



केन्द्रीय प्रदूषण नियंत्रण बोर्ड

(पर्यावरण एवं वन मंत्रालय, भारत सरकार)

**CENTRAL POLLUTION CONTROL BOARD**

(MINISTRY OF ENVIRONMENT & FORESTS, GOVT. OF INDIA)

F.No.: Tech-42/AirLab/P-II(13)ZOB/13-14/

6<sup>th</sup> January 2014

To

As per the list

Sub: Inviting quotations for supplying of PM<sub>2.5</sub> sampler, Micro Analytical Balance, UV-Vis Spectrophotometer, Pyrometer and Personal VOC sampler

Sir,

Sealed quotations are hereby invited from the reputed manufacturers/Authorized dealers to supply the instruments/equipment namely PM<sub>2.5</sub> sampler, Micro Analytical Balance, UV-Vis Spectrophotometer, Pyrometer and Personal VOC sampler as per the specifications mentioned in Annexures and as per the terms and conditions detailed below:-

1. Technical bid containing the technical specification of the instruments/equipment shall be kept in a separate sealed envelope (1) and Price bid quoting the price of the instruments/equipment shall be kept separately in another sealed envelope (2) mentioning "Technical Bid" and "Price bid" on top left side of the envelope respectively.
2. Both Technical and Price bids are to be kept separately in sealed envelopes and both shall be kept in another sealed envelope(3) mentioning that "Quotation for instruments/equipment (Air)" on top left side of the envelope.
3. Separate quotation shall be submitted for each and every instrument/equipment individually depending on capacity to supply the instrument/equipment as per the terms and conditions.
4. Combined submission of the quotations for all the instrument/equipment shall be summarily rejected.

contd... /  
S. Swamy

दक्षिण आंचलिक कार्यालय : निसर्ग भवन, ए-ब्लॉक, प्रथम एवं द्वितीय तल, तिम्मय्या रोड, ७-डी मैन, शिवनगर, बंगलूरु - ५६० ०१०.

Zonal Office (South) : " Nisarga Bhawan ", A-Block, 1<sup>st</sup> & 2<sup>nd</sup> Floors, Thimmaiah Road, 7<sup>th</sup> D - Main, Shivanagar, Bangalore - 560 010.

दूरभाष / Telephone : 80-23233739, 23233827, 23233996, 23233600, 23232559, 23226002, 23222539, Fax : 080-23234059

ई-मेल / E-mail : cpcbszo@yahoo.com

प्रधान कार्यालय : परिवेश भवन, पूर्वी अर्जुन नगर, दिल्ली- ११० ०३२.

Head Office : Parivesh Bhawan, East Arjun Nagar, Delhi - 110 032.

दूरभाष / Telephone : 011-43102030, Fax : 22305793, 22307078, 22307079, 22301932, 22304948

ई-मेल / E-mail : cpcb@nic.in वेबसाइट / Website : www.cpcb.nic.in

5. Buy/Back : Quotation for buy/back shall also be quoted and preference will be given for the same. The instruments/equipment meant for buy/back shall be inspected during the Office hours at our premises if required.
6. The duly filled in quotation shall reach this office on or before 29<sup>th</sup> January 2014 at 16:00 hours by post. The quotation may also be dropped in the Tender Box kept at this office.
7. The quotation received without separate sealed envelopes for technical and Price bid as explained in conditions 1 and 2 shall not be entertained.
8. The instruments/equipment shall be delivered, installed and adequate demo & training to the laboratory staff shall be given at this office.
9. On site warranty for three years to be given.
10. The call of quotation does not bind the Central Board to place the order.
11. The quotations submitted in response to this notice may be rejected without assigning any reason.
12. The instruments/equipment shall be delivered along with the invoice in original at this office within 30 days from the date of issue of Supply Order
13. The validity of quotation shall normally be 90 days from the date of opening.
14. The payment shall be released after the delivery, demo and satisfactory performance of the instruments/equipment.
15. Applicable taxes, cess and any other charges if any shall be quoted separately.

