

**INDIAN INSTITUTE OF TECHNOLOGY**  
**Department of Civil Engineering**

**Enquiry letter for purchase of Optical Particle Sizer (OPS)**

Sub: Quotation for supply of Optical Particle Sizer (Qty: 2)

Reference: IITK/CE/10-2013\_129

Dated 19.10.2013

Sir / Madam,

With reference to the subject mentioned above, you are invited to submit the quotation in a sealed cover. Configuration/Specification are given below:

***Includes***

- Operation manual
- Power supply
- One battery
- Purge filter
- USB cable
- Carrying case
- Aerosol Instrument Manager software for the OPS

***Specification***

- The instrument must be capable of measuring 16 size channels.
- The number of channels must be user selectable
- The channel boundaries must be user selectable.
- The instrument must be capable of measuring aerosols from 0.3 microns to 10 microns.
- The size resolution must be at equal to or better than 5% at 0.5 microns.
- The instrument must be capable of measuring concentrations up to 3,000 particles/cm<sup>3</sup>
- The instrument must be capable of measuring mass concentrations between 0.001 and 275,000 µg/cubic meter.
- The instrument must include a built-in pump providing sample flow of 1.0 lpm ±5% accuracy AND internal sheath flow of 1 lpm.
- The instrument must measure less than 1 count per minute with HEPA filtered air at inlet.
- The instrument must be capable of sample times as short as 1 second and sample time must be user definable.
- The instrument must include USB, Ethernet and USB flash drive interfaces.
- The instrument must include a user selectable analogue output between 0 to 5V or 4 to 20mA.
- The instrument must include a relay or switch alarm output with visual and audible indicators. The alarm point shall be user selectable.
- The instrument must be fully compliant with ISO 21501-04.
- The instrument must allow the user to input the particle density for each size class to more accurately calculate particle mass.
- The user must be able to input both real and imaginary components of the refractive index for more accurate size distributions.
- The user must be able to save size bin classifications using user determined names in the instrument.
- The instrument must include a 5.7 inch color touch screen front panel for ease of use and data display.
- The instrument must have a built-in filter to collect a sample on a 37mm filter for Gravimetric sampling.

- The instrument must have a battery in the system that will allow up to minimum 10 hours operation.
- The instrument must have built-in data logging for up to 30,000 sample sets of data.
- The system must work with the AIM software system.
- The system must be manufactured in an ISO 9001 compliant facility.

**The quotation should have the following details:**

1. Cost of the item and accessories and installation charges, if any
2. Technical specifications in detail
3. Warranty period
4. Educational discount considering end use for research and teaching
5. Payment terms
6. Proprietary Certificate, if applicable
7. Any other relevant details

**Terms and condition:-**

1. Sealed Quotation must reach to us till 30.10.2013 before 5.00PM
2. Prices should be in USD and CIF Delhi.

Dr. S.N. Tripathi  
Professor  
Department of Civil Engineering  
Indian Institute of Technology  
Kanpur – 208016

Tel. 0512 – 2597845  
Fax No. 0512-2597395  
E-mail: snt@iitk.ac.in