



TAMIL UNIVERSITY, THANJAVUR

Tender Document

For

Supply and Installation of GC-MS Equipment
at Tamil University, Thanjavur

Tender Notice No. 8/2019-20/ Grant

November 2019

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TAMIL UNIVERSITY, THANJAVUR

Name of Work: Supply and Installation of GC-MS Equipment at Tamil University, Thanjavur

1. INVITATION

On behalf of the Tamil University, Thanjavur, Tender is invited for the Supply and Installation of GC-MS Equipment **under** two cover tender systems (Pre-Qualification Bid & Financial Bid) from reputed firms/ Service Providers / Agencies by the Registrar, Tamil University, Thanjavur. One cover shall contain EMD & Pre-Qualification Documents and the Second Cover shall contain Financial Bid. The Tender submission date is **06.12.2019 at 14.30 Hrs.**

2. PRE-QUALIFICATION CRITERIA

- a) The Bidder should have previous experience in Supply and Installation of GC-MS Equipment to the Government departments/Universities/other educational institutions/agencies.
- b) The bidder should have got their firm registered with Goods & Service Tax with the Government of Tamil Nadu.
- c) The bidder should have recorded an average annual turnover of Rs.1.50 Crore per year during the last three (3) financial years. (2016-17, 2017-2018&2018-2019). The bidder should submit the Annual Report/Audited Accounts Certified by Auditor in this regards.
- d) The bidders should have not been Black listed by any of the Government Agency in the past years for any reasons whatsoever.
- e) The bitter should have to produce FROM-16 for the last financial year
- f) See paragraph No 17.2 for further details.

3. . SCOPE

The scope of this tender is to Supply and Installation of GC-MS Equipment in Tamil University, Thanjavur . The responsibilities of the selected tenderer are given below:

1. Company should have good track record over for the past three years from the date of Tender.

4. PERIOD OF COMPLETION

With in one month against the supply order

5. EARNEST MONEY DEPOSIT

- An Earnest Money Deposit of Rs. **47,500/-** (Rupees Forty Seven Thousand and Five Hundred only) should be accompanied along with the Pre-Qualification tender.
- The Earnest Money Deposit should be remitted in the form of Demand Draft issued by any Nationalized or Scheduled Banks drawn in the favour of "The Registrar, Tamil University, Thanjavur - 613 010.
- NOTE: The EMD in the form of Bank Guarantee/ Cheque or other form will not be accepted.
- Pre-Qualification Bid without the requisite Earnest Money Deposit will be summarily rejected and treated as Non-Responsive tender.
- The Tenderer should not withdraw from the work after acceptance and received the work order from the university at any cost. Such withdrawal if any, is subject to legal proceedings by the university and cost of damage should be claimed from the tenderer.

6. EMD forfeit

If the successful tenderer fails to supply within the stipulated period, the Earnest Money Deposit amount remitted by the Tenderer along with the Pre-Qualification Bid will be forfeited and legal procedures by the University and the cost of the damage should be claimed from the Tenderer.

7. LANGUAGE OF TWO COVER TENDER SYSTEM

Tenders shall be offered in the prescribed forms in ENGLISH Language only.

8. VALIDITY OF BID

The Bids shall be valid for a period of 90 days (Ninety days) from the date of opening.

9. SUBMISSION OF BIDS

- a. Tenders should be submitted only through Post (or) in person in the Tender Box placed at the Registrar, Tamil University, Thanjavur – 613 010.
- b. A two stage bidding procedure will be followed. Cover-1 shall contain the EMD, Pre-Qualification Bid, Signed Tender Conditions and Bidding document. The Cover-2 shall contain only the Financial Bid i.e., the cost of the components as in the Schedule C.