Yours faithfully

Sd.../  
(S.Suresh)  
ZONAL OFFICER

Encl.: Annexure

Copy to

1. I/c. IT Divn., CPCB, HO. With a request to place in the official website
2. Notice Board, CPCB, SZO., Bangalore
3. Notice Board, KSPCB, Bangalore

S-Suresh  
6/1/2014

## Micro Analytical Balance

S. No.	Parameters	Specifications	Tick mark should be put as applicable (Either <input checked="" type="checkbox"/> or <input type="checkbox"/> )
1	Capacity, Max	0.00001mg to 5.1 or 6.1 g	
2	Readability	± 1 µg	
3	Repeatability	± 1 µg	
4	Linearity, micrograms	± 4 µg	
5	Linearity	0 - 500 µg ± 2 µg	
6	Response time	10 sec	
7	Operating Temperature	5 °C to 40 °C	
8	Operating Humidity	85% RH	
9	Zero tracking	Automatic, with Level Adjustment	
10	Calibration	Self Calibration	
11	Power Source	230 ± 10V AC with suitable AC adopter	
12	Standard Features	1. 230 ± 10V AC Adapter, 2. Level indicator, with adjustable legs, 3. RS-232, /USB Port 4. Operational manual	
13	Warranty	Minimum three years warranty from the date of installation	
14	Calibration Certificate	From Accredited Agency with one year validity	
15	Shield	Suitable Size of Draft Shield	
16	Built in Interface	USB/ RS - 232	

Note: Furnish two quotes    1) Regular Price  
    2) Buy back price

*S. Suman*

*[Handwritten Signature]*

## PM<sub>2.5</sub> SAMPLER

S.No.	Parameters	Specifications	Tick mark should be put as applicable (Either ✓ or ✗)
1	Flow rate	Fixed, 1m <sup>3</sup> /hour (16.7lpm) controlled by Mass Flow Controller	
2	Elapsed time indicator	Up to 9999 hours with two decimals	
3	Vaccum pump	Diaphragm type, brush less motor	
4	Flow Control and recorder	Storable and downloadable of past history	
5	Dry gas meter (Volume totalizer)	For measuring total volume of air sampled with Digital Indicator	
6	Volumetric Flow rate compensation	Ambient temperature and pressure sensors to auto compensate volumetric flow rate	
7	Power requirement	230 ± 10VAC, 50 Hz	
8	Dual sampling ports for PM <sub>10</sub> & PM <sub>2.5</sub>	With suitable cut off and Inlet Probes	
9	Calibration Unit	Calibration unit to calibrate the flow rate of sampling port	
10	Additional Supply	Manufactures standard operation kit including all required items, fittings for start up/ regular operation of instrument. Operation and maintenance manual for each unit. Spares and Consumables for three year operation.	
11	Warranty	Three years from the date of installation	
12	Calibration Certificate	From Accredited Agency with one year validity	

Following filter papers should be supplied along with the instrument:

Pure Nylon membrane (1 μm, 47 mm) developed specially for acidic deposition measurements = 10 packets (Pack of 100Nos.).

PTFE membrane filter with PMP (Poly Methyl Pentene) support ring (1 μm, 47 mm) = 10packets (Pack of 100Nos.)

Pure Quartz filter 47 mm = 10packets (pack of 100 Nos.).

