

INDIAN INSTITUTE OF TROPICAL METEOROLOGY
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PS/125/36/2016

15 November 2016

Sub: Minutes of the Pre-bid meeting of the "Supply and Installation of Proton Transfer Reaction Time-of-Flight Mass Spectrometer (PTR-TOF-MS)" - Qty 01 Set (as per tender document) held on 15/11/2016 at IITM, Pune.

A Pre-bid meeting relating to the "Supply and Installation of Proton Transfer Reaction Time-of-Flight Mass Spectrometer (PTR-TOF-MS)" - Qty 01 Set held on 15th November, 2016 at 11:30 hrs. at IITM, Pune.

In response to our Global Tender Notice No.PS/125/36/2016, representatives of the following prospective bidders / firms / companies had attended the meeting.

- i) M/s. TesscornAeroFluids Inc., Bangalore
- ii) M/s. MARS Bioanalytical Pvt. Ltd., Delhi

Representative of the prospective bidders / firms / companies were asked about any suggestion, queries or technical advancement regarding tender document & Equipment to be procured. The Institute's reply to the queries raised by M/s. Tesscorn AeroFluids Inc., Bangalore and M/s. MARS Bioanalytical Pvt. Ltd., Delhi is as given below:

1. **Detector can be Micro channel –plate (MCP) having time resolution better than 30 ps and unlimited mass scale.** As per their Principals – the MCPs available in the market are having 300ps time resolution and above.

Reply: May be read as 300 PS.

2. Reaction chamber of system should be a drift tube in which following temperature, pressure, electric field and reaction condition ranges should be possible: Temperature: 40-100 °C; Pressure: Max 3.5 mbar; Electric field: up to 1000 V with stable homogeneous electric field ; Reaction conditions: 50-300 Td

Reply: No change, as per Tender.

3. The inlet system should have a heated tubing that is at least 5 m long, with adjustable temperature set points in the range of 40- 150 °C..

Reply: No change, as per Tender.

4. Sample inlet flow should be regulated and adjustable 50 ml/min to 10 L/min (temperature corrected).

Reply: No change, as per Tender.

5. Additional port for second heated hose should also be provided.

Reply: No change, as per Tender.

6. Regulation of inlet pressure between 500 mbar -1200 mbar should be possible

Reply: No change, as per Tender.

7. System should have built in sample gas dilution system allowing for dilution by factor of up to 500

Reply: No change, as per Tender.

8. System should have built in sample gas dilution system allowing for dilution by factor of up to 500

Reply: No change, as per Tender.

9. Data acquisition system should have RAM better than 5 GB RAM and have PCI slots for data acquisition and pulse generator card

Reply: No change, as per Tender.

10. The TOF data acquisition software should permit data visualization as spectra and time traces, peak identification and real time mass calibration with data file export in ASCII, hdf5 formats with routines that enable single button click import into IGOR PRO and MS Excel

Reply: No change, as per Tender.

11. System should have a mass resolution better than 5000 ($m/\Delta m$) (FWHM) for benzene and higher molecular weight compounds, that is for $m/z > 79$.

Reply: No change, as per Tender.

12. Sensitivity should be > 100 cps/ppb.

Reply: No change, as per Tender.

13. LOD should be better than 5 pptv for averaging @ 1 minute @ 5000 (m/Δm).
Reply: No change, as per Tender.
14. Response time < 100 ms and linearity range 10 pptv – 100 ppmv
Reply: No change, as per Tender.
15. System should incorporate at least six Analog Output ports and six Mass Flow Controller ports
Reply: No change, as per Tender.
16. System should be supplied with compatible UPS system for 30 min power backup in event of power failure and should not consume peak load greater than 1500 W. System should be compatible with main power supply of 220V/50Hz
Reply: No change, as per Tender.
17. PTR-TOF-MS Installation and operation training schedule on site should be for a minimum of 5 days including advanced software use.
Reply: 05 days training at designated location.
18. System should be supplied with a certified 19 VOC calibration gas mixture containing the following compounds (1) formaldehyde 2) methanol 3) acetone 4) acetaldehyde 5) dimethyl sulphide 6) isoprene 7) benzene 8) toluene 9) p-xylene 10) styrene 11) trimethyl benzene 12) alpha pinene 13)1, 2 dichlorobenzene 14) acetonitrile 15) ethanol 16) acrolein 17) methacrolein 18) 2- butanone 19) 1,2,4-trichlorobenzene) in an inert aluminum gas bottle of 40 L capacity filled to 150 bar for field calibrations in the 1 ppm or lower concentration range for stability greater than 11 months
Reply: No change, as per Tender.
19. System should contain heated platinum or palladium convertor based catalyst for generating VOC free zero air to collect instrument background measurements
Reply: No change, as per Tender.
20. **Revised Delivery Schedule: 12-16 weeks After Receipt of Order OR as prescribed in PO.**
21. **The revised method and conditions of payment to be made to the Supplier under this Contract shall be as follows:**
(A) Payment for Goods supplied from abroad: Payment of foreign currency portion shall be made in currency of the Contract in the following manner:
(a) On Shipment: SIXTY (60%)percent of the Contract Price of the Goods shipped shall be paid through irrevocable letter of credit opened in favour of the Supplier in a bank in its country, upon submission of documents specified in GCC Clause 2.15.
(b) On Acceptance: FORTY (40%)percent of the Contract Price of Goods received shall be paid within thirty (30) days of receipt of the Goods and successful installation & commissioning upon submission of claim supported by the acceptance certificate issued by the Purchaser along with the **Performance Security**, if any.
(c) The LC for 100% value of the contract shall be established after deducting the agency commission payable if any, to the Indian agent from the FOB / FCA value.
(d) The LC will be confirmed at the suppliers cost, if requested specifically by the supplier. All bank charges abroad shall be to the account of the beneficiary i.e. supplier and all bank charges in India shall be to the account of the opener i.e. purchaser. If LC is requested to be extended/ reinstated for reasons not attributable to the purchaser, the charges thereof would be to the suppliers' account. Payment of local currency portion shall be made in Indian Rupees within thirty (30) days of presentation of claim supported by a certificate from the Purchaser declaring that the Goods have been delivered and that all other contracted Services have been performed.
(B) Payment for Goods and Services supplied from India: The payment shall be made in Indian Rupees, as follows:
(a) On shipment: SIXTY (60%) percent of the Contract Price shall be paid on receipt of the Goods and upon submission of the documents specified in **GCC Clause 2.15**
(b) On Acceptance: The remaining **FORTY (40%)**percent of the Contract value shall be paid to the Supplier within thirty (30) days after the date of the acceptance certificate issued by the Purchaser subject to submission of performance security, if any.
(c) In case of supplies where installation & commissioning is not required payment will be made within 30 days from receipt of items by purchaser as per purchase order contract
(d) E-Payment: All payments, IITM prefers to make Electronic Transfers (RTGS) / (NEFT)
22. **Revised Last date of submission of bids: 14th December 2016 upto 12:00 hrs.**
Revised Opening of bids (Technical only): 14th December 2016 at 15:00 hrs.

The Pre-bid Committee suggested continuing / keeping the tender document as it is incorporating the changes detailed at Sr. No.1 to 22 above.