10. OPENING OF TENDERS.

The Cover-1 containing the original copy of the EMD, Pre-Qualification Bid and Tender Conditions and Bidding document will be opened by The Registrar, Tamil University, Thanjavur at **06.12.2019** Hours on **15.00** itself, in the presence of the Tenderers (or) their Authorized Representatives, who choose to be present. The Pre-Qualification Bids of the Tenderers will be evaluated. The Financial Bids i.e., Cover-2 of the Tenderers will be opened only for the Tenderers, who have cleared Pre-Qualification criteria. The date and time of opening of the Financial Bids will be informed to the qualifying Tenderers, in the Pre-Qualification bids.

11. PAYMENT, SEHEDULE

S.No	Milestone	Payment
1.	Supply and Installation of GC-MS Equipment at Tamil University, Thanjavur	100% after Supply of GC-MS Equipment

12. NEGOTIATION

If it is felt that the price quoted by the lowest Tenderer is exorbitantly high with reference to the prevailing market rate, negotiation of rates will be made with the lowest Tenderer, for reducing the quoted rates to the reasonable levels. If the tender contains unbalanced items/rates the lowest tenderer must be prepared to furnish the detailed cost break up and other clarifications to the proposals submitted by them, as may be required to adjudge the reasonableness of their price proposals.

13. LIQUIDATED DAMAGES

Liquidated damages will be imposed on the contractor for the lapses/short fall in achieving the rate of progress as per existing schedule.

14. LEGAL JURISDICTION:

Jurisdiction of all legal proceedings, if necessary, relating to the above tender shall be the appropriate court in Thanjavur only.

15. ARBITRATION

Any fact or condition, which may not have been mentioned in Terms & Conditions and may arise after issuing work order, shall be decided as per the State Government policy/rules. In case rules/policies do not provide such situation, the issue will be referred for arbitration. Arbitration for any such dispute shall be conducted in accordance with the provisions of Arbitration and Conciliation Act 1996 or any statutory modification or re-enactment thereof.

16. WHOM TO CONTACT

For any clarifications regarding tendering, the bidders shall contact the Registrar at the following address.

The Registrar,
Tamil University
Thanjavur – 613 010.
Telephone: 04362-226720
Email: tamilunivreg@gmail.com

17. INFORMATION AND INSTURCTIOINS

17.1 FOR SPECIAL ATTENTION

Bids are invited in accordance with Tamil Nadu Transparency in Tenders Act, 1998 & Tamil Nadu Transparency in Tenders Rules, 2000.

17.2 PRE-QUALIFICATION CRITERIA

The bidding tenderer should be registered and in existence for more than three years and should comply with the following eligibility criteria:

- i. Should have GST registration issued by Government of Tamil Nadu or with Government of India.
- ii. Should be an Income Tax Assessee with PAN Card.

- iii. Should have supplied GC-MS Equipment to any State University/ Govt Organizations in India.
- iv. Should be ready to provide a satisfactory demonstration of the actual working of the GC-MS Equipment to the Tamil University staff.
- v. Authorization letter from Principals/Appropriate authority of Manufacturer should be produced without OEM letter the bidder will be rejected.

DOCUMENTS TO BE PRODUCED

Copy of the work order and the issued by the concerned Government Department / Agency.

2. The bidder should have got their Firm registered with either Goods & Service Tax Directorate (or) with the Commercial Taxes Department or any other Government Department.

DOCUMENTS TO BE PRODUCED

Copy of the Goods & Service Tax Registration Certificate issued by the competent authority.

3. The bidder should have recorded an average annual turnover of Rs. 1.5 Crores per year during the last three (3) financial years (2016-17, 2017-18 & 2018-2019).

DOCUMENTS TO BE PRODUCED

Copy of the Audited Balance sheet with associated documents duly certified by a Chartered Accountant.

4. The bidders should have not been Black listed by any Government Agency in the past years for the reasons whatsoever.

DOCUMENTS TO BE PRODUCED

A self-declaration in form of an undertaking to the effect that they have not been Blacklisted by any Government Department to be given in Rs.20/- valued India Non – Judicial stamp paper duly notarized.

