

DEPARTMENT OF BOTANY

GURU GHASIDAS VISHWAVIDYALA, KONI, BILASPUR (C.G.) 495009

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Ref No.: 43-311-2014 (S.R.)-02

Date: 09/09/2016

LIMITED TENDER ENQUIRY (Under GFR 151 of 2005)

**Subject:- Limited tender enquiry for the supply of Equipments / Instruments for Research Project in the Department of Botany.**

Sealed quotations are invited from the registered manufacturers/ suppliers in the University.

The competitive rates for the supply and installation of instruments/ equipments with the desired specifications as mentioned ahead Bidder must carefully peruse the general terms and conditions for the supply of the equipment/ instrument'

The sealed quotations with specifications and offer price should reach to Dr. S K. Pandey, P.I. of the Project, Department of Botany, Guru Ghasidas Vishwavidyalaya, Koni, Bilaspur-495009 within 21 days from the publication of LTE on University's website through speed /registered post only.

| S.No. | Description/Specification of the article  | Quantity |
|-------|---|----------|
| 01    | <b>Name: High volume sampler with Cascade Impactor</b><br><b>Description/Specification of the instrument:</b><br><b>A. High Volume Sampler</b><br><b>Blower Flow Rate:</b> More than 1.8 m <sup>3</sup> / min free flow without resistance.<br><b>Particulate Sampling:</b> Less than 100 $\mu$ (SPM) using Gable Roof Less | 01       |

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than 10 $\mu$  (PM-10) using **Size Selective Inlet** at 1.13 m<sup>3</sup>/Min (**Optional**)

**Filter Holder:** SS 304 to accommodate filter paper of 25 x 20 cm.

**Filter Media:** Whatman GF/A or EPM – 2000

**Electronic Control Module ECM 8 with Constant Flow Controller & digital display of STP corrected Flow & Volume**

**Display:** 16 x 2 Character Alphanumeric LCD Module with blue backlit

**Keys:** 6 Nos.

**Delay Time:** Programmable with Real Time Clock

**Sampling Time:** Programmable up to 199 hrs. 59mts. with Real Time Clock.

**Electronic Time Totalizer:** Up to 199 hrs. 59mts.

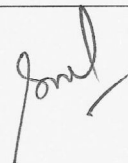
**Automatic Sampling Control:** Fully programmable electronic timer to automatically shut off system after preset time interval. Facility for programming ON / OFF Time in cyclic mode.

**Flow Measurement:** With exhaust orifice & D P pressure sensor

**Flow Setting & Display Flow Control:** Range 0.60 to 1.80 M<sup>3</sup>/min on Digital Display Automatic within 2% of set Value with Constant Flow Controller irrespective of dust load & mains voltage variation.

**Volume Totalizer:** Up to 99999 M<sup>3</sup> STP Corrected on digital display.

**Temperature Measurement:** Solid State Temperature Sensor for STP correction.



**Additional Features:** Storage of all data including sampling time, volume, minimum, maximum & average flow / Constant Flow Volume / Non Constant Flow Volume & their respective time information in Hrs. & Min. Also minimum & maximum ambient temp. etc. **for 10 sample nos.** Facility to store sampling flow data value for every 1 minute in memory for 24 Hrs. USB & USB Pen Drive connectors along with USB Cable provided for transferring the data to PC with the software provided on CD. PC Software includes facility to acquire & save data from control module **including flow data & power interruptions for further processing** & plotting flow data in circular chart format indicating flow variation over 24 Hrs.

**Safety Features: Automatic Stoppage of Sampling due to under voltage / over voltage / low flow & high Flow conditions.**

**Power:** Electronic Unit & Blower Motor 230  $\pm$ 15%, 1 Ph, 50 Hz.

**Main Cabinet (Standard):** Made of sturdy Powder Coated aluminum.

Size: 73 x 37 x 30 cms.

**Gable Roof:** Made of sturdy Powder Coated aluminum. Size:

**Brushless Blower: Very low noise maintenance free Centrifugal regenerative blower** directly coupled to 0.75 HP, 3 Ph, 60Hz. Motor, mounted in the Cabinet.

**Gaseous Sampling Arrangement**

**Flow Rate:** 0.3 to 3 LPM

**Flow Control:** Four way acrylic manifolds with four inlets and one outlet and four stainless steel needle valve for flow control of each inlet.

**Rotameter:** 0.3 LPM to 3 LPM with a resolution of 0.1 LPM.

**Sampling Train:** 4 Nos. 35-ml glass impingers in a double – walled cold box.

**Calibration:** Each Blower & Gaseous Rotameter is individually calibrated with NABL Lab. Certified Instruments. Calibration Reports are provided.





**11. Track Log:** 10,000 points, 200 saved tracks

**12. Wireless Data Transfer:** Yes

**13. 3- Axis Compass:** Yes

**14. Barometric Altimeter:** Yes

**15. 3D view:** Yes

**16. Customisable Dashboard:** Yes

**17. Birdseye select Compatible:** Yes

**18. Operating system:** Android Operating system

**19. Wi-Fi and Bluetooth Connectivity**

**20. Camera 1. Lens Type: -**

Focal Length: 18-140 mm Lens

**2. Sensor:-**

Mega pixels: 24.2 Megapixels

Sensor size: 23.5 x 15.6 mm

Sensor type: CMOS

ISO: 100-12800

**3. Image**

Image stabilization: Yes

**4. Optics & Focus**

Autofocus: Yes

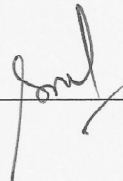
Optical Zoom: 3 x

Number of focus points: 39

**5. Screen / viewfinder**

Screen size: 3.2 inch

Screen type: LCD



**6. Photography features**

Minimum shutter speed: 30 Sec

Built-in flash: Yes

Flash modes: Auto, Auto with Red-eye Reduction, Auto Slow Sync, Auto Slow Sync with Red-eye Reduction, Fill-flash, Red-eye Reduction, Slow Sync, Slow Sync with Red-eye Reduction, Rear-curtain with Slow Sync, Rear-curtain Sync, Off

Scene modes: Portrait, Landscape, Child, Sports, Close up, Night Portrait, Night Landscape, Party/Indoor, Beach/Snow, Sunset, Dusk/Dawn, Pet Portrait, Candlelight, Blossom, Autumn Colors, Food.

