

e-Tender Document

For

Procurement of

Gas Chromatograph (GC) - Triple

Quadrupole Mass Spectrometer

(MSMS) with Automated Thermal

Desorber (ATD)

Tender No.:- MPCB/PSO/e-Tender-02/2019



Maharashtra Pollution Control Board

Kalpataru Point, 3rd Floor, Sion Matunga Scheme Road No.8

Opp.Sion Circle, Sion (East), Mumbai - 400 022

Website: .<http://mpcb.gov.in>

Price: Rs.5000/-

(Non Refundable)

July, 2019

Maharashtra Pollution Control Board

Kalpataru Point, 3rd Floor,
Sion Circle, Sion (East), Mumbai - 400 022

Website: <http://mpcb.gov.in>

e-Tender for Supply of Gas Chromatograph (GC) -Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD)

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Maharashtra Pollution Control Board

Kalpataru Point, 3rd&4th Floor, SionMatunga Scheme Road No.8,

Opp. Sion Circle. Sion (East), Mumbai - 400 022

Website: <http://mpcb.gov.in>

Tender Notice

1). Tender Notice Details

| | |
|--|---|
| Tender Reference no. | MPCB/PSO/e-Tender-02/2019, Dt. 15/07/2019 |
| Name of Work / Item | Purchase of Gas Chromatograph (GC) -Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) |
| Cost of blank tender document & Mode of Payment | Rs.5000/- (Rupees Five thousand Only) (Non Refundable) to be paid through Online Payment Modes i.e. Net Banking, Debit Card and Credit Card during Tender Document Download Stage for each. |
| EMD Amount & Mode of Payment | Rs.40,000/- (Rupees Forty Thousand Only) to be paid through Online Payment Modes i.e. Net Banking, Debit Card, Credit Card and NEFT/RTGS during Bid Preparation Stage for each. |
| Date ,Time and Place of Pre Bid Meeting | 29/07/2019 at 17.00 Hrs at MPCB Conference Hall,Kalpataru Point, 4th Floor, Sion Matunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai – 400 022 |
| Last date and time of receiving queries from prospective bidders to be addressed in pre-bid conference | 26th July 2019 at 17:00 Hrs |
| Venue of online opening of tender | MPCB Conference Hall,Kalpataru Point, 4 th Floor, SionMatunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai - 400 022 |
| Address for Communication | Member Secretary M.P.C.Board, Kalpataru Point, 4 th Floor, SionMatunga Scheme Road No.8,Opp. Sion Circle. Sion (East), Mumbai - 400 022 |
| Contact Telephone & Fax Numbers | 022-267195012,67195033 022-27780684 Email- icclab@mpcb.gov.in |
| e-Tendering Helpline Support: Monday to Friday - 09:00 AM - 08:00 PM Saturday - 09:00 AM - 06:00 PM | Telephone: 020 - 3018 7500 Email: support.gom@nextenders.com |

2) e-TENDER TIME SCHEDULE

Please Note: All bid related activities (Process) like Tender Document Download, Bid Preparation, and Bid Submission will be governed by the time schedule given under Key Dates below:

| Sr. No. | Activity | Performed by | Start | | Expiry | |
|---------|--|-------------------|------------|-------|------------|-------|
| | | | Date | Time | Date | Time |
| 1 | <i>Release of Tender</i> | <i>Department</i> | 16-07-2019 | 11.00 | 16-07-2019 | 17.00 |
| 2 | Tender Download | Bidders | 16-07-2019 | 10.00 | 26-07-2019 | 17.00 |
| 3 | Bid Preparation | | 16-07-2019 | 10.00 | 03-08-2019 | 17.00 |
| 4 | <i>Superhash Generation & Bid Lock</i> | <i>Department</i> | 05-08-2019 | 11.00 | 05-08-2019 | 13.00 |
| 5 | Control Transfer of Bid | Bidders | 05-08-2019 | 13.01 | 06-08-2019 | 17.00 |
| 6 | <i>Envelope Opening 1</i> | <i>Department</i> | 07-08-2019 | 15.00 | 07-08-2019 | 17.00 |
| 7 | <i>Envelope 2 Opening</i> | | 13-08-2019 | 11.00 | 13-08-2019 | 13.00 |

**Dates mentioned here, are scheduled dates for Bid Opening Activities. Any changes in dates of opening of technical and commercial bids shall be notified in 'Press Notice / Corrigendum' section on the e-Tendering sub portal of the department before opening of the same.*

3. INSTRUCTIONS TO BIDDERS

3.1 GENERAL INSTRUCTIONS:

The bidders are requested to familiarize themselves with the use of the e-Tendering portal of Government of Maharashtra well in advance.

To view- Tender Notice, Detailed Time Schedule, Tender Document for this Tender and subsequently purchase the Tender Document and its supporting documents, kindly visit following e-Tendering website of **Government of Maharashtra**:
<https://maharashtra.etenders.in>

The Contractors participating first time for e-Tenders on GoM e-tendering portal will have to complete the Online Registration Process for the e-Tendering portal. A link for enrollment of new bidders has been provided on <https://maharashtra.etenders.in>

All bidders interested in participating in the online e-Tendering process are required to procure Class II or Class III Digital e-Token having 2 certificates inside it, one for Signing / Verification purpose and another for Encryption / Decryption purpose. The tender should be prepared & submitted online using individual's Digital e-Token.

e-Tendering Tool Kit for Bidders (detailed Help documents, designed for bidders) has been provided on e-Tendering website in order to guide them through different stages involved during e-Tendering such as online procedure for Tender Document Purchase, Bid Preparation, Bid Submission.

Bidders will have to pay cost of Tender Document through online modes of payment such as **Net Banking, Debit Card and Credit Card** during **Tender Document Download stage**. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

Similarly, Bidders will have to pay Earnest Money Deposit through online modes of payment such as **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during **Bid Preparation stage**. This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

The interested contractors / bidders will have to make online payment (using credit card/debit card/net banking) of Rs. **1054/-** (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (SifyNexTenders) at the time of entering **Online Bid Submission** stage of the tender schedule.

If any assistance is required regarding e-Tendering (registration / upload / download) please contact GoM e-Tendering Help Desk on number: **020 – 3018 7500 (Pune Helpline)**, Email: support.gom@nextenders.com

For a bidder, online bidding process consists of following 3 stages:

1. Online Tender Document Purchase and Download

2. *Online Bid Preparation*

3. *Online Bid Submission*

All of 3 stages are mandatory in order for bidders to successfully complete Online Bidding Process.