18. METHODS OF TENDERING

- i. If the Qualification Application is made by an individual, it should be signed by the individual with his full name and his current address.
- ii. If the Qualification Application is made by a sole Proprietary Firm, it shall be signed by the Proprietor along with his full name and full name of the

- Firm with its current address. Document with regard to Registration as FIRM by the Registrar of Firms should be produced.
- iii. If the Qualification Application is made by a FIRM in partnership, it shall be signed by all the partners of the Firm with their full names and current address or by a PARTNER authorized by the Firm (either as per Articles of the Deed of Partnership or by Power of Attorney) for signing in Tenders, Agreements etc., In which case, certified copy of the Registered Deed of Partnership along with the current address of all the partners and a certified Photocopy of the Registered Power of Attorney issued in favour of the Signatory, should be produced.
 - iv. If the Qualification Application is made by a "Limited Company" it shall be signed by a duly authorized person holding the power of attorney for signing the application, in which case, the certified copy of the power of attorney shall accompany the application. Such limited company or Corporation shall also furnish satisfactory evidence of its existence along with the Pre-Qualification Application.
 - v. Qualification application from joint ventures is not acceptable.
 - vi. All the Signatures in the Pre-Qualification Bid Application and all the Signatures in the Documents produced **shall be dated.**
 - vii. All the originals of the documentary evidences produced shall be produced, if asked for, for verification at the time of opening of **Pre-Qualification tender** or subsequently.
 - viii. Any clarification on the documents submitted by the bidders may be called for by the Commercial Taxes Department.

19. CAPABILITY OF APPLICANT

The Applicant shall include with the Pre-Qualification Application, details in the prescribed Performa vide Schedule 'A' and 'B'.

- (i) Schedule – 'A' - Affidavit
- (ii) Schedule – 'B' - Self-Declaration on –Black Listing Certificate
- (iii) Schedule – 'C' - Commercial Quote

20. OPENING OF BIDS

- i. Bids received in sealed cover up to **14.30** hours on 06.12.2019 will be opened on the same day at **15.00** hours by the Registrar, Tamil University, Thanjavur in the presence of the Applicants or their authorized representative.
- ii. The Pre-Qualification bid and Financial Bid received belatedly on account of any reasons whatsoever, will not be opened or considered and will be returned unopened to the applicant.
- iii. Telegraphic Applications will not be entertained.
- iv. The date of opening of Financial Bid will be notified to the qualified applicants after evaluation of Pre-Qualification Bid well in advance.

SCHEDULE "A"

AFFIDAVIT

(To be furnished in Twenty Rupees Non – Judicial Stamp paper duly certified by Notary public)

- 1) I/WE the undersigned solemnly declare that all the statements made in the documents records etc., attached with this application are true and correct to the best of my knowledge.
- 2) I/WE, the undersigned do hereby certify that neither our firm/company nor any of its constituent partners have abandoned any work / works of similar nature and magnitude in India, during the last "FIVE" years.
- 3) I/WE, the undersigned do hereby certify that any of the contracts awarded to me / us has not been terminated rescinded, due to breach of contract on my / our part, during the last "FIVE" years.
- 4) I/WE, the undersigned authorize and request any bank / person/ firm/ Corporation / Government departments to furnish pertinent information deemed necessary and requested by the Registrar, Tamil University, Thanjavur to verify the statements made by me / us or to assess my / out to assess my / our competence and general reputation.

5) I/WE, the undersigned, understands that further qualifying information / clarification on the statements made by me / us may be requested and agrees to furnish such information / clarification within "**Five Working days**" days from the date of receipt of such request from the The Registrar, Tamil University, Thanjavur -10.

Dated Signature of Applicant with Seal.

(To be signed by the officer authorized by the Firm Company to sign on behalf of the Firm/Company with Company's Seal)

Note: In case of sole proprietary concern, affidavit should be signed only by the sole Proprietor.

(Title of the Firm/Company)

(Date)

The above named deponent has understood the contents well and solemnly and sincerely declared and affirmed by the deponent in my presence at and signed before me on this day of

(Seal)

(Signature of the Notary public)

Self - Declaration on Black Listing Certificate.