Continuous shots: 5 fps

**8. Connectivity**

USB, HDMI, Wireless, Remote control

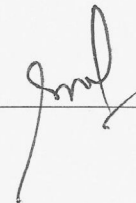
**9. Physical:-**

Battery Type: Li-ion Battery Pack

Battery Type Details: Li-ion Battery

**10. Storage: Memory Card**

01



## LIMITED TENDER ENQUIRY

### GENERAL TERMS AND CONDITIONS OF THE SUPPLY

1. The sealed quotation be superscripted with "**Quotation for supply of Equipments under Research Project**".
2. **Quantity:** The quantities mentioned (in page-1) are indicative and may be altered at the time of placing the purchase order.
3. **Product Leaflet/ Handbook:** Duly certified copy of the Technical brochure/leaflet etc. of the quoted equipment/ instrument must be submitted along with the quotation, by the bidder.
4. **Discount, if any:** special concession/discount (if any) applicable for educational institutions, if any, must be clearly mentioned in the price bid.
5. **Excise duty exemption:** the University is exempted from Custom/Excise Duty by DSIR, Govt. of India vide letter no. TU/V/RG-CDE (710)/2010 dated 19-1-11. The exemption certificate of the same shall be issued by the University on demand, at the time of supply. Bidder must clearly mention if any basic custom duty/ excise duty etc. is chargeable, in spite of the GGV is exempted by DSIR certificate.
6. If the item is under DGS&D rate contract, the quoted price should not be more than the DGS&D rate
7. **FOR GGV:** The rate should be quoted on F.O.R University campus, Koni, Bilaspur basis. No packing/ forwarding, unloading, transit insurance charges will be paid extra to the bidder by GGV. All extra charges have to be borne by the supplier/bidder only.
8. **No Installation charges:** The Equipment/ Instrument must be delivered, installed and demonstrated without any extra charges from the GGV.



**9. Validity of the offered Rate:** The quoted rate should be valid for a minimum period of 90 days from the last date of receipt of the tender, as notified.

**10. Delivery period:** The Equipment/ Instrument, ordered will have to be delivered and installed in the Department at GGV, within 60 days from the issue of the Purchase Order.

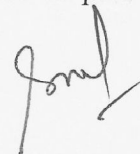
**11. Liquidated Damages (LD):** Any delay in supplying the ordered equipment/instrument from the stipulated date of delivery will attract LD, which will be applicable at the rate of 0.5% per week and limited to 10% maximum. The authority reserves the right to cancel the purchase order when LD accumulates to 10%.

**12. Warranty:** At least one year comprehensive on-site warranty shall be applicable to the supplied equipment/instrument for all manufacturing defects from the date of satisfactory installation, commissioning, demonstration by the supplier and acceptance by GGV.

**13. Performance security:** The successful bidder must submit performance security of 5 % of the ordered value, on the goods/services supplied irrespective of the origin, within fifteen days of issue of purchase order in form of Demand Draft/TDR/Bank guarantee from any nationalized bank. Otherwise, the same amount will be deducted from the billed amount. On satisfactory completion of the warranty period of 01 year (12 months) or more period as offered by the bidder, Performance Security will be released without any interest on demand.

**14. Payment:** Bidder should not ask for advance or part payment prior to supply and successful installation. Payment to the firm shall be made, only after the supply in good condition, installation and demonstration of the equipment/instrument at GGV.

**15. CST/VAT etc:** CST/VAT/OCTROI/ basic custom duty etc. must be clearly mentioned along with the quoted offer, weather to be paid extra or not. GGV shall pay the same as per prevailing government rules, if mentioned in the price bid. No taxes shall be paid if not





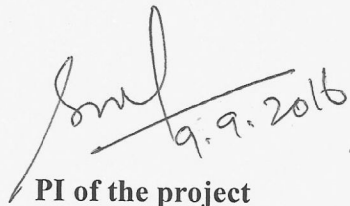
mentioned in the bid and any correspondence in this regard shall be not entertained after the price bids are opened.

**16. Unsealed quotations:** Quotation must be sealed properly. Unsealed envelopes/ offers are liable to be rejected by GGV.

**17. Offer after due date:** GGV shall not be responsible for late postal delivery and any offer received after the due date shall be summarily rejected by GGV. You Sealed offer must reach on or before the scheduled due date only by the speed/registered post.

**18.** GGV has all the rights reserved to accept / reject any /all the quotation(s) and not to procure any/all the equipments/instruments, without assigning any reason(s) thereof.

**19.** The bidder should check the university website [www.ggu.ac.in](http://www.ggu.ac.in) on a regular basis for any updates.

  
9.9.2016

**PI of the project**  
**(Dr. Sudhir Kumar Pandey)**

Department of Botany,  
School of Life Sciences  
GGV, Bilaspur