4). TENDER DOCUMENT PURCHASE AND DOWNLOAD:

4.1) The tender document is uploaded / released on Government of Maharashtra, (GOM) e-tendering website <https://maharashtra.etenders.in>. Tender document and supporting documents may be purchased and downloaded from following link of **Organizations of Government of Maharashtra** on e-Tendering website of Government of Maharashtra, <https://allgom.maharashtra.etenders.in> by making payment through **Online Payment Modes i.e. Net Banking, Debit Card and Credit Card.**

4.2) If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder proceed further for next stage resulting in his/her elimination from Online Bidding Process.

4.3) This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

4.4) subsequently, bid has to be prepared and submitted online ONLY as per the schedule.

4.5) The Tender form will be available online only. Tender forms will not be sold / issued manually from **Maharashtra Pollution Control Board (MPCB)** office.

4.6) The bidders are required to download the tender document within the pre-scribed date & time mentioned in online tender schedule. After expiry of the date and time for tender document download, Department / Corporation will not be responsible for any such failure on account of bidders for not downloading the document within the schedule even though they have paid the cost of the tender to the Department / Corporation. In such case the cost of the tender paid by the bidders will not be refunded.

5. PREPARATION & SUBMISSION OF BIDS

Both the Bids (Technical as well as Commercial) shall have to be prepared and subsequently submitted online only. Bids not submitted online will not be entertained.

6. Online Bid Preparation

6.1). EARNEST MONEY DEPOSIT (EMD)

Bidders are required to pay Earnest Money Deposit (if applicable) through Online Payment modes i.e. **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during Bid Preparation Stage.

This payment will not be accepted by the department through any offline modes such as Cash, Cheque or Demand Draft.

If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder to complete Bid Preparation stage resulting in his/her elimination from Online Bidding Process.

In case EMD is mandatory to all the bidders for a tender, offers made without EMD shall be rejected.

In Bid Preparation stage, bidders get access to Online Technical and Commercial Envelopes where they require uploading documents related to technical eligibility criteria and quote commercial offer for the work / item in respective online envelopes.

7). TECHNICAL BID

Following documents should be uploaded in Online Technical Envelope (T1) in PDF format, if required can be zipped as well and then uploaded during **Online Bid Preparation stage**.

List of documents for Technical Envelope is as follows:

| Sr. No. | List of Documents | Compulsory (C) / Additional (A) |
|---------|---|---------------------------------|
| | Pre-Qualification Documents to be submitted as per schedule – I: | |
| 1 | Undertaking of having manufacturer along with address of manufacturing activity. In case of foreign manufacturers, Indian counterpart shall enclose Authority letter from their principal | C |
| 2 | List of Govt./Semi Govt. Institutions, Universities, industries etc. having supplied Gas Chromatograph (GC) -Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) of same OR equivalent model. Enclose Photocopies of minimum three Purchase order for last two years. | C |
| 3 | Details as per Schedule II | C |
| 4 | Certified copies of G.S.T., Excise Registration No, PAN No. | C |
| 5 | Bidders shall give undertaking as per enclosed format at Schedule – III. | |
| 6 | Technical Specification as per Schedule - IV: | C |
| 7 | Technical Specification Deviation Sheet as per Annexure-III | C |

Note:1) **C** indicates compulsory documents to be uploaded in PDF format.

2) Catalogs and other supporting documents of above items should also be submitted in original at the time of technical bid opening.

3) Technical Bid information (Excluding prize/cost) in **excel sheet** as per **Annexure-III** shall be uploaded in addition to PDF format.

8) COMMERCIAL BID

All commercial offers must be prepared online (An online form will be provided for this purpose in Online Commercial Envelope (C1), during **Online Bid Preparation** stage).

Any bidder should not quote his offer anywhere directly or indirectly in Technical Envelope (T1), failing which the Commercial Envelope (C1) shall not be opened and his tender shall stand rejected.

Note: During Online Bid Preparation stage, bidders are allowed to make any changes or modifications in the bid data uploaded by them in Technical (T1) as well as Commercial (C1) envelope.

*Towards the end of Bid Preparation, once verification of EMD payment is successful, bidder completes the Bid Preparation stage by generating the Hash Values for T1 and C1. Post this, **system won't allow him/her to make any further changes or modifications in the bid data.***

9) Online Bid Submission

In this stage, bidders who have successfully completed their Bid Preparation stage are required to transfer the data, already uploaded by them during Bid Preparation stage, from their custody to department's custody.

Note: During this stage, bidders won't have any capability to make any kind of changes or editing into technical as well as commercial data.

10) INSTRUCTION TO BIDDERS FOR ONLINE BID PREPARATION & SUBMISSION

Bidders are required to pay Earnest Money Deposit (if applicable to them) through Online Payment modes i.e. **Net Banking, Debit Card, Credit Card and NEFT/RTGS** during Bid Preparation Stage.

If for any reason a bidder fails to make this payment through online modes, system won't allow the bidder to complete Bid Preparation stage resulting in his/her elimination from Online Bidding Process.

Hence, it is strongly recommended to bidders to initiate this payment well in advance prior to expiry of Bid Preparation stage in order to avoid elimination from Online Bidding Process on grounds of failure to make this payment.

During the activity of **Bid Preparation**, bidders are required to upload all the documents of the technical bid by scanning the documents and uploading those in the PDF format. This apart, bidders will have to quote commercial offer for the work / item, for which bids are invited, in an online form made available to them in

Commercial Envelope. This activity of **Bid Preparation** should be completed within the pre-scribed schedule given for bid preparation.

After **Bid Preparation**, the bidders are required to complete **Bid Submission** activity within pre-scribed schedule without which the tender will not be submitted.

Interested contractors / bidders will have to make online payment (using credit card/debit card/net banking/Cash Card) of Rs. **1054/-** (inclusive of all taxes) per bid per tender to online service provider of e-Tendering system (SifyNexTenders) at the time of commencing **Online Bid Submission** stage of the tender schedule.

Non-payment of processing fees will result in non submission of the tender and Department will not be responsible if the tenderer is not able to submit their offer due to non- payment of processing fees to the e-tendering agency.

Detailed list of different modes of online payment to e-tendering service provider (**E-Payment Options**) has been provided under **E-Tendering Toolkit for Bidders** section of <https://maharashtra.etenders.in> .

The date and time for online preparation followed by submission of envelopes shall strictly apply in all cases. The tenderers should ensure that their tender is prepared online before the expiry of the scheduled date and time and then submitted online before the expiry of the scheduled date and time. No delay on account of any cause will be entertained. Offers not submitted online will not be entertained.