SCHEDULE “B”

TECHNICAL SCHEDULE

Name of the Work: Supply and Installation of Siddha Equipments

Technical specification of Latest, High End Single Quadrupole GCMS- Head Space Sampler system

Latest, High End Gas Chromatograph system to be coupled with solid, metallic quadrupole based or equivalent technology-oriented Mass Spectrometry system. Gas Chromatograph with Mass Analyzer is to provide all the needed data including Temperature, Pressure/ Flow parameter, type of Carrier Gas, Carrier gas column pressure, flow rates, constant linear velocity mode, split flow, detector gas flow rates and all detector parameter to be displayed on LCD. With Programmable pneumatic /electronic Control for injectors, detectors and complete system.

- ❖ GC-main frame with Split / Spitless Injection ports (**Two nos.**) with APC/AFC/PPC/EPC with Fast GC capability– One with S/SL capillary column (0.1mm or 0.22mm or 0.32mm ID) injector & another with wide bore GC capillary column (0.53mm) injector
- ❖ It should have minimum 9 ramps & 10 Plateau or better for Temperature programming purpose
- ❖ Carrier gas head pressure setting should be 970-1035KPa (140 - 150psi or better) provision for installing micro-bore to wide bore capillary columns (i.e., to accommodate 0.1mm column to 0.53mm capillary column)
- ❖ Carrier gas flow should be more than 10 ml/min
- ❖ Oven heating rate minimum 70 - 120⁰ C / min or better
- ❖ Split ratio should be more than 7500:1
- ❖ Injection Port heating up to 450⁰C
- ❖ Auto injector with Autosampler more than 110 vial samples carousal is preferred.
- ❖ High power column oven cooling (450⁰C to 50⁰ C) within 3 4 mins (without any insertion or modification of GC Oven)
- ❖ Mass Range 1.5 m/z to 1050 m/z or better
- ❖ Resolution FWHM 0.4 to 2.0u or Unit Mass Resolution
- ❖ Scan rate should be minimum 20,000 amu /sec or more. Higher scan rates will be always preferred.
- ❖ Ionization modes: EI source.
- ❖ System Ion source should have dual filament to change over automatically in case of failure of Dual filament (F1 & F2).
- ❖ Differential exhaust / evacuation system with TMP vacuum pump of 255L - 350 L/sec. Preference will be given to higher capacity TMP to get maximum sensitivity and flow rates 15 ml/min or more for use of wide bore columns.
- ❖ Direct interface between GC & MS with independent heating up to 350⁰C.
- ❖ Independent Ion source heating up to 300⁰C
- ❖ Variable Ionization voltage from 10 to 200 eV
- ❖ Variable Ionization current from 5 to 250 μ A
- ❖ Quadrupole Analyzers should be of 4 nos. solid metallic rods and rugged type or equivalent technology. The cleaning of rotatable pre-rods or pre-filters should be easy and can be easily done by user or other mode

- ❖ Detector should be Electron Multiplier Tube with low noise over drive lens
- ❖ EI Performance Scan Sensitivity **S/N Ratio > 2000** for 1pg OFN m/z 272. Higher S/N ratio will be preferred as a performance check out of the mass chromatograph with 30-meter capillary column only.
- ❖ Latest NIST version 2017 library database to be offered in CD-ROM only. No Pre-loaded GC-MS software & library in CPU will be allowed.
- ❖ Method development training & practical Hands- on training at site is must
- ❖ System should have provision to mount additional 3 detectors other than MS detector.

