

**Government of India
Bhabha Atomic Research Centre
Radiation & Photochemistry Division**

Ref:- **BARC/RPCD/minor/533/R&D-02/2019/23** Date:- 08/02/2019

Sub:- Fabrication of TGS detector and KBr Beam Splitter for FTIR6300 spectrometer as detailed in annexure A.

Sealed quotations are invited on behalf of President of India by Head, Radiation & Photochemistry Division, BARC, Trombay, as per enclosed specification from the eligible contractors having adequate experience in similar works with the units of DAE, NPCIL, or Public Undertakings.

Bidder shall quote for the fabrication of **Fabrication of TGS detector and KBr Beam Splitter** for FTIR spectrometer in RPCD as per the specification mentioned in Annexure-I.

The quotation must reach Head, Radiation & Photochemistry Division by 18th **February, 2019, by 16.00 hrs** and must be sent in a sealed envelop. Sealed envelop should clearly indicate Name of work, Reference number & due date of submission. The address on the envelop should read as

**The Head, Radiation & Photochemistry Division
Kind Attention-Dr. Rajib Ghosh
Bhabha Atomic Research Centre, Trombay
Mumbai-400085**

The offer should be valid for at least 90 days from the due date of the tender and quoted price shall remain firm during the period of execution of the work

The quotation should be submitted on printed letter head indicating SGT and PAN number of the firm.

Sealed quotation should be submitted only through **registered post/speed post through Indian Postal Service.**

Taxes, duties and other charges if any shall be quoted separately.

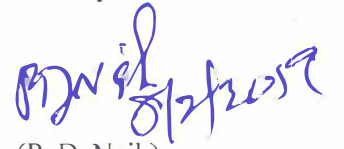
The work should be completed within 45 days from the date of issue of the work order.

Head, Radiation and Photochemistry Division, reserves the right to accept/reject any or all quotation without assigning any reason.

TERMS AND CONDITIONS:

The acceptance of tender shall rest with department which does not bind itself to accept the lowest tender and reserves to itself the authority to reject any or all of the tenders received, without assigning any reason. All tenders in which any of the prescribed conditions are not fulfilled or incomplete in any respect are liable to be rejected.

Canvassing in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable for rejection.



(P. D. Naik)

Head, RPCD, BARC

अध्यक्ष, विकिरण एवं फोटोरसायनिकी प्रभाग
Head, Radiation & Photochemistry Division
भा.प.अ.केंद्र, ट्रॉम्बे, मुंबई - ४०० ०८५.
B.A.R.C., Trombay, Mumbai - 400 085.

Fabrication and Installation of TGS detector and Beam Splitter for FTIR spectrometer as per following specification and drawing

1. TGS detector FTIR spectrometer 1 No.

Specifications:

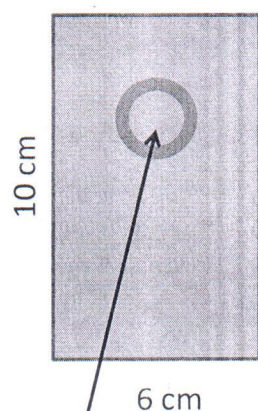
1. Dimension of detector module: height- 10 cm, width – 6 cm
2. Dimension of TGS element, diameter- 1.2 cm, radius- 0.6 cm.
3. Range of detection : (MID-IR) - (7800 – 350 cm^{-1})
4. Window: KRS5 covering Mid IR range 7800-350 cm^{-1}
5. Signal to Noise ratio(at 4 cm^{-1} resolution, 1 min acquisition): better than 40000: 1
6. The detector must be compatible and installed with our existing FTIR6300 hardware and software

2. Germanium coated KBr Beam Splitter for FTIR spectrometer 1 No

Specifications:

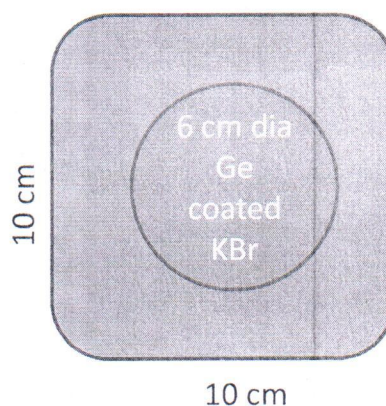
1. Material: KBr
2. Material of coating: Ge
3. T/R ratio- 50/50 $\pm 20\%$
4. Must be Equipped with Secure lock Beam splitter catch system -IF unit controls aperture control in beam splitter & detects the type of Beam Splitter.
5. Must be compatible with the interferometer of existing FTIR spectrometer.
6. The component must be installed and demonstrated to the existing FTIR 6300 spectrometer by the supplier.

TGS detector assembly



1.2 cm dia TGS element Fitted in 10 x 6 cm copper frame

Ge coated KBr Beam splitter assembly



6 cm diameter KBr plate (germanium coated) to be fitted on centre of 10 x 10 cm SS frame. Thickness of Germanium coating should be optimized to 50 : 50 mid-IR beam splitting efficiency.