If for any reason, any interested bidder fails to complete any of online stages during the complete tender cycle, department shall not be responsible for that and any grievance regarding that shall not be entertained.

Any amendment to the tender will be placed on sub portal of the Department, who have invited the bids, on e-tendering portal of the Govt. of Maharashtra. The tenderer will not be communicated separately regarding the amendment.

11) OPENING OF BIDS:

The bids that are submitted online successfully shall be opened online as per date and time given in detailed tender schedule (if possible), through e-Tendering procedure only in the presence of bidders (if possible).

Bids shall be opened either in the presence of bidders or it's duly authorized representatives. The bidder representatives who are present shall sign a register evidencing their attendance. Only one representative per applicant shall be permitted to be present at the time of opening the tender.

12) TECHNICAL ENVELOPE (T1):

First of all, Technical Envelope of the tenderer will be opened online through e-Tendering procedure to verify its contents as per requirements.

At the time of opening of technical bid the tenderer should bring all the original documents that have been uploaded in the Online Technical Envelope **(T1)** so that same can be verified at the time of opening of technical bid.

If the tenderer fails to produce the original documents at the time of opening of technical bid then the decision of the committee taken on the basis of document uploaded will be final and binding on the tenderer.

If the various documents contained in this envelope do not meet the requirements, a note will be recorded accordingly by the tender opening authority and the said tenderer's Commercial Envelope will not be considered for further action but the same will be recorded. Decision of the tender opening authority shall be final in this regard.

The right to accept or reject any or all tenders in part or whole without assigning any reason thereof is reserved with Tender Opening Authority and his decision(s) on the matter will be final and binding to all.

The commercial bids shall not be opened till the completion of evaluation of technical bids. The commercial Bids of only technically qualified Bidders as mentioned above will be opened.

13) COMMERCIAL ENVELOPE (C1):

This envelope shall be opened online as per the date and time given in detailed tender schedule (if possible), through e-Tendering procedure only,

14) Final List of Commercial Documents to be uploaded Online:

The following documents related to commercial envelope should be uploaded by the bidders in the form of PDF Files in the same order as mentioned below, on the e-Tendering website during **Online Bid Preparation** stage.

| Sr. No. | List of Documents | Compulsory I / Additional (A) |
|---------|---|-------------------------------|
| 1 | Specification of Gas Chromatograph (GC) -Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) with List of spares / consumables along with price details as per Annexure – I | C |

Note:1) All above documents should be uploaded in PDF format and the price schedule (**Annexure – I**) should be uploaded in excel format as well.

General Terms & Conditions:

- 1) **Specification of Instrument required: As per Schedule – IV**
 - I) Technical Bid consisting of
 - i) Authorization of Manufacturer
 - ii) Specification Required V/s. Specification Offered
 - iii) Printed Catalogs
 - iv) EMD.
 - II) Financial Bid consisting of: Price, Taxes, Warranty etc.
- 2) **Payment Terms:** 80% against supply of instrument and balance 20% against successful installation and demonstration at MPCB, Central Laboratory, Navi Mumbai.
- 3) **Delivery F.O.R. / Mode of delivery: Delivery and commissioning of Gas Chromatograph (GC) Triple Quadrupole Mass Spectrometer(MSMS) with Automated Thermal Desorber (ATD) Instrument at C.Lab., Navi Mumbai within 90 days from issue of order.**
- 4) **Price of Instrument:** Should be TOTAL FOR Destination basis including GST & other levies (Except LBT) if applicable any. (LBT cost should be mentioned separately). ***Quoted rate may clearly indicate the net amount in Indian Rupees (INR) and all applicable GST & levies.***
- 5) **Installation, Demonstration, Training:** Shall be provided by trained engineers at free of cost to minimum two scientist of MPCB for operation and maintenance for at least two weeks at OEM facility of Manufacturer or at application Laboratory at OEM.
- 6) **Custom Duty Exemption Certificate & other required documents for duty / central excise exemption will be given by MPCB. However, consignment clearance from Customs warehouse should be done by supplier.**
- 7) **EMD detail :** Non Refundable Rs.40,000/- shall be submitted in the name of “MPCB” online as per Clause no.3.1 for each instrument.
- 8) **Performance Guarantee:** Successful bidder shall submit PBG @10% on value of order within 15 days from acceptance of order (in the form of BG on nationalized bank valid for 18 months).
- 9) The quoted model OR equivalent, should have been supplied to minimum **five** vendors in last three years (Enclose list of Purchasers and certificate of satisfactory commissioning and performance).

- 10) The e-Tender is opened to only manufacturer and in case of imported goods authorized Indian agent can bid.
- 11) Specification of **Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD)** is enclosed at **Schedule-IV**. Bidders are requested to state the buy-back discount (**against M/s.Perkin Elmer make existing GC-ATD-MS system at C.Lab., Navi Mumbai**) on the original catalog price. Bidders can check the existing M/s.Perkin Elmer make GC-ATD-MS at MPCB Central Laboratory, Nirmal Bhavan, SHil-Mahape Road, Navi Mumbai at working hours from 10.00 am to 5.00pm.
- 12) The bidder is expected to examine all instructions mentioned in tender documents forms and terms & conditions. Failure to furnish all information required by the tendering documents or submission of all documents, not substantially responsive to the tendering document in every respect will be at the risk and may result in the rejection of bid.
- 13) This call of e-tender does not bind the M.P.C.B. to place order. The offer/Bids submitted in response to this invitation may be rejected without assigning any reasons.
- 14) The Board at its discretion may extend the last date of submission of tender and opening of tenders. The authority does not bind itself to accept the lowest e-tender and is vested with authority to reject any or all of the tenders received without assigning any reason.
- 15) Documents, samples, etc. enclosed in the e-tender, shall become the property of M.P.C.B. without any payment.
- 16) In case of dispute, the decision of Member Secretary, Maharashtra Pollution Control Board shall be final
- 17) The proposal from the firms /Bidders putting their own terms and conditions will be rejected.
- 18) The validity of the tender will be for the duration of **180 days**.
- 19) Each folio of the tender document shall be signed by the bidder otherwise the bid will be treated as rejected.
- 20) The e-tender must be filled in English and all the entries must be made by hand written in ink or may be typed. If any of the document is missing, or unsigned tender will be considered invalid.
- 21) The prospective bidder shall have not been disqualified by the Maharashtra Pollution Control Board for any reason for specific period.

