required	XX.X	L/min
Flow rate, Coefficient of variation (CV), for the sample period	Not Required	Required	Not Required	Required	XX.X	%
Flow rate, 5 minutes average	NA	Required	Not Required	Required	XX.X	L/min
Sample volume, Total	Required	Required	Anytime	Required	XX.XXX	m ³
Temperature, ambient, 30 seconds interval	Required	Not Required	Yes	Not Required	XX.X	°C
Temperature, ambient Average for recording interval (5 min)	NA	Required	Not Required	For sampling period	XX.X	°C
Barometric Pressure, ambient, 30 seconds interval	Required	Not Required	Yes	Not Required	XXX	mm Hg / mBar
Barometric Pressure, ambient Average for recording interval (5 min)	Not Required	Not Required	Not Required	For sampling period	XXX	mm Hg / mBar
Filter Temperature, 30 seconds interval	Required	Not Required	Yes	Not Required	XX.X	°C
Date & Time	Required	Required	Required	For sampling period	dd/mm/yy HH. MM.SS	D/M/Y HR:M:S
Sampling Start and Stop Time Setting	Not Required	Required	Not Required	For sampling period	dd/mm/yy HH. MM.SS	D/M/Y HR:M:S
Time Totalizer	Required	Required	Required	For sampling period	HH. MM.SS	HR:M:S
User enter information such as filter number and site identification	Required			At the start of sampling	As entered	