AFC/APC/EPC controlled two ways Detector Capable of operating minimum two detectors simultaneously with AFC / EPC/APC/PPC control detector splitting

Head Space Sampler

- Headspace sampler with minimum 80 vial capacity to be provided with compatibility with vials of 10 mL, 20 mL sizes of Screw or crimp top closure and Flat or rounded bottom style.
 - Temperature zones have setpoint increments in 1 °C with 0.1 °C resolution for actual temperatures and can be set upto Temperature of 10°C to 300°C
 - Vial pressurization and 1ml Loop Fill is fully controlled by the included onboard EPC/AFC
 - Headspace Sampler Should be compatible with using Helium, Nitrogen or Hydrogen as carrier gas.
 - Software should have features of Headspace parameters set and control with method dialogs, display of System actuals in conjunction with GC status, Headspace sequence status.
- System should have facility to get retention time identical for all peaks simultaneously in minimum possible time, after changing column or column length.
 - Instrument control through MS WINDOWS based GCMS Software for control of GC temp., interface temp.; pressure and flow rates; split ratio; all MS parameters in SCAN and SIM modes; Start up and Shut down of vacuum system; User, Manual and Auto tuning; Adjustment of retention time should be automatic with n-Alkanes & through S/W, Data Acquisition & Data Handling Parameters, Report Formats; Real Time Data Acquisition, display of chromatograms and mass spectra of data under acquisition, Snapshot Function; automatic analysis through Sample Schedule; Post Run analysis, Quantitation, Private and Public Library Search software; GLP / GMP, System Suitability, Audit Trail functions and other Detector signal integration capability
 - System should be easy to maintain by end user. Preferably it should have front access opening to reach filament, Ion source, and pre-filters/pre-rods for easy maintenance to be done by the user.

Accessories (to be included)

- Control PC: Latest PC that controls GC can be used concurrently (OS: Windows 10 with > one USB communication port, printer, He Gas cylinder-2Nos., He regulator, He gas purification panel, tubing's, gas cylinder mounting bracket and fittings etc. with the system. carrier, capillary columns for different application-2 Nos.
2 Ton Air Conditioner, UPS – 7.5KVA
- Three years warranty should be offered for the complete GC MS System
- Training: Onsite training.

SCHEDULE "C"

COMMERCIAL QUOTE

Name of the Work: Supply and Installation of Siddha Equipments

Technical specification of Latest, High End Single Quadrupole GCMS- Head Space Sampler system

Latest, High End Gas Chromatograph system to be coupled with solid, metallic quadrupole based or equivalent technology-oriented Mass Spectrometry system. Gas Chromatograph with Mass Analyzer is to provide all the needed data including Temperature, Pressure/ Flow parameter, type of Carrier Gas, Carrier gas column pressure, flow rates, constant linear velocity mode, split flow, detector gas flow rates and all detector parameter to be displayed on LCD. With Programmable pneumatic /electronic Control for injectors, detectors and complete system.

- ❖ GC-main frame with Split / Spitless Injection ports (**Two nos.**) with APC/AFC/PPC/EPC with Fast GC capability– One with S/SL capillary column (0.1mm or 0.22mm or 0.32mm ID) injector & another with wide bore GC capillary column (0.53mm) injector
- ❖ It should have minimum 9 ramps & 10 Plateau or better for Temperature programming purpose
- ❖ Carrier gas head pressure setting should be 970-1035KPa (140 - 150psi or better) provision for installing micro-bore to wide bore capillary columns (i.e., to accommodate 0.1mm column to 0.53mm capillary column)
- ❖ Carrier gas flow should be more than 10 ml/min
- ❖ Oven heating rate minimum 70 - 120⁰C / min or better
- ❖ Split ratio should be more than 7500:1
- ❖ Injection Port heating up to 450⁰C
- ❖ Auto injector with Autosampler more than 110 vial samples carousal is preferred.
- ❖ High power column oven cooling (450⁰C to 50⁰C) within 3 4 mins (without any insertion or modification of GC Oven)
- ❖ Mass Range 1.5 m/z to 1050 m/z or better
- ❖ Resolution FWHM 0.4 to 2.0u or Unit Mass Resolution
- ❖ Scan rate should be minimum 20,000 amu /sec or more. Higher scan rates will be always preferred.
- ❖ Ionization modes: EI source.
- ❖ System Ion source should have dual filament to change over automatically in case of failure of Dual filament (F1 & F2).
- ❖ Differential exhaust / evacuation system with TMP vacuum pump of 255L - 350 L/sec. Preference will be given to higher capacity TMP to get maximum sensitivity and flow rates 15 ml/min or more for use of wide bore columns.
- ❖ Direct interface between GC & MS with independent heating up to 350⁰C.
- ❖ Independent Ion source heating up to 300⁰C
- ❖ Variable Ionization voltage from 10 to 200 eV
- ❖ Variable Ionization current from 5 to 250 μA