- 22) The price bid of only those bidders will be opened whose Pre qualification Criteria (**schedule – I**) are found to be acceptable.
- 23) The e-tender shall contain no interlineations erasures or overwriting of words except as necessary to correct errors made by e-tenders, in which case such correction shall be initialized by the person or persons.
- 24) Bids received after due date and time mentioned in the tender notice shall not be accepted.
- 25) In no case hard copy of tender should be handed over to any employee of the Board.
- 26) Canvassing in any form will disqualify the tender.
- 27) All tenders shall be addressed to:
**The Member Secretary,
Maharashtra Pollution Control Board, Kalpataru Point, 3rd& 4th Floor,
Sion-Matunga Scheme Road No.8, Opp. Sion Circle. Sion (East),
Mumbai- 400 022, Tel No. 24010437, 24086916.**
- 28) Earnest Money of the unsuccessful bidder will be refunded without any interest after the tender is finalized or within one month whichever is earliest and that of successful bidder will be refunded without any interest after 3 months of the finalization tender or can be readjusted as a security deposit, on their request.
- 29) Successful bidder shall deliver the goods at the door step at Central Laboratory, MPCB, Navi Mumbai as mentioned in purchase order.(**Annexure –I**)
- 30) Successful bidder or his authorized local agents / dealers as mentioned in tender document will have to supply Atomic Absorption Spectrometer, Semi Micro Weighing Balance & Inductively Coupled Plasma – OES at rate finalized
- 31) The successful bidder shall deposit security deposit @10% of Purchase cost in the form of D.D. drawn in favour of **Maharashtra Pollution Control Board** which will be refundable, without interest, after the successful completion of the warranty period.
- 32) Successful bidder after accepting the purchase order fails to supply the goods as per T & C of P.O such manufacture/supplier shall be black listed and his EMD and Security deposit shall be forfeited.
- 33) In case of any dispute, the Mumbai is the jurisdiction.
- 34) MPCB, reserve right to reject any / all offers without assigning any reason.

Date:

Place:

(Name & Seal & Signature of Bidder)

Maharashtra Pollution Control Board

Schedule- I

PRE-QUALIFICATION CRITERIA

Following Signed & Sealed documents should be submitted:

1. Undertaking of having manufacturer along with address of manufacturing activity and specify Country of Origin. In case of foreign manufacturers, Indian counterpart shall enclose Authority letter from their principal.
2. List of Suppliers having Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer(MSMS) with Automated Thermal Desorber (ATD) of same model. Enclose Photocopies of Purchase Orders for last three years. Total Annual supply should not be less than **Rs. 5.0 Crores**.
3. The intending bidder will have to submit earnest money deposit (EMD) of Rs.40,000/- In the form of pay order / Demand Draft of a nationalized bank drawn in favour of "**Maharashtra Pollution Control Board**" with a validity of six months after the date of issue of this tender. A tender which is not accompanied by earnest money will not be considered.
4. Certified copies of Excise Registration No., PAN No., GST No.
5. Bidders shall give undertaking as per enclosed format at **schedule – III**.

Date :

(Signature of Supplier)

Place:

(Name &Designation)

MAHARASHTRA POLLUTION CONTROL BOARD

Application form

Schedule – II

(To Be Filled by the Manufacture or his distributor enclose authority letter of Principal manufacture in case of imported goods)

- 1) Name and full address of Bidder Including telegraphic address / e-mail / Telephone No. and Fax No.
- 2) Name and designation of the Head of The Firm/Supplier and his Tele. No. / Fax / Email
- 3) Tender Document Fees : Rs.5000/- Yes No
- 4) Earnest Money Deposited : Rs. 40000/- Yes No
- 5) Whether the Tender conditions are : Yes No acceptable in full. (Reply Yes or No)
- 6) **Enclose authority letter of Principal Manufacturer.**
- 7) Income Tax, **PAN** No., GST /Excise Registration Certificate Attached (Latest) : (Reply Yes or No)
- 8) Documents to be submitted /enclosed
 - i) Sealed Document containing prequalification criteria of bidder for the supply of Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) duly signed, (**Schedule – I**)
 - ii) Acceptance of General Terms & Conditions duly signed as per **Schedule – II**
 - iii) Sealed Price bid: (**Annexure – I**)

Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) – **Annexure- I** (Duly signed)

Place:

Date ⊗ Name& Seal & Signature of Bidder)

Schedule – III
UNDERTAKING

Date:-

Tender Notice No. MPCB/PSO/e-Tender-01/2019 Dtd. /03/2019

To,
The Member Secretary
Maharashtra Pollution Control Board
Kalpataru Point, 3RD Floor,
SionMatunga Scheme Road No.8, opp. Sion Circle
Sion, (East) Mumbai 400 022

Sir,

Having examined the conditions of Tender Documents and specifications of the materials, the receipt of which is hereby acknowledged, we the undersigned offer to supply, deliver the following:

| Sr. No. | Particulars | Make / Manufacturer Name |
|----------------|---|---------------------------------|
| 1 | Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) (Under Buy-back) | |

(Bidder my enclose catalog / additional pages if necessary)

The above supply, with the specification and conditions of supply will be as per the rates quoted in this tender. We undertake, if our offer is accepted to deliver the items quoted by us. We shall deliver quality items as per tender specifications within stipulated time period of tender / Purchase order (PO).

We agree to abide by this tender conditions and it shall remain binding upon us.

Date. Day of 2019.

Signature of authorized person)
With stamp & full address

Schedule – IV

Technical Specifications for Gas Chromatograph (GC) Triple Quadrupole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) (Under Buy-back)

The Latest OR (Top-of-the-line model) Triple Quadrupole GCMS mass spectrometer should be equipped with high-sensitivity ion source, high-gain long life detector, and ion optics for highly selectable GC-MS/MS analysis. The quadrupole with rotatable pre-rod and high-stability ion source should make it possible to do long-term stable and high sensitivity analysis. High speed MRM/ SRM (Multiple Reaction Monitoring or Selective Reaction Monitoring) performance and a method creation function should automatically set the optimal measurement times for each component. It should offer high speed scan performance so that it should be capable of measurements combining multiple measurement modes such as simultaneous Scan/MRM measurements and thus it can acquire great deal of information in a single analysis. System should have built-in gas saver or Helium gas saver mode. Carrier gas consumption and power consumption in standby mode also should be available, which will contribute to reduced day to day running costs and a lower environmental load.