Note: Furnish two quotes 1) Regular Price  
2) Buy back price

*S. Suresh*

*[Signature]*

## HIGH TEMPERATURE DIGITAL PYROMETER

S.No.	Parameters	Specifications	Tick mark should be put as applicable (Either <input checked="" type="checkbox"/> or <input type="checkbox"/> )
1	Measuring Sensor	Ni-Cr-Ni (Thermocouple plug in connection type K).	
2	Measuring Range	0 to 1200 °C (Automatic Switch Over from + 200 °C)	
3	Accuracy	± 1 °C (on full range).	
4	Resolution	0.1 °C/1 °C	
5	Storage/ Transport Temperature	20 °C to 70 °C	
6	Probe Length	2 meter	
7	Display	LCD/LED	
8	Power Supply	Rechargeable Battery life > 100hrs. With charger of 220 V ± 10 Volts, 50Hz ± 0.05.	
9	Switch Over	°C/°F (Hold and toggle function)	
10	Other Requirement	Low battery display Auto Switch off	
11	Warranty	3 years	
12	Calibration	From Accredited Agency with one year validity	

Note: Furnish two quote 1) Regular Price  
2) Buy back price

*H. K. ...*

*S. Swain*

### Low Flow Portable Personal Sampler

S.No.	Parameters	Specifications	Tick mark should be put as applicable (Either <input type="checkbox"/> or <input type="checkbox"/> )
1	General Description	Battery Operated lightweight pump for personal sampling with built in flow indicator suitable for Ambient Air VOC/SVOC sampling.	
2	Flow Control	0.1 to 0.5 lpm (Constant flow/constant pressure mode)	
2	Flow Control	± 1% set point constant flow	
3	Battery	Rechargeable NiMH/Lithium ion	
4	Battery Capacity	24 hours minimum Back up	
5	Size	Compact and Portable	
6	Display	Easy-to-read LCD indicator for battery level, flow status & fault and time display	
7	Timer	Flow control with variable timer & count down	
8	Elapsed Time	Elapsed time period 0.999	
9	Storage	Run time data shall be stored in memory	
10	Software	Program capable for intermittent sampling	
11	Validity	Accurate air volumes & data validity	
12	Other features	1. To restart after flow fault. 2. Security system for low battery or restricted flow shut-off. 3. Portable personal sampler should operate at low Noise (Noise free) with over flow cut off Provision to cut off from overcharging of the Battery.	
13	Warranty	Three years from the date of installation	

Note: Furnish two quot 1) Regular Price  
2) Buy back price

*S. Smith*

*Handwritten signature*

## UV/Visible Spectrophotometer

1.	Wavelength range	190 to 1100nm
2.	Spectral bandwidth	1nm (190 to 1100nm)
3.	Wavelength display	0.1-nm increments
4.	Wavelength setting	0.1-nm increments (1-nm increments when setting scanning range )
5.	Wavelength accuracy	$\pm 0.1$ nm at 656.1nm D2 $\pm 0.3$ nm (190 to 1100nm)
6.	Wavelength repeatability	$\pm 0.1$ nm
7.	Stray light	less than 0.02% NaI at 220nm, NaNO <sub>2</sub> at 340nm less than 1.0% KC I at 198nm
8.	Photometric system	Double Beam
9.	Photometric range	Absorbance: -4 to 4 Abs, Transmittance: 0% to 400%
10.	Photometric accuracy	$\pm 0.002$ Abs (0.5Abs), $\pm 0.004$ Abs (1.0Abs), $\pm 0.006$ Abs (2.0Abs)
11.	Photometric repeatability	less than $\pm 0.001$ Abs (0.5Abs) and less than $\pm 0.001$ Abs (1Abs), less than $\pm 0.003$ Abs (2.0Abs)
12.	Baseline stability	less than 0.0003 Abs/H at 700nm (one hour after light source turned ON)
13.	Baseline flatness	within $\pm 0.0006$ Abs (190 to 1100nm, one hour after light source turned ON)
14.	Noise level	Within 0.00005 Abs RMS value (at 700nm)
15.	Power Supply	230 VAC $\pm$ 10, 50 HZ
16.	Accessories	All Consumables should be supplied for three years
17.	Warrantee	At least for three years
18.	Memory	Downloadable using USB and compatible with user application software
19.	Calibration	Certificate of Calibration from accredited agency should be produced with validity of one year.
20.	Cuvette	Supply of 3 pairs of suitable size of Cuvette

*S. Smith*