- ❖ Quadruple Analyzers should be of 4 nos. solid metallic rods and rugged type or equivalent technology. The cleaning of rotatable pre-rods or pre-filters should be easy and can be easily done by user or other mode
- ❖ Detector should be Electron Multiplier Tube with low noise over drive lens
- ❖ EI Performance Scan Sensitivity **S/N Ratio > 2000** for 1pg OFN m/z 272. Higher S/N ratio will be preferred as a performance check out of the mass chromatograph with 30-meter capillary column only.
- ❖ Latest NIST version 2017 library database to be offered in CD-ROM only. No Pre-loaded GC-MS software & library in CPU will be allowed.
- ❖ Method development training & practical Hands- on training at site is must
- ❖ System should have provision to mount additional 3 detectors other than MS detector.

AFC/APC/EPC controlled two ways Detector Capable of operating minimum two detectors simultaneously with AFC / EPC/APC/PPC control detector splitting

Head Space Sampler

- Headspace sampler with minimum 80 vial capacity to be provided with compatibility with vials of 10 mL, 20 mL sizes of Screw or crimp top closure and Flat or rounded bottom style.
- Temperature zones have setpoint increments in 1 °C with 0.1 °C resolution for actual temperatures and can be set upto Temperature of 10°C to 300°C
- Vial pressurization and 1ml Loop Fill is fully controlled by the included onboard EPC/AFC
- Headspace Sampler Should be compatible with using Helium, Nitrogen or Hydrogen as carrier gas.
- Software should have features of Headspace parameters set and control with method dialogs, display of System actuals in conjunction with GC status, Headspace sequence status.
- System should have facility to get retention time identical for all peaks simultaneously in minimum possible time, after changing column or column length.
- Instrument control through MS WINDOWS based GCMS Software for control of GC temp., interface temp.; pressure and flow rates; split ratio; all MS parameters in SCAN and SIM modes; Start up and Shut down of vacuum system; User, Manual and Auto tuning; Adjustment of retention time should be automatic with n-Alkanes & through S/W, Data Acquisition & Data Handling Parameters, Report Formats; Real Time Data Acquisition, display of chromatograms and mass spectra of data under acquisition, Snapshot Function; automatic analysis through Sample Schedule; Post Run analysis, Quantitation, Private and Public Library Search software; GLP / GMP, System Suitability, Audit Trail functions and other Detector signal integration capability
- System should be easy to maintain by end user. Preferably it should have front access opening to reach filament, Ion source, and pre-filters/pre-rods for easy maintenance to be done by the user.

Accessories (to be included)

- Control PC: Latest PC that controls GC can be used concurrently (OS: Windows 10 with > one USB communication port, printer, He Gas cylinder-2Nos., He regulator, He gas purification panel, tubing's, gas cylinder mounting bracket and

fittings etc. with the system. carrier, capillary columns for different application-2
Nos.

2 Ton Air Conditioner, UPS – 7.5KVA

- Three years warranty should be offered for the complete GC MS System
- Training: Onsite training.

Sl.No	Addition / Reduction to Basic Rates	% Amount on Basic/ Any other Base	Any condition applicable for calculation
1.	GST		
2.	Packing & Forwarding charges		
3.	Transportation charges upto the Destination		
4.	Discount		
5.	Warranty if Any		
6.	Payment Terms		

Note: (1) If there is any correction it should be counter signed.

(2) Rate should be quoted in figures and words.

Signature of the Bidder