Fully PC operated gas chromatograph – MS / MS triple quadrupole (GC-MS / MS) system intended for the analysis of polycyclic aromatic hydrocarbons, pesticides, volatile organic compounds.

| | | |
|---|--|---|
| 1 | Instrument composition | |
| | Gas Chromatograph – Mass Spectrometer triple quadrupole | <ul style="list-style-type: none"> • It should have Graphic User Intuitive and big colour display for easier viewing and operation purpose including viewing the status of all Gas chromatographic (column, Injector, detector status) running parameter function • GC oven to run ambient + 3 °C to 450 ° C, with min 10 heating ramps or more . Oven to be illuminated with suitable light for ease of operation & it should withstand upto 400 ° C temp. • Pressure setting throughout the range of 0.1 to 145 psi (1000 KPa) or more for connecting microbore (ID 0.1 mm) to mega bore (0.53 mm ID) capillary column and column flow of minimum 8 ml/min or more. <p style="margin-left: 40px;">Fastest cooling time of GC oven (from 450 ° C to 50 ° C within 3 to 4 mins.</p> |

| | | |
|----------|--|---|
| | | <ul style="list-style-type: none"> Auto Liquid Injector should be quoted with 100 vials or more . |
| | Capillary Column | <p>Capillary Column suitable for the analysis of polycyclic aromatic hydrocarbons, pesticides, volatile organic compounds, polychlorinated bi-phenyls, etc. (60 meter x 0.25 OR 0.32 mm ID x 1.4 µm (or more) Film thickness).</p> <p>Eg. Rtx-5ms; Rts-624 etc.</p> |
| | Injectors | <p>GCMS should have two Split / Split less injector – one for auto liquid & one for Thermal Desorber System with pressure range 140 psi & temperature up to 450 °C . It should have technology like Turn top or equivalent where the user should not use the spanner to replace glass insert or septa , which can easily perform maintenance on injection port & replace inserts and septa safely, un-interrupting the heated GC-MS unit thus increase the system uptime and productivity with high throughput.</p> |
| 2 | Technical Specification :- Gas Chromatograph Instrument | |
| | Features | Personal Computer controlled Data Workstation based computer compatible (GC). Built in diagnostics and comprehensive Self-Testing. |
| | Temperature programme ramps / holds | Minimum 10 ramps. Negative Ramps are allowed. |
| | Upgradability | The system should be upgradable to additional SPL / Splitless , OCI , PTV Injector & Other detectors like FID , FPD, ECD etc. |
| | Local display | <p>Colour & Touch screen graphical User Intuitive display should be available.</p> <p>Display include temperature and pressure / flow parameters, type of carrier gas, carrier gas column pressure, flow rates, split flow, detector gas flow rates and all detector parameters including method and Auto sampler information.</p> |
| | Local control | <ul style="list-style-type: none"> Touch screen Hard keys |
| | Language | English |
| | Memory protection | Power fail memory protection. |

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| | Method editing facility | Non-active methods should have editing facility |
| | System leak check | Unattended and automated system leak simultaneous check |
| | Purge system | Effective Gas Saver and Septum Purge System |
| | built back flush facility | Should be upgradable if required in future. |
| | Connectivity to teddler bags, canisters, etc. | Facility of gas sampling valve for direct analysis of gaseous samples collected in teddler bags, canisters, etc. |
| | Capacity | Possible to use columns of 50, 100, 250, 320, 530 microns. |
| 3 | Technical Specification: Triple Quadrupole Mass Spectrometer | |
| | Ion Source | <ul style="list-style-type: none"> • It should have unique front-open chamber to allow very easy removal of the ion source box, without removing the filament or lens thus permits easiest ion source maintenance. • Ionization Mode should be with EI (standard) and should have provision for future upgradeable to PCI, NCI mode • Electron Voltage Setting Range 10 V to 200 V • Electron Current Setting Range 5 A to 200 A. • During tuning, the three sensitivity modes (high-concentration mode, standard mode, and high-sensitivity mode) can be selected. • Filament Rhenium dual-filament (with automatic switching) system • Ion Source Temperature with temperature achievable 150 °C to 300 °C . |
| | Analyzer | <ul style="list-style-type: none"> • High-accuracy Heated Quartz OR Large quadrupole metallic rods OR equivalent technology should be used for Q1 and Q3, and a high-efficiency collision cell unit, thus enabling high-sensitivity analysis across a wide mass range (10 – 1050 u) or more. |

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| | | <ul style="list-style-type: none"> • The analyzer should have differential / dual stage exhaust system & thus maintains high ion transmission. • Mass Stability 0.1 u to 48 hours (constant temperature) • Maximum Collision Energy 60 eV Collision Gas Argon / Nitrogen or equivalent. |
| | Detector | <ul style="list-style-type: none"> • It should have Tripple Axis Or overdrive lenses technology or equivalent technology to cuts out unnecessary noise components thus phenomenally improving to give highest sensitivity. • The shield plates near to electron multiplier should reduce more noise and subsequently reduce the load during the trace level (ppb / ppt) analysis and improves the detector's life. • The detector's secondary electron emission surface should be treated to ensure a long operating life, even when exposed to air with uniform dynamic Range of 1×10^6 or better. |
| | Vacuum System (TMP) | <ul style="list-style-type: none"> • The Dual Stage or differential pumping Vacuum system having total capacity of 300 Ltr / Sec • In case, if there is any problem, the vacuum exhaust should stops automatically. The Auxiliary Pump (30 L/min (60 Hz) should be oil rotary pump should be quoted and to be provided as standard. • Vacuum system should with stand maximum Column Flowrate 8-10 mL/min (EI), □ Columns: Mega bore (0.53 mm & Micro bore 0.1 mm) column can be connected directly. • Easier column swapping without any manual interference or change over of the column with different polarities for quick method development for different types of applications should be available without breaking the vacuum. |

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| | Analysis Mode | <ul style="list-style-type: none"> • Apart from normal MS analysis modes it should have MS/MS combined analysis mode which can effectively perform Qualitative and Quantitative analysis in a single analysis. • Measurement Mode Q1 Scan, Q3 Scan, Q1 SIM, Q3 SIM, Product ion scan, precursor ion scan, neutral loss scan, MRM should be available. |
| | Scan Speed | <ul style="list-style-type: none"> • The scanning speed should automatically set to the optimal value depending on the scan interval and measured mass range. • Maximum Scan Speed 20,000 u/sec . The system should perform high sensitivity analysis with high scanning speed i.e. without compromising the sensitivity during high scanning speed so as to give more throughput & faster analysis. |
| | SIM (Selected Ion Monitoring) and MRM (Multiple Reaction Monitoring) | <ul style="list-style-type: none"> • Maximum MRM Speed > 800 MRM/sec • Minimum Dwell Time < 0.5 msec • The system should perform Scan / SIM type measurement with high speed switching between the Scan mode and the SIM / MRM mode. With this facility, the system should acquire qualitative mass spectral data simultaneously with high-sensitivity measurement in the SIM / MRM mode. • Demonstration of Performance : The performance should be confirmed during installation using 30 m x 0.25 mm x 0.25 μm (Rtx-5MS / Rxi-5Sil MS column) with automated Tuning (Auto tuning) facility. Auto tuning can be performed in each ionization mode of EI. • EI Scan mode: Octafluoronaphthalene (OFN) m/z 272 , 1 pg, S/N \geq 1500 (helium gas) • MRM mode: Octafluoronaphthalene (OFN) 100 fg, S/N \geq 16,500 or more (with helium gas) m/z 272 \rightarrow |

