

INDIAN INSTITUTE OF TECHNOLOGY
Centre for Environmental Science and Engineering

Enquiry letter for purchase of filter papers for ambient air quality monitoring

Subject: Quotation for supply of filter papers (Consumables)

Reference: CESE/IITK/MS/2017-18/01

Dated: March 19, 2018

Sir / Madam,

With reference to the subject mentioned above, you are invited to submit the sealed quotation for (i) **2µm PTFE 46.2 mm Filter PP Ring Supported for PM2.5 (Membrane filter)** with sequentially number – required quantity is 2000 filters. PTFE Filter should meet the requirement for EPA PM2.5 reference method under 40CFR part 50 Appendix L, broad specifications are enclosed (Technical specifications). (ii) **47 mm Quartz filter paper (QMA)** – required quantity is 1000 filters. Quartz should meet the required specifications are enclosed (Technical specifications).

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 till **28.03.2018 before 5:00 PM**.

The quotation should have the following details:

1. Bidder must be a GST registered firm
2. Educational discount for research
3. Delivery Period
4. Rates quoted must be FOR CESE IIT Kanpur including packing forwarding and freight

Terms and condition:

1. No advance payment 100% payment after supply of material. Part supply is acceptable
2. Our Institute is partially exempted from custom duty.
3. Payable GST @ 5% DSIR certificate shall be issued

Dr. Mukesh Sharma
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Technical Specifications Sheet:

There are two different types of Filter papers, **minimum specifications** given below.

(i) For Teflon Filter (PTFE MEMBRANE).

- a) Diameter ~ 47 mm with supported ring (46.2 ± 0.4 mm).
- b) Thickness 30 to 50 μm .
- c) Pore size 2.0 μm as measured by ASTM F 316-94 or similar.
- d) pH neutral and Density ~ 0.5 mg/cm², Pressure drop @ 16.67 LPM ~ 30 cm H₂O or less (ASTM D 2986-95a or similar).
- e) Weight stability: Filter weight loss shall be less than 20 μg (average change in weight of 50 filters).
- f) PM_{2.5} sampling compatible.
- g) Support ring media: polymethylpentene (PMP) or equivalent inert material.
- h) Support ring thickness: 0.38 ± 0.04 mm
- i) Loose particles : <20 μg
- j) Moisture pickup: not more than 10 μg wt. increase after 24 h exposure to air of 40% RH, relative to wt. after 24 h exposure to air of 35% RH.
- k) Alkalinity less than 25 micro equivalent/gram of filter

(ii) Quartz (QMA).

1. Diameter ~ 47mm
2. Thickness: Min-300 μm , Max – 600 μm (ASTM D 645-92 or similar)
3. Density: 6.51 mg/cm², stable even at temperature > 950oC.
4. Aerosol retention for 0.3 μm size particle at 16.67 LPM = 99.95% or better (ASTM D 2986-91 or similar)
5. Tensile strength: 200-gram force/20mm (min) (ASTM D 828-93 or similar)

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