

**INDIAN INSTITUTE OF TECHNOLOGY**  
**Centre for Environmental Science and Engineering**

**Enquiry letter for purchase of Continuous ambient air quality Ozone Analyzer**

Subject: Quotation for supply of filter Ozone Analyzer

Reference: CESE/IITK/MS/2018-19/01

Dated: December 26, 2018

Sir / Madam,

With reference to the subject mentioned above, you are invited to submit the sealed quotation for Continuous ambient air quality ozone analyzer (see specifications below).

Submit quotation at your earliest. Make sure that the quotation should valid up to 60 days. Sealed quotation duly signed must reach to Dr. Mukesh Sharma, Professor, Department of Civil Engineering, IIT Kanpur by **21.01.2019; 5:00 PM**.

The quotation should have the following details:

1. Bidder must be a GST registered firm (if from India)
2. Academic and Research Institute discount
3. Delivery Period
4. Rates quoted must be FOB CESE IIT Kanpur including packing forwarding and freight

Terms and condition:

1. Our Institute is partially exempted from custom duty.
2. Payable GST @ 5% (for Indian company); DSIR certificate shall be issued

Dr. Mukesh Sharma  
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Department of Civil Engineering  
Indian Institute of Technology  
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**Technical Specifications Sheet:**

The minimum specifications given below.

Principle	UV Photometer
Range	<p><b>Display and Digital Output:</b> Auto Ranging 0 to 20 ppm.  <b>Display Resolution</b> = 0.001ppm  <b>Analog Output:</b> 0- full scale from 0-0.05 ppm to 0-20 ppm with 0.5, 10% offset (with optional 50 pin I/O board).  <b>USEPA Designated Range:</b> Any full scale range between 0-0.05 ppm and 0-1 ppm</p>
Noise (RMS)	<p><b>Measurement process:</b> 0.25 ppb or 0.1% of concentration reading, whichever is greater than Kalman filter algorithm active.  <b>Analogue interface</b> :&lt; 0.5 ppb or 0.2 % of analog output FS (whichever is greater).</p>
Sensitivity, Lower Detachable Limit	<p><b>Measurement process:</b> &lt;0.05 ppb or 0.2% of concentration reading, whichever is greater than Kalman filter algorithm active.  <b>Analogue interface</b> :&lt; 0.5 ppb or 0.2 % of analog output FS (whichever is greater).</p>
Zero Drift	<p><b>Temperature dependent:</b> &lt;0.05 ppb per °C  <b>Time Dependent(fixed temperature):</b> &lt; 1 ppb /24 hrs,&lt;1 ppb/30 days</p>

Span Drift	<b>Temperature dependent:</b> <2 ppb per °C with span gas @ 400ppb O <sub>3</sub> <b>Time Dependent (fixed temperature) :</b> < 0.5 ppb /24 hrs of concentration reading, <0.5ppb/30 days of concentration reading. <b>Lag Time :</b> < 20 seconds <b>Rise/Fall Time, T95 :</b> < 120 seconds
Liner Error	± 1% of full scale (from best straight line fit)
Precision	1 ppb or 1% of concentration reading (whichever is greater)
Sample flow rate	Approx 0.5l/min
Ambient Temp Range	TUV: +5° to +40°(41 F°+104 F°) USEPA DESIGNATED RANGE: +15° to +35°(59 F°+95 F°)
Mains Power	99 to 132 VAC, 198 to 264 VAC, 47 to 63 Hz. U.S. EPA designated range: 105 to 125 VAC, 60 Hz. or 200 to 240 VAC, 50 Hz.
Dimensions	43.5cm X 18.0cm X 65.0 cm (or less)
User interface Analog Output	Menu Selected Current output 0-,2- and 4- 20mA(on DB50 on back panel) Optional jumper selectable volatage output with 50 pin connector board of 100 mV,1V,5V,10V, with menu selectable zero output of 0,5%, 10%
User interface Digital Output	Multidrop RS232 Port shared between analysers for data, status and control DB50 with discrete status, user control and analog output.
Extended Memory	2GB USB based storage with 1 year capacity
Certification	USEPA or mCERTS or TUV

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