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| | | 222. High value of s/n will be preferable over lower value. |
| | Auto Switching of CID (collision) Gas | <ul style="list-style-type: none"> • During consecutive analysis, the system should automatically switch CID gas ON when performing MRM and product ion scan measurements, and switch CID gas OFF when performing only measurements of Q3 scan and Q3 SIM. • Software Specifications should be offered with latest version & should be included with the system. It should have an assistant bar that should allow graphical display of operational procedures, and functions to support the troublesome entry of parameters, the 32-bit/64-bit application software can be used even by first-time users. • All the accessories like auto liquid injectors, detector, GSV & Thermal Desorber ATD should be controlled through same software of GCMS-MS system. It should stop the analysis automatically to avoid wasting precious samples, in case of any problem occurs. • Measurement conditions and data analysis conditions should be managed in a single method file and the data includes in equipment log should be protected thus completely ensure complying with GLP requirements. |
| | Data Acquisition | <ul style="list-style-type: none"> • With GCMS-MS Software , data from MS and GC detectors (if any one of the detector is installed like FID , FPD, FTD (NPD), TCD, ECD detector) and the data can be acquired simultaneously or individually. |
| | Library | <ul style="list-style-type: none"> • Should be offered with latest version licensed NIST - 2017 OR upgrade version library in CD-ROM format to be provided. The software should supply separate dedicated MRM / SRM Pesticide residues, Environmental database should be quoted with individual part No. & license. . All the libraries & database should be loaded in front of user at site to avoid the supply of copied or pre-loaded database. It |

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| | | <p>should contain information on compounds including VOC, polychlorinated biphenyl, brominated flame retardants, dioxins, polycyclic aromatic hydrocarbons, and organochlorine pesticides, as well as their stable isotope labeled compounds.</p> <ul style="list-style-type: none"> • Also Separate Preregistered database with calibration curve information from the internal standard methods should be available which will allow users to calculate quantitative values without analyzing standard samples. It can be used for screening when quick confirmation of quantitative results is required. (Optional). |
| | Operating System | <ul style="list-style-type: none"> • Windows 10 Professional, 64-bit edition OR latest |
| | Essential Accessory | <ul style="list-style-type: none"> • Fully Automated Thermal Desorption system for sampling with Peltier cooling facility , fully automated robotic design with minimum 100 or more TD sample Tube carousel . System should not use cryogenic cooling . • Also supplier should quote for the required accessories for operation of thermal desorption system with varieties of TD tubes (like 3-adsorbent pre-packed Tenax, Carbosieve, chromosorb etc. for VOC sampling in Ambient Air. • Eg. M/s.Markes make Universal (3 adsorbent) OR M/s.Supelco make Carbotrap 349 (3 adsorbent) - 100 Nos. <p>Trap Temperature - Room temp -50°C~350°C</p> <p>Sample Line & Transfer line temp. → 50 to 250 °C</p> <ul style="list-style-type: none"> • Portable connecting device to be connected with TD tubes for rapid collection of samples. • The thermal desorber must be compatible with the application range & it should have the sample restoring facility . • It must be possible to quantitatively retain ultra-volatiles from at least 1.5 L of air or gas without liquid |

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| | | <p>cryogen for unattended on-line monitoring, with optimum sensitivity and minimal user intervention.</p> <ul style="list-style-type: none"> • The TD must allow the simultaneous analysis of volatiles and semi-volatiles • The system should have re-collection function as to get the analysed samples again because the environmental samples are precious & less in volume. • The TD system must be compatible with samples containing trace (i.e. sub ppt) and high (ppm / low %) concentration levels |
| | Warranty | The supplier should provide comprehensive on-site warranty for the entire system and peripherals (including parts and labour) for three years after successful installation and commissioning of complete system. The supplier should also quote AMC on regular basis beyond the warranty period for a period of three years. |
| | Installation & training | Minimum two week training to two MPCB Scientist at OEM facility overseas at application Laboratory / manufacturing facility. |
| | Essential Consumables & accessories (to be mentioned with Part nos. along with quantity as well): | <ul style="list-style-type: none"> • Filaments (2 Nos.) , • Septa (100 Nos), • glass inserts split (2 Nos.), • glass inserts splitless (2 Nos.), • Liquid auto injector vials 2 ml or 1.5 ml (200 Nos.), • Vespel ferrules (10 Nos.), • Low flow personal sampling pumps (SKC make) – 10 Nos. • Sampling pump calibrator – 1 No. • ATD tube conditioner (should have capacity to condition minimum 30 tubes at a time with carrier gas flow facility) – 1 No. |

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| | | <ul style="list-style-type: none"> • Dual adjustable low flow tube holder – 10 Nos. • Constant pressure controller (CPC) – 10 Nos. • Helium gas cylinders: Helium Gas cylinders duly filled with ultrapure gas should be supplied; Nitrogen Gas cylinder, Argon Gas cylinder should also be provided. Double stage gas regulators made of brass and filtration panel to meet the requirement. • GCMS MS slit nut (5 Nos.), etc. with quantity to be clearly specified and to be included in the offer. • Training at site must be provided minimum 3 times with a gap of 6 months for basic familiarity of the system. |
| | <p>PC & Printer</p> | <p>The personal computer with latest processor/configuration (Core i5 processor or better, minimum 4 GB RAM, 1 TB hard disk, DVD writer, with minimum 19" LED monitor, Optical Mouse, keyboard and LaserJet Printer) should be supplied along with the instrument.</p> <p>The latest OS (windows 10 or better software which is compatible with the chromatography / MS / MS software) should be supplied along with original license key of windows and Microsoft office.</p> <p>Latest Configuration branded color laser printer along with Licensed application software , anti virus software with licensed CD .</p> |

MAHARASHTRA POLLUTION CONTROL BOARD

Central Laboratory, Navi Mumbai
Annexure-I (For GC-MSMS-ATD)

PRICE SCHEDULE

Note: Commercial Offer has to be entered online only. An Online Form, similar to the Commercial format given below, will be available to the bidders in Commercial Envelope (C1) during Online Bid Preparation stage where bidders would quote their offer.

| Sr. No. | Details | Specifications | Cost in INR | Remarks |
|---------|--|----------------|-------------|---------|
| 1. | Make | | | |
| 2. | Model | | | |
| 3. | Cost of Basic unit INR | | | |
| 4. | Optional Items | | | |
| | i. Head Space Sampler /PTV Injector | | | |
| | ii. FID / TCD / FPD / ECD | | | |
| 5. | Total Cost in INR (before Taxes) | | | |
| 6. | GST | | | |
| 7. | Custom Duty | | | |
| 8. | Installation and Demonstration | | | |
| 9. | Total Cost with Taxes | | | |
| 10. | O & M cost (CAMC) for Three years after warranty period. Including Spares & Excluding Spares a. 1 st year b. 2 nd year c. 3 rd year | | | |
| 11. | List of consumables for 5 years | | | |
| 12. | Payment Terms | | | |
| 13. | Delivery period (No. of weeks) | | | |
| 14. | Warranty (Three years) | | | |

Note: - For price bid comparison, the O & M cost will be added to the capital cost of the instrument to Rank the Bid.

Place: **Date: (Name & Seal & Signature of Bidder)**

Name and address of the Laboratory

| Instrument Name | Name & Address Of Laboratory | Telephone / Fax No. | Email |
|---|---|---|--|
| Gas Chromatograph (GC) Triple Quadrapole Mass Spectrometer (MSMS) with Automated Thermal Desorber (ATD) -under buyback | Central Laboratory, Maharashtra Pollution Control Board, Nirmal Bhavan, Shil Mahape Road, Navi Mumbai | (022) 67195012 / 5004 / 5035 / (022) 27780684 | icclab@mpcb.gov.in |

MAHARASHTRA POLLUTION CONTROL BOARD

Annexure-III

Central Laboratory, Navi Mumbai

Technical Specification Bid for GC-MSMS-ATD

Note: Technical Offer has to be entered online only. An Online Form, similar to the Technical format given below, will be available to the bidders in Technical Envelope (C2) during Online Bid Preparation stage where bidders would submit their Technical offer in Excel Sheet as below.

| Sr. No. | Details | Specifications as per Tender | Specification Offered | Deviation / Remarks |
|---------|-------------------------------------|--|-----------------------|---------------------|
| 1. | Make | — | | |
| 2. | Model | — | | |
| 3. | Technical Specification :- | Gas Chromatograph Instrument | | |
| 4. | Features | Personal Computer controlled Data Workstation based computer compatible (GC). Built in diagnostics and comprehensive Self-Testing. | | |
| 5. | Temperature programme ramps / holds | 20 / 21. Negative Ramps are allowed. | | |
| 6. | Upgradability | The system should be upgradable to additional SPL / Split less , OCI , PTV Injector & Other detectors like FID , FPD, ECD etc. | | |
| 7. | Local display | Colour & Touch screen graphical User Intuitive display should be available. Display include temperature and pressure / flow parameters, type of carrier gas, carrier gas column pressure, flow rates, split flow, detector gas flow rates and all detector parameters including method and Auto sampler information. | | |
| 8. | Local control | Touch screen Hard keys | | |
| 9. | Language | English | | |
| 10. | Memory protection | Power fail memory protection. | | |
| 11. | Method editing facility | Non-active methods should have editing facility | | |
| 12. | System leak check | Unattended and automated system leak simultaneous check | | |
| 13. | Purge system | Effective Gas Saver and Septum Purge System | | |
| 14. | built back flush facility | Should be upgradable if required in future. | | |

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| 15. | Connectivity to teddler bags, canisters, etc. | Facility of gas sampling valve for direct analysis of gaseous samples collected in teddler bags, canisters, etc. | | |
| 16. | Capacity | Possible to use columns of 50, 100, 250, 320, 530 microns. | | |
| 17. | Technical Specification: Triple Quadrupole Mass Spectrometer | | | |
| 18. | Ion Source | <ul style="list-style-type: none"> • It should have unique front-open chamber to allow very easy removal of the ion source box, without removing the filament or lens thus permits easiest ion source maintenance. • Ionization Mode should be with EI (standard) and should have provision for future upgradeable to PCI, NCI mode • Electron Voltage Setting Range 10 V to 200 V • Electron Current Setting Range 5 A to 200 A. • During tuning, the three sensitivity modes (high-concentration mode, standard mode, and high-sensitivity mode) can be selected. • Filament Rhenium dual-filament (with automatic switching) system • Ion Source Temperature with temperature achievable 150 °C to 300 °C . | | |
| | Analyzer | <ul style="list-style-type: none"> • High-accuracy Heated Quartz OR Large quadrupole metallic rods OR equivalent technology should be used for Q1 and Q3, and a high-efficiency collision cell unit, thus enabling high-sensitivity analysis across a wide mass range (10 – 1050 u) or more. • The analyzer should have differential / dual stage exhaust system & thus maintains high ion transmission. • Mass Stability 0.1 u to 48 hours (constant temperature) <p>Maximum Collision Energy 60 eV Collision Gas Argon / Nitrogen or equivalent</p> | | |

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| | Detector | <ul style="list-style-type: none"> • It should have Tripple Axis Or overdrive lenses technology or equivalent technology to cuts out unnecessary noise components thus phenomenally improving to give highest sensitivity. • The shield plates near to electron multiplier should reduce more noise and subsequently reduce the load during the trace level (ppb / ppt) analysis and improves the detector's life. <p>The detector's secondary electron emission surface should be treated to ensure a long operating life, even when exposed to air with uniform dynamic Range of 1×10^6 or better.</p> | | |
| | Vacuum System (TMP) | <ul style="list-style-type: none"> • The Dual Stage or differential pumping Vacuum system having total capacity of 300 Ltr / Sec | | |
| | Analysis Mode | <ul style="list-style-type: none"> • Apart from normal MS analysis modes it should have MS/MS combined analysis mode which can effectively perform Qualitative and Quantitative analysis in a single analysis. <p>Measurement Mode Q1 Scan, Q3 Scan, Q1 SIM, Q3 SIM Product ion scan, precursor ion scan, neutral loss scan, MRM.</p> | | |
| | Scan Speed | <ul style="list-style-type: none"> • The scanning speed should automatically set to the optimal value depending on the scan interval and measured mass range. • Maximum Scan Speed 20,000 u/sec . The system should perform high sensitivity analysis with high scanning speed i.e. without compromising the sensitivity during high scanning speed so as to give more throughput & faster analysis. | | |

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| | SIM (Selected Ion Monitoring) and MRM (Multiple Reaction Monitoring) | <ul style="list-style-type: none"> • Maximum MRM Speed > 800 MRM/sec • Minimum Dwell Time < 0.5 msec • The system should perform Scan / SIM type measurement with high speed switching between the Scan mode and the SIM/MRM mode. With this facility, the system should acquire qualitative mass spectral data simultaneously with high-sensitivity measurement in the SIM/MRM mode. • Demonstration of Performance : The performance should be confirmed during installation using 30 m x 0.25 mm x 0.25 µm (DB-5MS / Rxi-5Sil MS column) with automated Tuning (Auto tuning) facility. Auto tuning can be performed in each ionization mode of EI. • EI Scan mode: Octafluoronaphthalene (OFN) m/z 272 1 pg, S/N ≥ 1500 (helium gas) • MRM mode: Octafluoronaphthalene (OFN) 100 fg, S/N ≥ 16,500 or more (with helium gas) m/z 272 → 222. High value of s/n will be preferable over lower value. | | |
| | Auto Switching of CID (collision) Gas | <ul style="list-style-type: none"> • During consecutive analysis, the system should automatically switch CID gas ON when performing MRM and product ion scan measurements, and switch CID gas OFF when performing only measurements of Q3 scan and Q3 SIM. • Software Specifications Should be offered with latest version & should be included with the system. It should have an assistant bar that should allow graphical display of operational procedures, and functions to support the troublesome entry of parameters, the 32-bit/64-bit application software can be used even by first-time users. • All the accessories like auto liquid injectors, detector & Thermal Desorber ATD should be controlled thru same software of GCMS-MS system. It should stop the analysis automatically to avoid wasting precious samples, in case of any problem occurs. Measurement conditions and data analysis | | |

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| | Data Acquisition | With GCMS-MS Software , data from MS and GC detectors (if any one of the detector is installed like FID , FPD, FTD (NPD), TCD, ECD detector) and the data can be acquired simultaneously or individually. | | |
| | Library | <ul style="list-style-type: none"> Should be offered with latest version licensed NIST -2017 OR upgrade version library in CD-ROM format to be provided. The software should supply separate dedicated MRM / SRM Pesticide residues, Environmental database should be quoted with individual part no. & license . . All the libraries & database should be loaded in front of user at site to avoid the supply of copied or pre-loaded database. It should contain information on compounds including VOC, polychlorinated biphenyl, brominated flame retardants, dioxins, polycyclic aromatic hydrocarbons, and organochlorine pesticides, as well as their stable isotope labeled compounds . <p>Also Separate Preregistered database with calibration curve information from the internal standard methods should be available which will allow users to calculate quantitative values without analyzing standard samples. It can be used for screening when quick confirmation of quantitative results is required.</p> | | |
| | Operating System | Windows 10 Professional, 64-bit edition OR latest | | |

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| | Essential Accessory | <ul style="list-style-type: none"> • Fully Automated Thermal Desorption system for sampling with Peltier cooling facility , fully automated robotic design with minimum 100 or more TD sample Tube carousal . System should not use cryogenic cooling . • Also supplier should quote for the required accessories for operation of thermal desorption system with varieties of TD tubes (like 3-adsorbent pre-packed Tenax, Carbosieve, chromosorb etc. for VOC sampling in Ambient Air. <p>Trap Temperature - Room temp -50°C~350°C</p> <p>Sample Line & Transfer line temp. → 50 to 250 °C</p> <ul style="list-style-type: none"> • Portable connecting device to be connected with TD tubes for rapid collection of samples. • The thermal desorber must be compatible with the application range & it should have the sample restoring facility . • It must be possible to quantitatively retain ultra-volatiles from at least 1.5 L of air or gas without liquid cryogen for unattended on-line monitoring, with optimum sensitivity and minimal user intervention. • The TD must allow the simultaneous analysis of volatiles and semi-volatiles • The system should have re-collection function as to get the analysed samples again because the environmental samples are precious & less in volume. <p>The TD system must be compatible with samples containing trace (i.e. sub ppt) and high (ppm / low %) concentration levels</p> | | |
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| | Warranty | The supplier should provide comprehensive on-site warranty for the entire system and peripherals (including parts and labour) for three years after successful installation and commissioning of complete system. The supplier should also quote AMC on regular basis beyond the warranty period for a period of three years. | | |
| | Installation & training | Minimum two week training to two MPCB Scientist at OEM facility overseas at application Laboratory / manufacturing facility. | | |
| | Essential Consumables & accessories (to be mentioned with Part nos. along with quantity as well): | <ul style="list-style-type: none"> • Filaments (2 Nos.) , • Septa (100 Nos), • glass inserts split (2 Nos.), • glass inserts splitless (2 Nos.), • Liquid autoinjector vials 2 ml or 1.5 ml (200 Nos.), • Vespel ferrules (10 Nos.), • Low flow personal sampling pumps (SKC make) – 10 Nos. • Sampling pump calibrator – 1 No. • ATD tube conditioner (should have capacity to condition minimum 30 tubes at a time with carrier gas flow facility) – 1 No. • Dual adjustable low flow tube holder – 10 Nos. • Constant pressure controller (CPC) – 10 Nos. • Helium gas cylinders: Helium Gas cylinders duly filled with ultrapure gas should be supplied; Nitrogen Gas cylinder, Argon Gas cylinder should also be provided. Double stage gas regulators made of brass and filtration panel to meet the requirement. • GCMS MS slit nut (5 Nos.), etc. with quantity to be clearly specified and to be included in the offer. <p>Training at site must be provided minimum 3 times with a gap of 6 months for basic familiarity of the system.</p> | | |

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| | PC & Printer | <p>The personal computer with latest processor/configuration (Core i5 processor or better, minimum 4 GB RAM, 1 TB hard disk, DVD writer, with minimum 19" LED monitor, Optical Mouse, keyboard and LaserJet Printer) should be supplied along with the instrument.</p> <p>The latest OS (windows 10 or better software which is compatible with the chromatography / MS / MS software) should be supplied along with original license key of windows and Microsoft office.</p> <p>Latest Configuration branded color laser printer along with Licensed application software , anti virus software with licensed CD .</p> | | |
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Place:

Date: (Name & Seal & Signature of Bidder)

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